

A GRAMMAR OF NORTHERN MAO (MÀWÉS AAS'È)

by

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DISSERTATION ABSTRACT

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Title: A Grammar of Northern Mao (Mâwés Aas'è)

Northern Mao is an endangered Afroasiatic-Omotiic language of western Ethiopia with fewer than 5,000 speakers. This study is a comprehensive grammar of the language, written from a functional/typological perspective which embraces historical change as an explanation for synchronic structure.

The grammar introduces the Northern Mao people, aspects of their culture and history, and the major aspects of the language: contrastive phonology, tone phenomena, nouns, pronouns, demonstratives, numerals, noun phrases, verbs and verbal morphology, single verb constructions, non-final/medial clauses, subordinate clauses and alignment.

The tone system has three contrastive levels, where the Mid tones subdivide into two classes which historically derive from two different sources. Nouns each exhibit two tonal melodies: one melody in citation form or other unmodified environments and another melody when syntactically modified.

Extensive coverage is given to developments in the pronominal and subject-marking systems as well as the verbal system. In the pronominal and subject marking systems, innovations include the development of a dual opposition, the fusion of an affirmative verbal prefix to subject prefixes, and the development of these subject

prefixes into new pronouns. In the verbal system, innovations include the development of new verbal wordforms from subordinate + final verb periphrastic constructions and a set of new subject markers from an old subordinator morpheme.

The verbal system is oriented around two oppositional relations: realis vs. irrealis and finite vs. infinitive verb forms. Realis and irrealis verbs have distinct item-arrangement patterns: realis verbs take subject prefixes while irrealis verbs take subject suffixes. Realis is associated with affirmative polarity and non-future tense and may be used with many aspectual distinctions. Irrealis is associated with negative polarity, future tense, and counterfactual constructions; irrealis verbs do not express many aspectual distinctions. Finite versus infinitive verb stems are differentiated by tone. Finite verb stems are used in affirmative declarative and interrogative utterances, non-final/medial constructions and the more finite subordinate clause structures. Infinitive verb stems are used in negative declarative and interrogative utterances, non-final/medial constructions and the less finite subordinate clause structures.

The work concludes with a summary of cross-constructural alignment patterns and evaluates the efficacy of a marked-nominative analysis.

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- Ahland, Michael. 2010. Aspects of Northern Mao (Bambassi-Diddesa) phonology. *Linguistic Discovery* 7.1-38.
- Ahland, Michael. 2009. From topic to subject: Grammatical change in the Amharic possessive construction. *Studies in Language* 33.685-717.
- Ahland, Michael. 2006. Nasal spreading, rhinoglottophilia and the genesis of a non-etymological nasal consonant in Mesmes. *Proceedings of the 31st Annual Meeting of the Berkeley Linguistics Society*, ed. by Rebecca T. Cover and Yuni Kim, 13-24. Berkeley: Berkeley Linguistics Society, Inc.
- Ahland, Michael and Colleen Ahland. 2005. Intelligibility and historical sound-change: A study of the relationship between subgroups, the direction of change and inherent intelligibility in an Ethio-Semitic and a Nilo-Saharan cluster. *Proceedings of the 5th International Language Assessment Conference*, Chiang Mai, Thailand. Dallas: SIL International.

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CHAPTER I

INTRODUCTION

This work is the first-ever attempt at a large-scale grammatical description of Northern Mao, a previously understudied and endangered language spoken in western Ethiopia in the Benishangul-Gumuz Regional State. The grammar is based on twenty months of field work (2007-2009) in Ethiopia and includes fourteen chapters devoted to describing the sound and grammatical systems of the language. Twenty-five speakers of Northern Mao have participated in this study by providing lists of words, elicited sentences and more than eight hours of natural texts. Only those speakers who live and work within the language areas and who speak Northern Mao as a mother tongue were consulted in an attempt to lessen the effect of loss or contact with other languages.

In addition to this grammatical description, the Northern Mao research project has resulted in the compilation of a tri-glot glossary (lexicon), featuring equivalents in Northern Mao, Amharic (a national language of Ethiopia), and English as well as a large collection of interlinearized and annotated natural texts recorded from speakers across the Northern Mao area. Both the lexicon and textual data have been utilized in the grammatical description presented here.

This grammar is organized into fourteen chapters. The first chapter introduces the Northern Mao people and their language, identifies geographic and social setting (including maps of the area), discusses the genetic relationship of the Northern Mao language to other Omotic languages and gives an overview of Northern Mao history, society and culture, the results of sociolinguistic research related to the endangerment of

the language, a review of previous work on the language and a typological overview of particularly interesting features. Following this introduction, two chapters are devoted to phonology: the sound system's contrastive features (Chapter II) and the tone system (Chapter III). The eleven chapters (IV-XIV) which follow, deal as comprehensively as possible with all the major and many minor morpho-syntactic structures of Northern Mao and their various functions. These chapters describe nouns (IV), pronouns (V), demonstratives and the definite article (VI), numerals and quantifiers (VII), the noun phrase (VIII), an overview of the verbal system (IX), and final verbs (X). The remaining chapters deal with more complex constructional and cross-constructional elements of the language, such as single verb constructions (XI), non-final verbs and clause-chaining (and serialization) (XII), subordination (XIII) and alignment (XIV). The appendices which follow provide evidence for contrast and some of the raw data used in the phonological examination (discussed in Chapter II), as well as a glossary of Northern Mao words, a sample of collected texts, a list of abbreviations and a subject index.

1.1. Location

The Northern Mao language, also known by the toponyms Bambassi and Diddesa, is spoken in the area around Bambassi town in western Ethiopia's Benishangul-Gumuz region, as well as among an emigrant population along the edge of the Diddesa valley, 300 km to the East (Siebert et al. 1994:9; Bender 2003:3; Ahland 2009); see Figure 1.1 below, where these two locations are marked with shading.

An additional settlement of not more than a few hundred Northern Mao speakers is said to be near Metahara (east of Addis Ababa in the Adama Special Zone), not far

from the Awash River. The migration to Diddesa and Metahara occurred sometime around 1900, but most of those who went to Metahara returned to Bambassi or Diddesa by 1994 (Siebert et al. 1994:8; Bender 2003:266).



Figure 1.1. Map of Ethiopia

The Northern Mao language area is bordered by the other Omotic-Mao languages: Hozo, Seze and Ganza (Fig. 1.2, below). Let's briefly consider Ganza, whose geographic position has been a matter of some discussion. Fleming and Bender each position Ganza entirely outside Ethiopia, along the Sudanese side of the border, across from Bambassi (Fleming 1988:35; Bender 2000:255; 2003:266). Smidt, however, testifies that there are Ganza living in Ethiopia as well as in Sudan (2007:759). Smidt's claim of Ganza speakers living in Ethiopia is supported by recent findings. Amy Krell, who carried out a survey of languages on the Sudanese side of the border, notes that Ganza speakers in

Dahmoh, Sudan report that there are Ganza speakers living in a place called Yamasala inside Ethiopia (2011:10). I have not been able to determine the location of Yamasala. Klaus-Christian Küspert, a linguist working with the Norwegian Mission Society in Ethiopia, organized a survey of some of the more remote areas in and around the Mao Special Woreda (cf. Fig. 1.4, below, for the boundaries of this political designation) in 2011. Küspert's team met a group of men who claimed to be Ganza speakers living in a village called Peshuba (see Fig. 1.2 for the location). Küspert very kindly sent me the short wordlist which his team recorded from these men, and I have positively identified it as Ganza.¹ According to Küspert's findings, there are as many as 50 Ganza speakers living in the area of Peshuba. My Northern Mao consultants also report that Ganza people, who speak a language somewhat similar to Northern Mao, are to be found in the area west of Bambassi town. They are said to come into Bambassi to attend the weekly market on Saturday. Figure 1.2 provides a detailed map of the Omotic-Mao languages, along with roads, rivers and the border with (North) Sudan and South Sudan.² The Ganza area includes the shaded region within Sudan (positioned here according to Bender 2000) as well as the village of Peshuba in Ethiopia and possibly other small enclave communities west of the Northern Mao area (indicated by the question marks). Fig. 1.2 also shows the other languages in the area with Bertha to the north of the western (Bambassi) Northern Mao area, Gumuz to the north and west, Gwama and Komo³ to the

¹ The data match Reidhead's 1947 data very closely, and show consistent sound change correspondences with Northern Mao.

² This map has been adapted from an earlier map produced by an SIL survey team who conducted a linguistic survey of the Northern Mao (Davis et al. 2004).

³ I have been told that there is a small group of Komo people who live within the Gwama area and

southwest (Bertha, Gumuz, Gwama and Komo are all Nilo-Saharan languages (Bender 1996; Ehret 2001)). Around the Diddesa pocket of Northern Mao is found West-Central Oromo, a Cushitic language which also serves as the language of wider communication throughout the region.

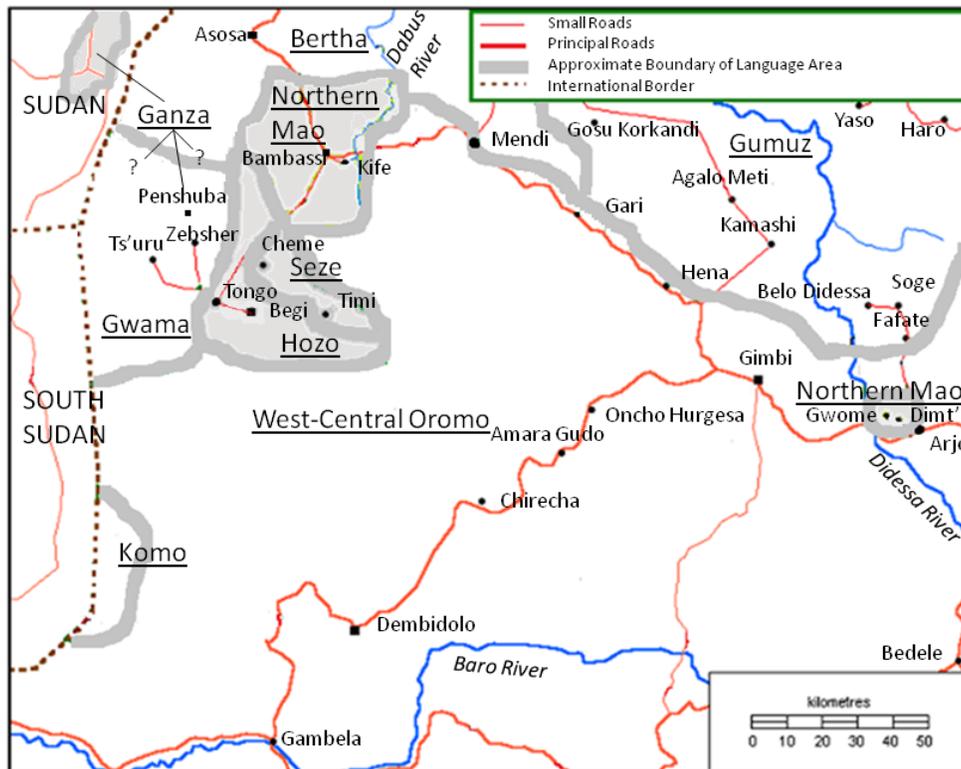


Figure 1.2. Map of the Omotic-Mao Languages

The vast majority of the Northern Mao live within Bambassi wereda.⁴ A wereda is a small political designation which roughly corresponds to the level of a county in the

who speak a language called Kwama (Andreas Neudorf, personal communication 2011). Dirk Kievit, who is working on a grammar of the Gwama language, says that the Gwama are known by the name Komo by outsiders (personal communication 2011). Zelealem Leyew (2005:1) writes that the Gwama are also known as 'Northern Mao', presumably because the earliest studies used the 'Mao' name to refer to a variety of peoples of the region (Grottanelli 1940 and Cerulli 1956).

⁴ The political organization of Ethiopia includes the following units from greatest to smallest: nation > regional states > zones > weredas > k'ebeles. Weredas are organized into zones which are in turn organized into regional states.

U.S. and is made up of smaller units, called k'ebeles. And within Bambassi wereda, most Northern Mao can be found to the south and southwest of Bambassi town in Muts'a Mado k'ebele, shown in Fig. 1.3.

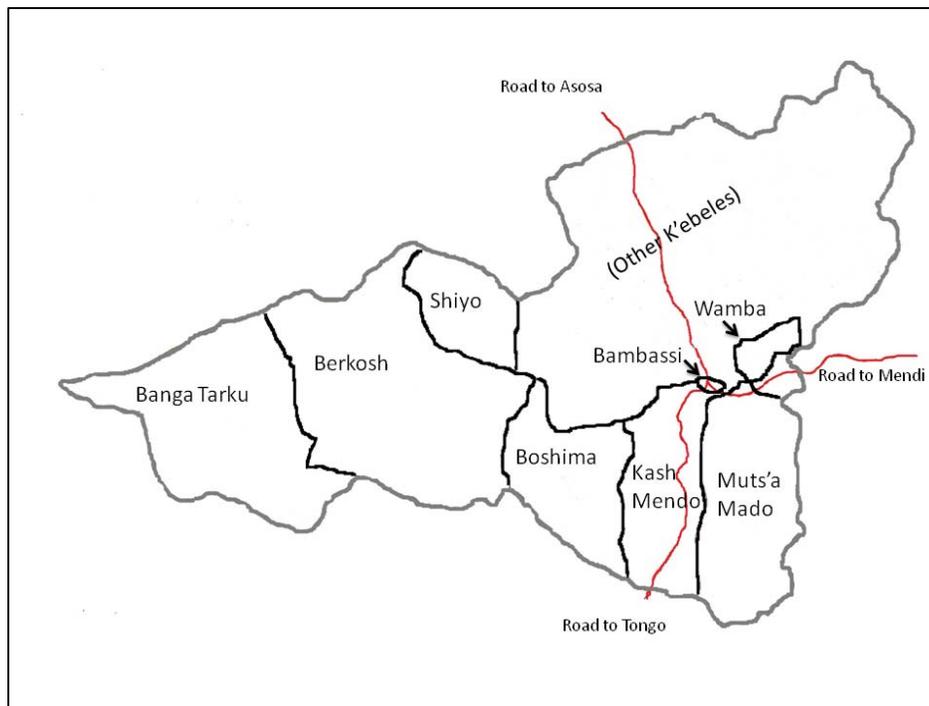


Figure 1.3. Map of Selected K'ebeles in Bambassi Wereda (adapted from a map produced by the Benishangul-Gumuz Office of Finance and Economic Development)

Nothern Mao may also be found in Wamba k'ebele as well as in the northern part of Kash Mendo k'ebele. Smaller numbers are found in family groups throughout the area labeled as 'other k'ebeles'. A small community of speakers may also be found outside the Mao area proper, in the town of Asosa and, of course, as mentioned above in the area known as 'Dimt'u' in the Diddessa valley; the Northern Mao are found in the area around Gome.⁵

⁵ To reach this area, one must take the road north from Arjo (on the eastern side of the Diddessa river), which is located on the Asosa-Addis Ababa highway. After traveling a few kilometers and crossing a small river, drive east, up the hill, past a grove of large trees and follow the road through the corn fields,

1.2. The Mao Name

Northern Mao speakers refer to their own language with the autonym /màw-és[↓]a:ts'-tòs-è/ LH[↓]MLL Mao-person tooth/language-talk-TV 'language of the Mao people' or sometimes /màw-és[↓]a:ts'-è/ LH[↓]ML Mao-person tooth/language-TV. The self-name for the people is /màw-és-[↓]wol-e/ LH[↓]MM Mao-person-PL-TV 'Mao people'. The Northern Mao use modifications of these names to refer to the related Hozo, Seze⁶ and Ganza languages: Hozo and Seze are commonly called /bègí màw-es a:ts'-è/ Begi Mao-person tooth/language-TV 'the language of Mao people of Begi' (a town to the south of Bambassi--see Fig. 1.2), while Ganza is called /sówès màw-es a:ts'-è/ ?? Mao-person tooth/language-TV. The Northern Mao I have asked do not know the meaning of the first word /sówès/ but use it to refer to Ganza, a name which they also recognize (perhaps the form /sówès/ refers to a clan. I do not know the autonyms of the other Omotic-Mao languages.

The name 'Mao' has been used to refer to a variety of different groups and languages in the literature.⁷ In the earliest literature, two 'Mao' languages were identified: 'Northern' and 'Southern'. The 'Northern' language was considered part of the Koman

past a few small farms and then across another small, shallow river. This is where the Gome area is found. A small number of Northern Mao speakers may be found living near the Asosa-Addis Ababa highway in the vicinity of the Ephraim Hotel (originally pointed out to me by Girma Mengistu).

⁶ The name 'Seze' is frequently written as 'Sezo' in the literature; I have elected to use 'Seze' on the grounds that my consultants tell me this is preferred by their Seze friends. Siebert et al. 1994 also use the names 'Seze' and 'Seeze'.

⁷ Bender cites Atieb Amed Dafallah's unpublished paper (circa 1974) as the "best source for information on ethnic/linguistic nomenclature in the Mao area" (Bender 2000:179). Unfortunately, I've not been able to find a copy of Atieb's manuscript, however, I have been able to learn at least part of what Atieb reports, from the work of Bender (2000, in particular).

group of Nilo-Sahara by Grottanelli (1940), but this was largely based on the physical appearance of the people and various cultural similarities (Fleming 1984:31). The ‘Southern’ Mao variety was later classified as Anfillo, an Omotic-Kefoid language (Bender 1975b)--see Fig. 1.5, below. Fleming notes that many scholars, including Cerulli (1956) and Greenberg (1963) among others, simply followed Grottanelli’s classification of the ‘Northern’ Mao language as Koman without question (1984:31). Today, we know that Grottanelli’s ‘Northern’ Mao is really made up of Hozo and Seze and some sub-varieties (like the Gebisi and Medegi, clans of Hozo and Seze, respectively) (Fleming 1984:32). Bender’s work (1971, 1975b) was instrumental in arguing for the ‘Mao’ languages’ inclusion in the Omotic family.

In this grammar, the term ‘Northern Mao’ refers to the people who live near Bambassi, particularly along the Dabus river as well as those who live along the Diddesa river, further to the east. This is in keeping with Bender (2003:266), who uses the term ‘Mao’ for a subgroup of Omotic languages made up of Bambassi-Diddesa (to the north and east), Hozo and Seze (to the south) and Ganza (to the west, likely mainly in Sudan). At times, I will refer to Bambassi Mao or Diddesa Mao but when referring to the language as a whole⁸ or when features are in common between these two varieties, I will use the term ‘Northern Mao’ to encompass both the Bambassi⁹ and Diddesa varieties.

Most neighboring groups and official Ethiopian documents, such as the 2007

⁸ Speakers of the Mao varieties in Bambassi and Diddesa consider their varieties one language; this is substantiated by linguistic data I have collected in each area as well as the highest degrees of intelligibility between the two.

⁹ The name ‘Bambassi’ is frequently written ‘Bambeshi’, and ‘Diddesa’ is also sometimes written as ‘Diddessa’. Siebert et al. notes that ‘Bambassi’ is preferred over ‘Bambeshi’ (1994:9).

census report, do not refer to the Northern Mao separately from the other related Mao languages (Hozo, Seze, and Ganza, all of which will be discussed below). The only designation in the census is that of ‘Mao’. It may also be that this designation of ‘Mao’ includes the Anfillo community and language as well.

A further complicating factor is that the name ‘Mao’ (usually pronounced as [maʔo]¹⁰ by non-Mao) may be used to refer to at least two unrelated (Nilo-Saharan) languages. The recent determination of the Mao Special Wereda¹¹ includes speakers of the Gwama¹² (Nilo-Saharan) language within its borders. Gwama speakers may be found outside the towns of Zebshir and Ts’uru as well as further to the west, presumably across the border into Sudan. Speakers of Komo, another Nilo-Saharan language found to the south of Gwama along Ethiopia’s border with Sudan, are also frequently called Mao.

Bender suggests that the spread of the Mao name may be the result of Oromo speakers using it to refer to “dark-skinned people” (Bender 1975a:128). The word ‘Mao’ likely has its origins in the Hozo and Seze languages where [maw] in Hozo and [ma:j] in Seze are the words for ‘people’ (Bender 1975a:128). In Northern Mao, the name ‘Mao’ simply refers to ‘Mao’ ethnicity. The Northern Mao word for ‘person’ is /esè/, and the

¹⁰ I have found no Northern Mao speakers who use the term [maʔo] with a glottal stop when speaking their own language. Rather, this form appears to be used only when speaking Oromo and Amharic and mainly by outsiders. In Northern Mao, the name ‘Mao’ is pronounced /màw-é/ Mao-TV, where the [e] at the end is the final vowel which is found on all nominals.

¹¹ Special Weredas are weredas which exist within a regional state, independently of zones; they are immediately under the authority of the regional state. There are two special weredas in Benishangul-Gumuz Regional State (Pawe Special Wereda in the far northeast of the region and Mao Special Wereda, southwest of Bambassi town).

¹² While Zelealem Leyew (2005) uses the name ‘Gwama’ for this language, others, most notably Bender, use the name ‘Kwama’.

word for ‘people’ is /esole/.

1.3. Population and Number of Speakers

Estimates made around 1982 suggested that Northern Mao speakers numbered around 5,000 (Siebert et al. 1993; Bender 2003; Grimes 2000). But it seems unlikely that this number obtains today, at least in terms of mother-tongue speakers. In some areas, the language is no longer spoken by children. As noted above, the Northern Mao are not counted as a distinct group in the Ethiopian census; accurate estimates of the current population are difficult to determine.

The Ethiopian census of 2007¹³ records a total of 46,026 ethnic Mao living in the country, and of these as many as 33,683 list Mao as their mother-tongue. As noted above, however, the name ‘Mao’ here refers to Northern Mao, as well as to Hozo, Seze, Ganza, perhaps Anfillo and possibly even some speakers of Gwama or Komo who live in the Mao Komo Special Wereda with the Hozo. According to the census report, the majority of ethnic Mao live in the following regions (organized by population size, greatest to least): Oromia, Benishangul-Gumuz, Addis Ababa and the Southern Nations, Nationalities and Peoples Region (for locations of regions and zones mentioned here and in the discussion below, see Fig. 1.4).

¹³ The 2007 census results have been published electronically and can, at the present time, be found at the Central Statistical Agency’s website:
http://www.csa.gov.et/index.php?option=com_rubberdoc&view=category&id=72&Itemid=521.

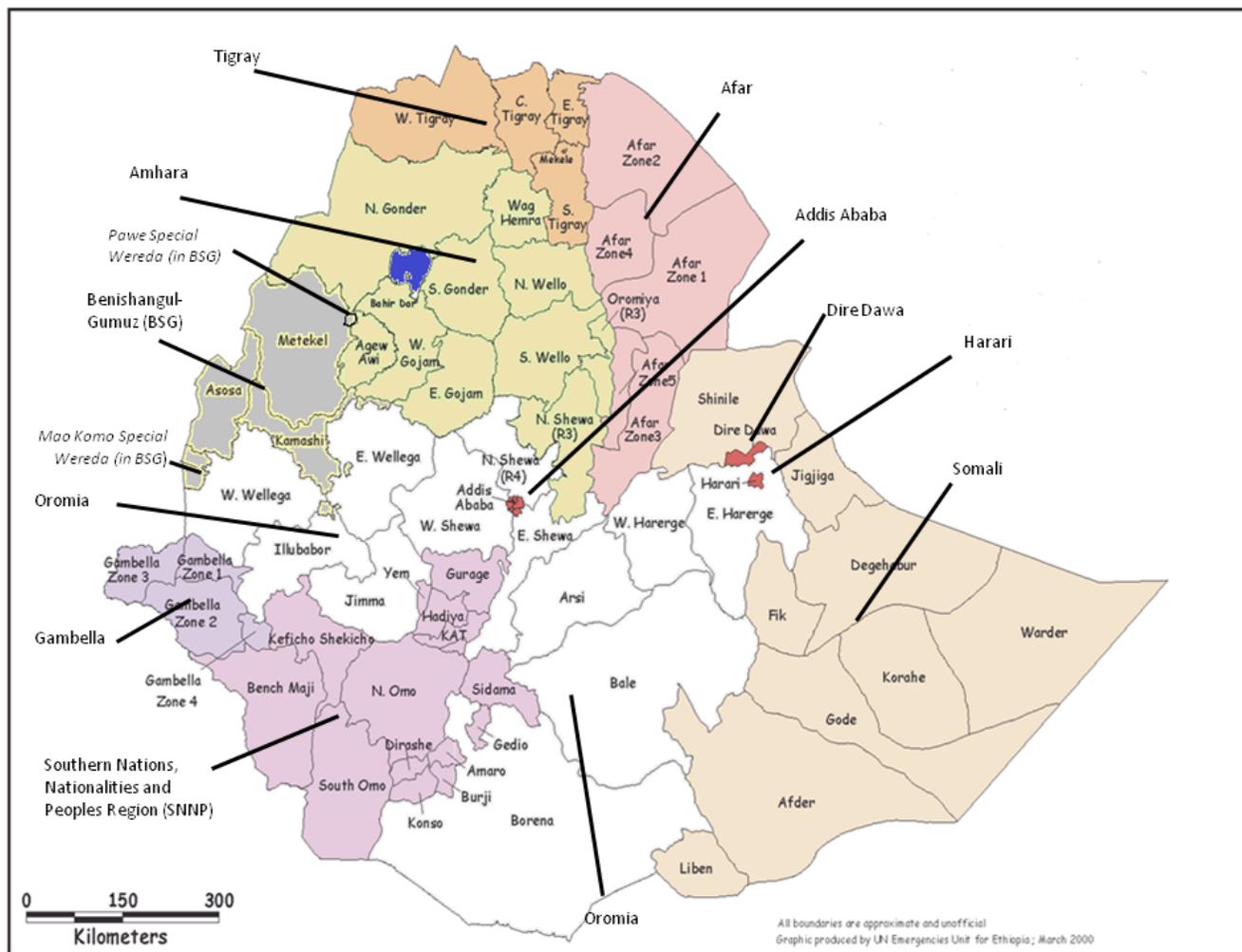


Figure 1.4. Administrative Regions and Zones of Ethiopia
(adapted from map provided by ReliefWeb (http://www.reliefweb.int/mapc/afr_ne/cnt/eth/ethiopia_zones.html))

The previous map shows the regions and zones of Ethiopia at the time of 2000, though with some adaptations.¹⁴

Within Oromiya Regional State, there are 24,202 people classified as ethnically Mao, with 20,100 mother-tongue speakers of Mao. The vast majority of the Mao of Oromia (19,521 with 18,375 mother-tongue speakers) live in Western Wellega Zone (just to the south of Bambassi wereda near the border with Asosa Zone). Other relatively large populations of Mao are found in Kelem Wellega Zone (1973 ethnic Mao with 185 mother-tongue speakers) and Adama Special Zone (662 ethnic Mao with 380 mother-tongue speakers); this area of Adama is the same area referred to as Metahara by Siebert (et al. 1994:9).

Within all of Benishangul-Gumuz Regional State, there are reportedly 15,384 ethnic Mao and 9,858 mother-tongue speakers. Most of these live in the Mao Komo Special Wereda (13,228 ethnic Mao with 7,812 mother-tongue speakers)--an area where it appears no speakers of Northern Mao live, according to my consultants. In Asosa Zone (which includes Bambassi wereda, where most Northern Mao live as well as the area west of Bambassi town, where the Ganza are reported to live), there are 1,921 ethnic Mao with 1,829 mother-tongue speakers.

In Addis Ababa, there is a reported 3,723 ethnic Mao with 2,134 mother-tongue

¹⁴ I amended the map in Fig. 1.4 by adding the name 'Mao Komo Special Wereda' to what in this 2000 version was listed as 'Tongo'. I also separated out the now designated Pawe Special Wereda in the northeast of Benishangul-Gumuz's Metekel Zone. Kelem Wellega Zone is not marked on this map; it is in the area near Anfillo in what is listed as Western Wellega Zone--an area south of Bambassi wereda (in the Asosa Zone), where Anfillo Mao live. The Adama Special Zone is found to the east of Addis Ababa on the road to Dire Dawa, near the town of Adama (formerly called Nazaret) and is found located near the Awash river.

speakers and an additional 2,408 ethnic Mao with 1,333 mother-tongue speakers in the Southern Nations, Nationalities and Peoples Region (Fig. 1.4).

The Diddesa Mao live on the eastern edge of Eastern Wellega Zone, within Oromia Regional State, along the Diddesa river. Girma Mengistu, in his MA Thesis on the Diddesa Mao variety lists the number of speakers at a mere 44 (Girma 2007:1).

In short, any attempt to come up with a valid number of mother-tongue speakers of Northern Mao is not straightforward. Based on my own observations and interviews and comments from the Northern Mao themselves, it appears that the vast majority of Northern Mao live within the Asosa Zone with a much smaller population, mentioned above, along the Diddesa river to the east in the Oromia region. It seems likely that the number of speakers of Northern Mao is less than 5,000 and perhaps between 2-3,000 in total. As noted above, the Mao who live in the Mao Komo Special Wereda in Benishangul-Gumuz are most likely speakers of Gwama (Nilo-Saharan) or Hozo (Omotic-Mao) and in Western Wellega Zone of the Oromia region (as well as the Kelem Wellega Zone), the name likely refers to speakers of Hozo and Seze.

1.4. The Genetic Position of Northern Mao

The Northern Mao language has been classified as a member of the Mao subgroup of the Omotic family, which, in turn, is a branch of the Afroasiatic superfamily (Hayward 2000:242; Bender 2003:3). There has been much debate about the status of Mao languages and even the status of the Omotic family, as a primary branch of Afroasiatic (for a summary of the debate, see Bender 2000:179ff). Only a brief overview of these debates is given below.

Let's first consider the debate surrounding Omotic as a branch of Afroasiatic. Before the identification of the Omotic family, Afroasiatic included the branches Chadic, Egyptian, Semitic, Cushitic and Berber. Many of the languages which are today known as Omotic were considered part of the West Cushitic subgroup of Cushitic. While Moreno had noted the lack of Cushitic features in many of the so-called West Cushitic languages (1940) and Bryan identified the similarity of the Omotic-Mao languages to what later became Bender's Ta/Ne grouping of Omotic (1945:192), it wasn't until Fleming's ground-breaking work (1969 and 1974, in particular) as well as in Bender (1971 and 1975b) that Omotic was identified as an independent branch of Afroasiatic.¹⁵ Lamberti rejects the declassification of West Cushitic and the establishment of Omotic as a distinct branch from Cushitic (1991). Lamberti's claim is that the establishment of Omotic was based too heavily on mere lexical evidence and not enough on morphological grounds. Bender's later work, especially 2000 and 2003, makes widespread use of morphological comparison for elucidating Omotic. Today, Omotic is widely accepted as one of the primary branches of the Afroasiatic family, with somewhere between 25-32 languages/dialects, depending on how one lumps or splits (Hayward 2000:241-2; Bender 2003:2-3).

While the internal structure of the Omotic family is still a matter of some debate, both Bender and Hayward, two scholars whose comparative work in Omotic has been of the greatest breadth, have agreed as to the position of the Mao group as a primary branch

¹⁵ Thus, in Greenberg's 1963 classification of African languages (1963), Omotic is not found as a branch of Afroasiatic.

of Omotic.¹⁶ Bender shows Mao as one member of a two-way split from Proto-Omotic, with Mao vs. the TNDA languages (see Fig. 1.5), while Hayward shows the Mao group as one member of a three-way (South-Omotic, North-Omotic and Mao) split from Proto-Omotic (Fig. 1.6).¹⁷

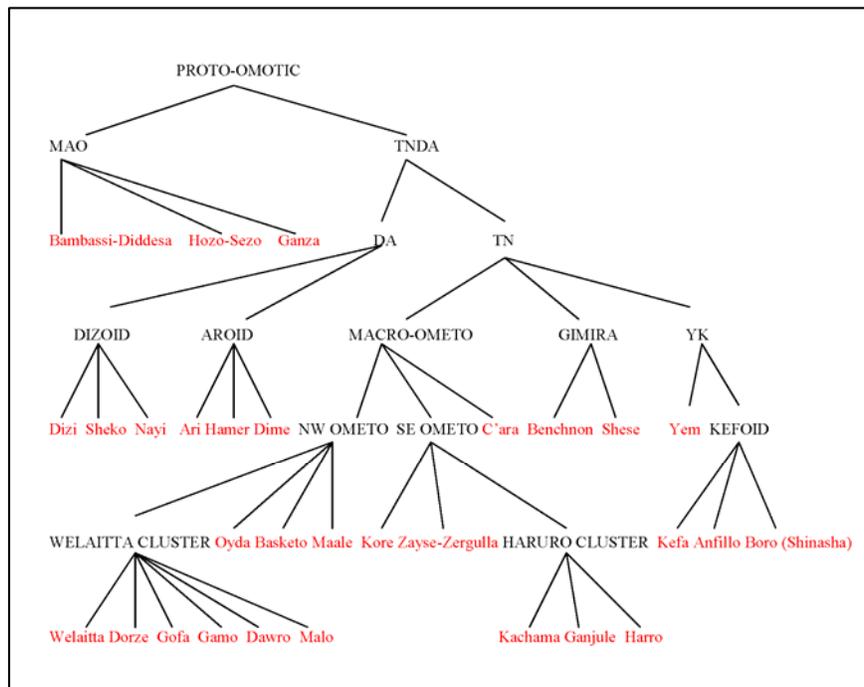


Figure 1.5. Omotic Family Tree (based on Bender 2003:1)

¹⁶ In addition to the tree provided in Fig. 1.5, above, which is based on chronological historical changes and proposed isomorphs, Bender provides another tree, based on lexical correspondences (2003:286), where Dizoid and Mao-TN form one branch under Proto-Omotic, with Aroid as a distinct sister branch. Below the Mao-TN level, the Mao group is drawn as a sister to the TN languages, but as Bender points out, diffusion may account for lexical similarities where morphological isomorphs may testify to historical relationship (2003:286).

¹⁷ In these trees, names for all reconstructed branches are written in capital letters while actual language names are written with only the first letter of the name capitalized.

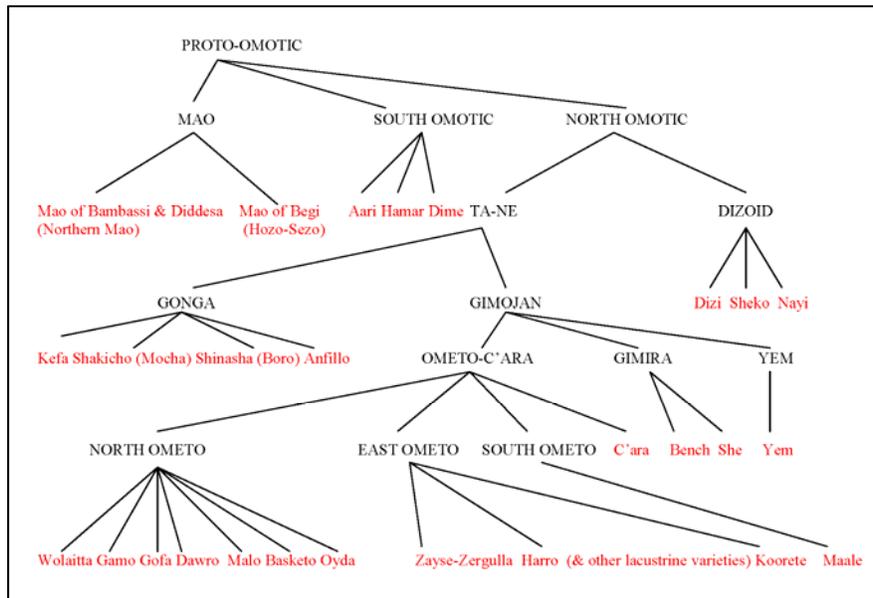


Figure 1.6. Omotic Family Tree (based on Hayward 2000:242)

There are a variety of differences between these Omotic taxonomies, but only the details concerning the Mao group are particularly relevant here. While Bender lists each of the four Mao languages (linking the dialects of the Bambassi and Diddesa area, as well as the forms Hozo and Seze, which according to my consultants are distinct languages, and Ganza), Hayward 2000 leaves Ganza out of his classification of Mao (for reasons unknown to me) and refers to the Hozo and Seze forms as the ‘Mao of Begi’, using the principal towns/areas to distinguish between the speech forms.¹⁸ Fleming has included Gebsi and Medegi as varieties of the Omotic-Mao group (1984:31); it appears that Gebsi is a Hozo clan and Medegi is a Seze clan (Bender 2000:179).

What’s most important here is that these scholars each position the Mao group as an early split from Proto-Omotic. But this has not always been the predominant view of

¹⁸ It is also the case that ‘Mao of Begi’ is a common way for folks in the Benishangul-Gumuz area to refer to the Hozo and Seze groups. The names Hozo and Seze are not widely known outside of the ‘Mao’ area proper.

the Mao languages. In fact, these Mao languages were at one time considered part of Nilo-Saharan: in Greenberg's classification of African languages, the Northern Mao were listed as part of the Koman family of Nilo-Saharan (1963), which Bender (Bender 1975a:128) says was primarily based on the limited data presented by Grottanelli (1940) and, as noted earlier, on the physical appearance and shared cultural traits with Nilo-Saharan groups (Fleming 1984:31). Bender considered this possibility as well as the fact that the Mao show some similarities in speech to the Omotic languages--what he termed 'the Mao problem' (1975a and 1985). In 1975, Bender argued for an Omotic classification of the Mao group, suggesting that this finding testified to a "a relic area: the remains of a once wide-spread Omotic family in western Ethiopia, split up by Nilo-Saharan incursions from the west and later Oromo invasions from the east" (Bender 1975a:140). Later, however, Bender returned to the possibility of at least partial Nilo-Saharan participation in the development of the Mao group, suggesting that the Mao peoples may be of Koman (Nilo-Saharan) stock, ethnically (1990:592), and that the languages may be essentially 'Omoticized' Koman (Nilo-Saharan) languages--i.e. of mixed lineage (1994:158). Once he was able to complete his *Omotic Lexicon and Phonology*, Bender noted that he had written repeatedly on the 'Mao Problem' and had finally come to a conclusion:

...there is no question that the Mao languages [Hozo, Seze, Ganza and Bambassi-Diddesa (i.e. Northern Mao)] are Omotic, while the other "little languages" of the area--Komo, Kwama [Gwama], Gumuz, Berta--are Nilo-Saharan (2003:267).

Today, as noted above, thanks in a very large part to the work of Bender and Fleming, the Mao group of Omotic is seen as one of the early branches from

Proto-Omoti--an analysis which allows for these languages to innovate on their own, apart from the rest of Omotic as well as, perhaps, to maintain some elements from Proto-Omoti that were lost in the other branches. It remains to be seen what impact, if any, this grammar of Northern Mao and other work on the Mao languages will have on the understanding of Omotic and even the larger Afroasiatic family.

1.5. Notes on Northern Mao Prehistory and History

Bender argues that the original Afroasiatic homeland was near the Blue-White Nile confluence, in the area of present-day Khartoum (1997:20). Through his examination of internal linguistic developments in Afroasiatic languages, Bender suggests a series of historical splits in early Afroasiatic prehistory: first around 10,000 B.C.E. Chadic and Omotic separate, Chadic to the west and Omotic to the southeast (1997:20). Others, most notably Fleming (1983) and Ehret (1995:489), suggest that Omotic was the first to split from Proto-Afroasiatic. Whatever the details, it does appear that the Omotic languages were early to split and to arrive in the west and southwest of Ethiopia, where they have remained, diversifying for millennia (Levine 1974:28-9). Today they form a family of languages characterized by what appear to be distant relationships between some subgroups (Bender, personal communication 2006).

As noted above, Bender suggested that the distribution of the Hozo, Seze and Northern Mao languages is evidence that the Omotic language area was once much larger and has been split up by the movements of Cushitic and Nilo-Saharan speaking peoples (1975a:140).

1.5.1. The Claim of Mao Autochthony

Cerulli notes that the Mao people (referring to the Anfillo and the Mao around Begi--the Hozo and Seze, sisters to the Northern Mao under the Omotic-Mao subgroup) claim to be the “original inhabitants of the country they now occupy, which before the [Oromo] invasion in the 16th century covered a large part of Wallaga” (1956:16). The Northern Mao peoples’ own accounts of their history also claim that they were the original inhabitants.

The Northern Mao suggest that they used to live in the forests on the mountains in the area stretching between Asosa and Bambassi. They say that they were in the region before the /jàwíjě/ (the Northern Mao name for Bertha) moved into the area and, of course, long before the Oromo moved there (in the 16th century, according to Cerulli 1956:19). Northern Mao speakers point to many toponyms, which still today, while outside of the current Northern Mao area, carry names they recognize as their own. These include /afɛ/ river (in Northern Mao /áfé ~ ápé/ means ‘firstborn’ and can also be used as a male name; the river is said to be named after a famous Mao man), found to the east of the Agricultural College, near the Asosa airstrip. The rocky butte on the eastern outskirts of Asosa town, on the south side of the main road, which is widely known as /inzi/, the Mao say is a Mao name /inziñè/. The name ‘Bambassi’¹⁹ is also said to be of Northern Mao origin, though I’ve heard two different accounts: 1) the name is said to be a corruption of the Mao male name /bànfé/ and 2) the name is said to be derived from the

¹⁹ It is common in the literature to find ‘Bambassi’ written as ‘Bambeshi’; Fleming uses Bambeshi quite consistently through his many works and Bender alternates between the two. In my field work in the area, I’ve not heard the ‘Bambeshi’ pronunciation. As noted earlier, ‘Bambassi’ is listed as preferable, according to Siebert (et al. 1994:9).

nouns /bà:bé/ ‘father’ and /ásè/ ‘a thing which inspires happiness’. In Northern Mao, today, /bànǵé/ is the name of Bambassi town. It may well be that this second interpretation, as well as some of the names of other toponyms above, are the result of folk etymology. I have not yet examined other languages in the area to see if there are alternative interpretations and possible sources.

1.5.2. Invasions, Subjugations and Slavery

Throughout the history of the Benishangul-Gumuz region, the local populations have been invaded, tributized and enslaved by various rulers (Smidt 2007:758). During the 1880s, the Mahdists of Sudan took control of what is today the Benishangul-Gumuz borderland and after the Mahdi’s death, and a large army entered into Ethiopia taking prisoners (which presumably became slaves) as they went (Holt 1970).²⁰

In fact slavery was a plague visited repeatedly upon the local populations of the Benishangul-Gumuz region. Gonzáles-Ruibal writes:

One of the main conditioning features of the social lives of the Sudanese-Ethiopian borderland peoples is the strain they have been subjected to for centuries. The frontier has been anything but static in the last two hundred years, a fact that bears negative implications for the local inhabitants. They have been raided, enslaved, and banished from their lands by their more powerful neighbors, the Sudanese Nilotes, the Arabs and the Abyssinian empire... (2006:382).

In the late 19th century, the peoples of the area, including the Northern Mao and other Omotic-Mao groups, were tributary to Sheikh Khagali, who ruled from Asosa

²⁰ Perhaps the Northern Mao word for ‘foreigner’, which is /adúrkè/, is derived from an Arabicization of ‘Turk’ (with the article al- reduced to a- due to coronal deletion); the Turkish foreigners in Sudan who, in conjunction with Egyptians, were ruling Sudan were condemned as infidels by the Mahdi (Holt 1970); the Ottoman-Turks were involved in other parts of Ethiopia, in areas along the Red Sea and the eastern Somali region but this was quite a distance from the Benishangul-Gumuz area and appears to be a less-reasonable source for this loan.

(Smidt 2007:758). Montandon noted that, in the early 20th century, many ‘Mao’ (though it is not clear exactly which ‘Mao’ were referred to) were enslaved and sold in Illubabor (an erstwhile Province, found to the south) (1913:332).

Sometime in the early 20th century, a group of the Northern Mao moved from Bambassi to the Diddesa area, where some remain today and have maintained their language and culture (Siebert et al. 1993; Bender 2003; Ahland 2009). Siebert et al. (1994:9) suggests that the move to the Metahara area (in the Adama Special Wereda) was part of a resettlement project under the Ethiopian Emperor Menelik II. Siebert does not specify the reason for the Northern Mao migration to Diddesa. The oral histories of the Diddesa Mao which I collected and interlinearized suggest that this move was an attempt to escape a ‘land tax’ which had been imposed on the Bambassi area. According to the Diddesa account, those who had no money to satisfy the tax were told they they had to ‘give a child’ for the land they occupied. It is said that some fled to Diddesa to keep from giving up their children while others fled out of fear because they had no money nor children. Some speakers told me that this tax was imposed by Oromo chiefs while others have said that it was the doing of the Imperial (Menelik II) government in Addis Ababa. I have not been able to substantiate this account.

What is of particular interest to this study is the fact that the Northern Mao, along with the other indigenous populations of the region have been ruled by a variety of ‘outside’ forces who at times demanded the payment of tribute and even conducted to slave raids. This aspect of Northern Mao history is not forgotten today by any means and appears to be relevant to the status of the Northern Mao language today, as an endangered

language which many children are ashamed to speak publically. This will be addressed below, in the discussion of endangerment.

1.6. Culture

The Northern Mao economy is based on agriculture. They grow maize, sorghum, t'eff (*eragrostis tef*), barley beans, chickpeas and pumpkins. Cerulli adds coffee and the so-called false banana or ensete (1956:17), though it appears that this is more relevant for the Mao in the area of Anfillo; I have only seen small amounts of coffee being grown in the Northern Mao area today and very little ensete.²¹ The Northern Mao keep goats, sheep, chickens and cattle. They have a long tradition of honey-collecting and have suggested that this was a primary cash enterprise in the past. Cerulli describes the hives, “The beehives are cylinders made of interlaced sticks covered with various materials. They are placed on the tops of tall trees which the Mao climb by means of a long rope tied in successive loops to the smooth trunks as they climb” (Cerulli 1956:18). The beeswax and honey are sold at market still today.

The Northern Mao live in small communities, under a polycephalous socio-political organization where clan heads (usually the eldest male member of the clan) lead each clan. They are organized into non-totemic exogamous clans (Cerulli 1956:20). These clans are patrilineal and patrilocal, so most people live in smaller family groups where all the men are related by blood under the clan's head and to where the women move, from other clans in other locations. I have never seen any large gathering of more than six or so

²¹ Cerulli's work among the Mao centered in the area nearer Begi and is likely a better representation of the Hozo and Seze Mao than the Mao of Bambassi. That being said, there are many similarities both linguistically and culturally between these groups, so Cerulli's work is still very valuable to the present discussion.

homes in the Northern Mao area.

Marriages are traditionally arranged by 'sister-exchange' between clans. If a man has no sister to exchange, he may promise a brother's daughter (or another girl from the clan) who is not yet of age. In this case, a stick is cut to match the height of the young girl at the time of the promise. The stick is given as a sign of promise to the man who is to receive her. When the girl reaches the age of 15 (or thereabouts), her husband comes with the stick and claims her. Bridewealth, in the form of wedding gifts, is sometimes exchanged between the fathers of the girls to be exchanged between clans. In some cases, today, I'm told that bridewealth can be used without exchange to secure a wife, though it is not clear how widespread this practice is; my consultants tell me this is a recent practice. Also, I know some Northern Mao who have personally rejected the wishes of their clan and refused to participate in what they deemed a forced exchange. It should be mentioned that sister-exchange is illegal according to Ethiopian law today.

Hunting and fishing are primarily men's activities. Fishing is more common (and certainly more fruitful) than hunting, as larger animals have become scarce over the last century. When asked about hunting today, most of my consultants told me stories of hunts from their childhood (more than 20 years ago). The Northern Mao use traps, snares and spears extensively. Traps are still used for both fishing and hunting. Cerulli also notes the use of fish traps (1956:18). Traps for hunting larger animals, like gazelles or antelope, are made from bamboo and with a trap-door propped up on the inside by a stick on a rope. When the animal enters and touches the rope, the door is triggered and falls, enclosing the animal. Human feces is used as bait to get the animal to enter the trap.

While Cerulli (1956:19) states that the “Mao will eat only the flesh of cloven-hoofed animals” and that they “will not eat horse, ass, mule, giraffe or elephant” (here, citing Grottanelli 1940:238), it appears that this may obtain only to the Anfillo or the Hozo and Seze, near Begi, and not the Northern Mao of Bambassi-Diddesa: I have recorded multiple texts which recount hunting elephants and other animals for meat. This practice is largely lost today as elephants are no longer found in the region and the vast majority of the population (in the Bambassi area) has adopted Islam and now keeps Koranic dietary restrictions.²² The Northern Mao eat a lot of fish from the Dabus river, which flows northward (toward the Blue Nile) on the west side of Muts’a Mado k’ebele. They also commonly eat honey, beans, sorghum porridge, and maize. Injera (the traditional highland Ethiopia staple of sour-dough flatbread) is also commonly consumed in many homes, but this is not a traditional Mao food. Sorghum porridge, called /kà:lè/, is the staple food for the Northern Mao.

1.7. Religion

Today, the vast majority of the Northern Mao in Asosa Zone (i.e. in the western area) have adopted a form of Sufi Islam which has entered Ethiopia from Sudan. This appears to be a relatively recent development as the older members of the community still practice parts of their traditional system, similar to that described by Grottanelli (1940:311ff) and Cerulli (1956:32-3). The Northern Mao who live in the Diddesa valley,

²² In actuality, those over the age of 50, while they nearly always wear clothing to identify as a Muslim, they tend not to keep the Islamic practice of abstaining from alcohol and eating only Halal meats. These elders also maintain many of their traditional Mao religious practices. Younger people, who are far more likely to go to daily prayers, tend to keep Islamic practices and express concern over the fact that their elders do not.

however, have largely adopted Ethiopian Orthodox (Tewahedo) Christianity. This is not a surprise as many of the Oromo who live in the Diddesa area are also Tewahedo Christians. It appears that Islam and Christianity are relatively recent additions to Northern Mao culture as neither is mentioned in the ethnographic literature and in the Bambassi and Diddesa areas, older people still maintain at least parts of the older traditional system.

While both Grottanelli (1940) and Cerulli (1956:32) describe a two-deity system with the supreme God /yere/or /yeresi/ and a lesser sky God /kewa/ (who controls lightning and rain) among the Mao they observed, the Northern Mao only make reference to /awè/, their name for the supreme Deity (perhaps derived from /kewa/), a name which today remains in use by Muslims in Bambassi as well as Christians in Diddesa. Northern Mao elders, in particular, still practice the traditional system of consulting the /mé:fé/, who fulfills the functions of telling the future, blessing hunts and homes and offering healing remedies and sacrificial rituals. While I've been told that many (but not all) homes continue to be constructed with altar space inside for traditional religious practices, there is apparently pressure not to talk of such things--at least with foreigners.

It appears that the adoption of Islam by the Northern Mao in the Bambassi area is a relatively recent phenomenon. Cerulli mentions the conversion of the Bertha (a neighboring group) to Islam (1956:20) which she assumes to have had some impact on their social organization and the practices of their traditional religious system. No such comment is provided regarding any of the Mao people. Grottanelli (1940), also, makes no mention of Islam in his description of Mao religion, dress or cultural practices.

1.8. Culture Change

Some of the practices described by Cerulli are now becoming quite rare as the culture is being lost, presumably due to the influence of Islam in the west and Christianity in the east as well as influence from the Oromo and Bertha who are far larger in numbers. It is admitted, however, that some of what Cerulli describes may have only obtained for the Anfillo or the Hoze and Seze. Regardless, the near universal tendency (according to Cerulli 1956:19) to drink the local beer of fermented barley and maize as well as honey wine is now maintained only by the older people in the Bambassi area, who were born before Islam was widely adopted by the Northern Mao. The younger men and women in the west abstain from all alcoholic drinks. The Mao of Diddesa do not abstain from alcohol.

Additionally, both Grottanelli (1940:106ff) and Cerulli (1956:28) describe traditional dress that is no longer maintained. Traditionally, men wore a gazelle skin loincloth, which in Northern Mao was called /kembilè/ or /k'wátè/ (both words were used, according to my consultants). Women wore a plaited bark skirt (Cerulli 1956:28). Cerulli notes that at her time, these articles of clothing were already lost but that a grass cloak was still worn: "The only indigenous article of Mao dress which remains at the present is a knee-length cloak (qungo) made of long strands of dried grass knotted at one end and decorated at the neck with various grasses and bark" (1956:28). She also notes that men wore brass earrings in the right ear as well as bead necklaces and that women wore round brass earrings in both ears as well as bead necklaces. Today, Northern Mao men do not wear earrings or necklaces but the women do still wear both. Clothing today is a

combination of western clothing throughout both the western and eastern areas as well as the jalabia²³ (long white gown for men) in the west. In my experience, this pattern of dress also obtains for the Hozo and Seze today.

1.9. The Sociolinguistic Situation

The sociolinguistic situation which characterizes the Northern Mao area today is one marked by high degrees of multilingualism with West-Central Oromo (hereafter referred to as ‘Oromo’) and to a lesser extent with Bertha and then Amharic. The Northern Mao language has not enjoyed official recognition by the Benishangul-Gumuz Regional government, though officials in the offices of Culture and Education were instrumental in supporting this research and have expressed an interest in including Northern Mao speakers in the future. This lack of official recognition, however, has had a profound impact on the relative prestige of the Northern Mao language. Many in the area only know the name Mao in reference to the official Mao Komo Special Wereda, which does not include any speakers of Northern Mao.

In terms of intelligibility among the Omotic-Mao languages, the Bambassi Mao find Seze to be the easiest to understand, many words are similar, but they can’t speak Mao to each other.²⁴ When Northern Mao of the Bambassi area meet Seze Mao speakers on the road , at market or even in their homes, they use Oromo or Amharic (I have observed this personally on many occasions). My Northern Mao consultants report that

²³ The jalabia is an import from Sudan and, according to my consultants, is worn as a symbol of one’s commitment to Islam.

²⁴ The Northern Mao of Diddesa do not know about the Seze or the other related Omotic-Mao languages, as they have lived outside the area for multiple generations

the Hozo language is more difficult for them to understand than Seze and the Ganza language, even more so.

1.9.1. Dialects

The primary dialect distinctions within Northern Mao correspond to the Bambassi and Diddesa geographic areas. It should be noted outright, however, that speakers of Northern Mao in each of these locations consider the others as good speakers of their language. While there are some differences in the sound systems between the Northern Mao spoken in the Bambassi and Diddesa areas (Fleming 1988), the differences do not impede intelligibility (Davis et al. 2004). I have traveled throughout the Diddesa area with one of my consultants from Bambassi, and he never had any problems speaking his mother-tongue with the Mao of Diddesa or assisting me in transcribing Diddesa Mao texts. That being said, this Bambassi gentleman, who accompanied me, is also a speaker of Oromo and Amharic, two languages which have had a major impact on the speech of the Diddesa Mao.

As noted in the discussion of religion above, the Mao of Bambassi have adopted Islam while the Mao of Diddesa have adopted Orthodox (Tewahedo) Christianity. Due in part to this religious difference as well as to the relative differences in geographic proximity (particularly to Sudan in the Bambassi area), the languages of high prestige and sources of borrowings in these two areas differ. In the Bambassi area, Northern Mao speakers borrow heavily from Sudanese Arabic and to a lesser extent from Oromo, while in the Diddesa area, Oromo and to a lesser extent Amharic are sources for many loanwords. Perhaps not surprisingly, I have found no Arabic loans in the speech of

Didessa Mao. This fact correlates with the absence of any mention of Islam among the Mao of the Bambassi area in Grottanelli (1940) and Cerulli (1956). It seems likely that the adoption of Islam occurred after the migration to the Didessa area.

Phonologically speaking, there are minimal differences between the Bambassi and Didessa varieties. Girma Mengistu, who wrote his MA Thesis on the Didessa Mao variety, reports the presence of a contrastive alveolar implosive /ɖ/ (2007:7-8). Of particular interest is that he finds this implosive in the initial environment, as seen in [ɖɔfɛ] ‘plant’ (Girma 2007:8). I have found the implosive in Bambassi to be limited to the intervocalic environment and in fact to be an allophone of the /tʼ/ ejective (section 2.2.5 below). My notes on the Bambassi variety indicate [tʼɔfɛ] for this same word. The only other phonological distinction I have found is that Girma’s alveopalatal nasal /ɲ/ (2007:7) corresponds to the velar nasal /ŋ/ in the Bambassi variety (see section 2.2.1). I have also found the velar nasal in some of my texts from Didessa, so it appears there is some variation in terms of place of articulation, at least for some Didessa Mao speakers.

Girma reports the form /ije/ for the 3rd singular pronoun in citation form (with an initial glottal stop, which appears to be epenthetic before initial vowels--as is the case in the Bambassi variety). This form corresponds to /i-/ subject markers on the affirmative, non-future dependent verbs (i.e. non-final and subordinate verbs) in the Bambassi variety (see section 9.4.2). In Girma’s data the /i-/ 3SG subject marker is found not only on dependent verbs, but also on final verbs (which correspond to my realis (non-future) declarative). In the Bambassi variety, the 3SG subject is unmarked on these final realis verbs; interestingly, my texts from Didessa do not show any subject marking on final

realis verbs with 3SG subjects. Again, these differences suggest some variation among speakers of the Diddesa variety.

A comparison of texts gathered in the Bambassi area with texts gathered in the Diddesa area shows that speakers in Diddesa maintain two older copulas /ti/ and /na/, both frozen in form. In the Bambassi area, these forms correspond to the relativizer /-t/ and the auxiliary on the certain/immediate future on irrealis verbs (cf. sections 10.2.3.2 and 10.3.1). In the speech of Diddesa, I have observed a tendency, especially among the younger speakers, to drop the different-subject and same-subject endings on non-final verbs (cf. Chapter XII) and to use instead the bare verb stem for non-final constructions and then fully inflect the final verb.

These distinctions above are some of the most frequently attested morpho-syntactic differences between the two dialects. They have posed essentially no problem for my Bambassi Mao consultants to understand the texts and to offer clear and detailed translations, even based on recordings. As noted above, the lexical differences have mainly to do with the different languages which serve as sources for loanwords. Throughout the grammar, I will focus primarily on the Bambassi dialect, which is much larger in number of speakers, shows fewer signs of loss and for which language development and literacy program possibilities are being explored as part of a joint project between the Northern Mao community, the Benishangul-Gumuz Education Office and SIL Ethiopia. I will attempt, however, to include notes on differences in the Diddesa dialect where I am aware of them.

1.9.2. Evidence of Shift and Endangerment

According to various factors of ethnolinguistic vitality identified by UNESCO's *Ad Hoc Group on Endangered Languages* (2003),²⁵ the Northern Mao language is endangered. The UNESCO report identifies useful indicators of endangerment: number and distribution of speakers within the group and across generations (as well as the 'normal' or intergenerational transmission of the speech form), use of the language in various domains and locales, the language of education, and attitudes of the speakers toward their language (2003).

We will briefly consider each of these factors relative to the Northern Mao sociolinguistic situation. Language surveys were conducted previously in both the Bambassi and Diddesa areas, in 1994 and again in 2004. The 1994 survey focused on the geographic area and a wordlist while the 2004 survey included a sociolinguistic questionnaire. The discussion below considers the reports published previously but relies heavily on my own notes, taken during sociolinguistic interviews with roughly 20 different Northern Mao from different areas throughout the Bambassi wereda. I did not conduct sociolinguistic research in the Diddesa valley.

As discussed in section 1.3. above, the population of speakers of Northern Mao is likely somewhere between 2-3000 today, based on the 2007 census report (Central Statistical Agency 2007). Though in the early 1980s the population of speakers was estimated as high as 5,000 (Siebert et al. 1994). As the Northern Mao identify ethnically

²⁵ This document was produced by a group of 11 experts who work in linguistics and have specific experience in identifying language endangerment.

with many other ‘Mao’ groups in the area and are almost certainly related to the other Omotic-Mao groups, accurate number of ethnicity are essentially impossible to determine. That being said, based on my own observations, of those who claim to be specifically Bambassi or Diddesa Mao, the population appears to be only slightly larger than the number of mother-tongue speakers.

The majority of Northern Mao children today are still able to speak the language, having learned it as a mother-tongue (according to my interviews). The children of the Wamba k’ebele (just northwest of Bambassi town), however, have not learned to speak Northern Mao and are instead being raised speaking Oromo. These children, in some cases as old as 20 years, do not appear even to have a passive understanding of the language. One of my consultants suggests that as many as 500 Northern Mao of the area no longer speak their heritage language, having instead adopted Oromo. The children of the Muts’a Mado k’ebele (the densest concentration of Northern Mao speakers) do speak their heritage language but also speak Oromo, which they favor as the language of play, according to many of their parents. In the Diddesa valley, in the area of Gome, I met as many as 10 or so children who still speak Northern Mao well, though they also speak Oromo.

Thus, the language is still being transmitted intergenerationally in most areas that I know of, except for Wamba k’ebele. The population of speakers appears to have declined since the early 1980s but apparently so has the population of those identifying as ‘Mao’ in the census in areas which are known to be primarily ‘Northern Mao’.

Based on my own observations as well as my interviews in the area and the more

recent survey report (Davis et al. 2004), there is a clear indication that the domains of use of Northern Mao are in the process of giving way to the prevalent language of wider communication, Oromo. Even in the home, Oromo is beginning to be used, often mixed with Northern Mao, according to some speakers. Other speakers have testified that they only use Oromo ‘on the road’ and ‘at market’ (i.e. in public places where speakers of other languages may be found). Interestingly, all those who say they speak only Northern Mao in the home identify ‘farming’ as their careers. Those who work in Bambassi town or who travel frequently to Asosa (the Asosa Zonal capital) say they mix Northern Mao with Oromo in the homes.

Outside of the home, most respondents testified that they use Northern Mao on the roads in the area but have said that their children often refuse to speak Northern Mao when on the road to market in Bambassi. I’ve been told that some of the children fear being identified as ‘Mao’ and prefer to speak Oromo and, if they’ve gone to school, Amharic (children in the area don’t tend to learn Amharic outside of the classroom). At the Bambassi market (the largest in the area), the language of trade is Oromo. I met no monolingual Northern Mao speakers in the area (though I’ve been told that some women who live in remote areas of Muts’a Mado k’ebele speak only Northern Mao). This does not appear to be the case for the men.

In the mosques in the Bambassi and Asosa areas, Northern Mao speakers use either Arabic, Oromo and, to a lesser-extent, Bertha. Though in personal prayers, many Northern Mao said that they preferred to use their mother-tongue. In the Diddesa area, those Northern Mao who know Amharic use it when attending a church but switch to

Oromo upon leaving the church grounds. They only use Northern Mao with other Northern Mao.

When talking to government officials or the police in Bambassi, the Northern Mao use Oromo primarily. In Asosa, however, those who can, prefer to use Amharic with officials of the Benishangul-Gumuz Regional State; presumably this is because some officials come from other parts of Ethiopia and do not speak Oromo.

Thus, Northern Mao is reserved for use in the home and related domains (such as personal prayers) and is essentially not used outside the home. In reference to the UNESCO report's terminology, the language use pattern is characterized as "dwindling" (2003:10). That is, the language is not used outside the home domain, and there is evidence that the more dominant language, in this case Oromo, is beginning to be used in the home.

Some Oromo who live in the Muts'a Mado k'ebele have reportedly learned to speak Northern Mao, though the number seems to be relatively small. I've not met any non-Mao speakers of Northern-Mao, save one Bertha woman who married a Northern Mao man and who moved into the Muts'a Mado area.

Certainly, it appears that most non-Mao do not learn to speak Northern Mao; it would be particularly difficult to learn considering that it is not used outside the most personal domains.

While the Bertha and Gumuz (both in the Benishangul-Gumuz region) are using their mother-tongues in the schools of their areas (up to grade 4) with a switch to Amharic as a medium of instruction until grade 7 and then English through grade 12, the

language of the schools in the Northern Mao area is primarily in Amharic, with Oromo used by some teachers. At issue here is the fact that, at the present time, there is not yet an approved orthography for the Northern Mao language (official orthographies must receive government approval through the Education office in Asosa). In fact, preliminary literacy primers have not yet been produced (cf. the discussion of language development plans in section 1.9.3, below).

A fundamental challenge to the development of Northern Mao has been that while many Northern Mao have expressed an interest in developing literacy materials and using the language in local schools, their language is not counted distinctly in the Ethiopian census (from other ‘Mao’) and is thus not generally known to be an independent language by officials in Asosa (officials in the Culture and Tourism Office in Asosa are aware of the issue and have been instrumental in assisting with this research project).

Attitudes of speakers toward their own language as well as their attitudes to the other languages in the area play an important role in perceptions of relative prestige. Most Northern Mao adults are very proud of their language, though they recognize that they are relatively small in number and for this reason don’t speak it publically, unless with other Northern Mao speakers. They desire to have literacy materials and to use it in their schools. Children of school age, however, are much less comfortable with their language outside the home. I have recorded texts which report children complaining of being called ‘backwards’ and even ‘dogs’ for speaking their mother-tongue in the Bambassi area in the presence of other non-Mao children. The adults have suggested to me that this is the result of lack of language development (i.e. there are no dictionaries or

literacy primers or educational materials in the language and therefore, other children see the language as something which does not belong in schools or towns) as well as their history of slavery and mistreatment.

The limited use of Northern Mao, restricted primarily to the home domain (with some Oromo encroachment into the home as well), the loss of the language by children in Wamba and the negative perception of the language by children in the Bambassi area all point to the endangerment of the language. Though, it must be stated, the loss of the language is not inevitable. There is a strong desire to see the language written and used in school, and this may be helpful in changing perceptions, by Northern Mao and others alike, that Northern Mao is somehow less of a language than Bertha or Gumuz or Oromo. Literacy development as well as the development of pedagogical materials, dictionaries and the like coupled with an acceptance by the Regional officials that Northern Mao is an independent language and thus worthy of official recognition and even development for use in the schools is needed.

1.9.3. Plans for Language Development

As noted above, the Northern Mao have expressed an interest in writing their language and using it in the schools. For a few weeks in the Fall of 2008, I and a group of Northern Mao speakers, mostly from the Bambassi area, were invited to participate in an educational materials workshop held by the Benishangul-Gumuz Regional Education Office and facilitated by SIL Ethiopia personnel. The presence of a small group of five speakers of the Northern Mao community was an important first-step in getting the Northern Mao community and their language recognized.

While the other linguistic groups present at the workshop (Bertha, Gumuz and Shinasha), were further along in developing their materials, we did complete a somewhat rough first draft of a pedagogical grammar of Northern Mao, which after revisions may be translated into Amharic. The materials have not yet been adopted for use as the orthography has not been adequately tested and approved throughout the Northern Mao community nor approved by the Regional officials. Tentative plans are in place to begin work on an initial literacy primer for orthography testing in the Northern Mao community in 2012.

1.10. An Overview of Previous Research

The Omotic family of languages has the distinction of being the least studied language family within the larger Afroasiatic phylum (Bender 1990:584; 2003:266). Additionally, Hayward (2000) termed Omotic the ‘empty quarter’ of Afroasiatic due to the overall lack of linguistic documentation of these languages. Within the weakly-documented Omotic family, the Mao languages themselves are said to have the weakest documentation (Bender 2000:180). Before this present study, the most ambitious studies undertaken were Baye Yimam’s sketch of Bambassi Mao’s phonology and syntax (2006), based on a list of roughly 250 words and elicited sentences, and Girma Mengistu’s 2007 sketch of Diddesa Mao morphosyntax which followed a minimalist approach in line with Chomsky’s paradigm.

Baye Yimam’s 2006 work is descriptive in nature and includes a brief phonology sketch, including an inventory of phonemes, evidence for contrastive vowel length, evidence of contrast for two levels of tone, phonotactics, syllable structure and various

phonological processes. He also includes a survey of some basic word categories, morphology and some sentence constructions. Girma Mengistu's work on Diddesa Mao (2007) also includes a brief report on the phonological system. The second chapter deals primarily with theoretical issues related to the Minimalist paradigm which he uses and his third chapter offers a description of the morphological facts which play into his study: these include primarily subject markers on verbs, some tense, aspect, and mood (speech-act/utterance type) distinctions. The fourth chapter offers an analysis of these findings, pertinent to the chosen theory. Some of what's reported in Baye Yimam 2006 and Girma Mengistu 2007 has been analyzed differently in this grammar, perhaps the result of working with different consultants as well as the reliance on texts and larger sets of data. That being said, this grammar should be seen as building upon these earlier pioneering works and references to these earlier works are made throughout.

Apart from these recent works, the extant literature on Northern Mao contains extremely little on the structures of the language. There are no annotated texts or publically available recordings whatsoever (apart from Ahland 2009, which is published electronically and contains links to sound files for the phonological examples). Grottanelli (1940) gives general information on ethnicity and culture, though deciphering which 'Mao' language is referred to is at times very difficult. Fleming (1988) examined the linguistic history of both Northern and "Southern" (Hozo and Seze) Mao, hypothesizing a particular set of consonants for the Proto-Mao language. Bender published short word lists, pronoun sets and partial paradigmatic information on the verb morphology of Northern Mao (1985, 1990, 2000, 2003). Siebert et al. (1994) included

some words of Northern Mao. Wedekind and Wedekind (1993) provided a three-page sketch of a few features of the sound system. Previous information on Northern Mao does not account for processes involving tone or consonant “agreement” within words involving sibilant consonants such as [s, z, ʃ, ʒ], and various grammatical features described for some other Omotic languages.

Relative to the larger Afroasiatic family, it has been suggested that Omotic may have been the first language to diverge from Proto-Afroasiatic (Fleming 1983, Ehret 1995:489). It has been argued that reconstruction of Afroasiatic has centered more on phenomena found in the Semitic subgroup of Afroasiatic than phenomena within Omotic or other subfamilies (Hayward 2000). The documentation of Omotic languages, including Northern Mao, may redirect the understanding of the Afroasiatic family as a whole (Hayward 2000:243). Hayward points out that many, if not most, of the features generally considered typologically common to Afroasiatic are not found within Omotic, at least not in those languages of which we possess descriptions (2000:243). Thus, the study of these languages will help scholars remedy the “heavy bias towards Semitic” which has played a role in much of the Afroasiatic reconstruction work thus far (Hayward 2000:244).

It remains to be seen how widely some of the features which have been reconstructed for Proto-Omotic have been retained in the Northern Mao area, which is the most northern reaches of the Omotic language area; also, it has been suggested that the Mao group is an early off-shoot of Proto-Omotic, forming its own subgroup directly under the proto-language (Hayward 2000:242; Bender 2003:3). It is my hope that this phonological and grammatical description and documentation of Northern Mao will serve

to increase the understanding of Mao history and perhaps shed more light on the structures present in Proto-Omotoc as well as the internal structure of the Omotic family.

1.11. A Typological Overview of Northern Mao

Before embarking on our journey into the minutia of Northern Mao, I will briefly sketch out some of the important features of the Northern Mao language, offering a typological overview. The discussion below will highlight and cross-reference aspects of Northern Mao phonology, morphology, and syntax which are highly salient in the language or which may be of particular typological interest.

1.11.1. Phonology

Northern Mao has 22 contrastive consonants (section 2.2.1) and a five-vowel system with phonemic length (section 2.3). The consonants include four ejectives, with a particularly robust and frequent bilabial ejective /pʔ/, and an allophonic alveolar implosive /dʔ/, in relationship with the alveolar ejective. Sibilant harmony (cf. Hayward 1988:287) is attested in roots and across morpheme boundaries (section 2.2.6).

There are three contrastive levels of tone (section 2.5.1), and the mid tone can be subdivided into two underlying tones based on behavior (sections 3.2.1.1 and 3.3.2). Tonal phenomena in Northern Mao appear to require the use of both tone and register features (sections 3.1, 3.1.1, 3.1.2 and 3.2.1.1). Nouns in citation form exhibit one of seven tonal melodies (section 2.5.2), which by their behavior form nine tone classes (section 3.3.1). When nouns are modified syntactically, however, these seven surface melodies collapse into three melodies (the so-called construct noun melodies, section 3.3). Monosyllabic finite verb stems exhibit H, M or L melodies (section 2.5.3), while

infinitive verb stems exhibit tonal melodies following the seven surface melody/nine tone class system of nouns (sections 3.6 and 9.2). In some cases single root lexemes can correspond to three different tonal melodies, distinguishing noun, finite verb stem and infinitive verb stem forms of the lexeme (section 3.6).

1.11.2. Morphology

Most Northern Mao word forms can be characterized as polysynthetic-agglutinative, in terms of Comrie's 1989 synthesis and fusion indexes. While nouns frequently exhibit three or four morphemes per word, and sometimes more (sections 4.2, 4.4.1, 4.5 and 4.6), verbs can include many more morphemes (sections 9.1, 9.2, 9.4 and 9.5). Most morphemes can be easily parsed and glossed as individual pieces (i.e. they are agglutinative); that said, there are a handful of morphemes where either two or more meanings are associated with a particular form (e.g. same/different/temporally-integrated non-final markers, section 12.2) or where a morpheme cannot easily be parsed separately (e.g. various grammatical tone phenomena such as finite or infinitive tone melodies, section 9.2).

1.11.2.1. Noun Morphology

All nominals in Northern Mao (nouns, pronouns, demonstratives and deverbal nominalizations) are marked with a terminal vowel /e/ when they are cited extrasyntactically or when they occur utterance-finally (sections 4.2.1 and 8.2). The terminal vowel's tone is dependent on the noun tone class and may be H, M, or L (section 3.3.1). Nouns may be marked with dual or plural suffixes; singular number is zero-marked (section 4.2.2). Northern Mao does not exhibit any gender marking on any

element.

The most productive means of nominal modification is the associative construction, where two or more nominals are joined phonologically into a single word form, which in some cases (but not most) has resulted in true compound forms with conventionalized semantics (section 4.4.1). Head nouns in the associative construction take a special form (the so-called construct noun form, section 4.3), and are marked by H tones on their first syllable in certain tonal environments (section 3.2.2).

1.11.2.2. Verb Morphology

Northern Mao's verb morphology is significantly more complex than nominal morphology. In the discussion below, I introduce two widespread oppositional relations relevant to verb forms and briefly survey the verbal morphology.

The verbal system exhibits two important oppositional categories: realis vs. irrealis (section 9.1) and the use of finite vs. infinitive verb stems (section 9.2). Realis and irrealis verbs exhibit different item-arrangement patterns in their respective word forms: realis takes subject-person prefixes while irrealis takes subject-person suffixes and bound auxiliary elements.

The realis category is associated with affirmative, non-future tense (section 9.1). Realis verb forms express morphologically unmarked non-future tense with a wide array of morphologically marked aspectual distinctions: two perfect constructions (sections 10.2.2.2 and 10.2.2.5), past habitual (10.2.2.3), past and present progressive (section 10.2.2.4), completive (section 10.2.2.6), durative (section 10.2.2.7), iterative/continuative (section 10.2.2.8), and non-past habitual (section 10.2.2.9).

The irrealis category is associated with affirmative future, negative non-future, and counterfactual constructions (section 9.1). Irrealis verbs express future tense (both a general future, section 10.2.3.1, and a certain/immediate future, section 10.2.3.2) with a future tense suffix, followed by subject-person suffixes and bound auxiliary elements; irrealis verbs can also express perfect aspect (section 10.2.3.3). The negative irrealis verb can express both future or non-future tense, through either the presence or the lack of the future tense suffix. Irrealis verbs can also be morphologically modified to express a simple counterfactual or a special counterfactual form found only in hypothetical conditional constructions (section 10.2.4).

Both realis and irrealis verb forms can be used in declarative and interrogative constructions (section 9.1). The realis form is also used in affirmative non-final/medial verbs (section 12.2) while the irrealis form is used in negative non-final/medial verbs (section 12.3). The most finite subordinate verb constructions also make use of the realis vs. irrealis distinction.

In contrast to all the preceding contexts, most highly nominalized subordinate verb constructions (relative clauses, subject complements, some object complements and some adverbial clause constructions) do not display the realis/irrealis item-arrangement contrast (section 9.1). Most verbs in imperative and jussive utterances also do not exhibit either the realis or irrealis verbal forms (section 9.1).

The second major oppositional relation in verb forms involves the use of the finite vs. infinitive verb stems. This opposition is marked by different tonal melodies. Verbs in declarative and interrogative utterances require the finite verb stem when affirmative,

while their negative counterparts require the infinitive verb stem (sections 3.6 and 9.2). Verbs in imperative and jussive utterances exhibit a more complicated pattern where some forms require the infinitive stem for affirmative polarity (imperative, 3rd person jussive, impersonal jussive, and polite (hortative) imperative) (section 10.4.3). Negative 3rd person jussive and negative polite (hortative) imperatives require the finite verb stem, making use of the opposition as part of the polarity marking (section 10.5.3). The negative imperative, however, like its affirmative counterpart, requires the infinitive verb stem (section 10.5.3). The general use of the infinitive verb stem with negative polarity is likely the result of the negative marker having been derived from an older nominalizing subordinator. Remnants of old copular and auxiliary elements can be seen on all negative verbs. The synchronic evidence in the more highly nominalized subordinate verb constructions shows that the infinitive verb stem continues to be used on nominalized subordinate structures, whether affirmative or negative (sections 13.2 and 13.3).

Affirmative irrealis future verbs in declarative utterances may optionally take an affirmative prefix (section 9.6.1). Realis non-future verbs show a more interesting pattern, where the affirmative prefix has become fused with (and non-separable from) the 1st and 2nd person dual and plural subject prefixes (section 9.6.2). The affirmative prefix remains optional on 1SG and 3rd person realis verbs. It is never attested on 2SG realis verbs. This same prefix is prohibited on both irrealis and realis content interrogatives, except where it has fused historically with the realis subject prefixes (section 9.6.3). The affirmative prefix is required on polar interrogatives where the expected answer is affirmative (section 9.6.3). The affirmative prefix is not found on verbs in imperative and jussive

utterances.

The subject markers (prefixes on the realis verb and suffixes on the irrealis verbs) are quite interesting in themselves, providing important clues to the history and development of the irrealis future verb form (sections 9.4 and 9.5). The realis subject prefixes (minus the fused material from the affirmative prefix in the 1st and 2nd person non-singular forms) are very similar in shape to the subject suffixes on the irrealis non-future verb (section 9.4.1). However, the irrealis future subject suffixes show an intrusive bilabial nasal on the 2SG and all 3rd person forms; this intrusive nasal is the result of a reanalysis of the final consonant of the future tense suffix which immediately precedes the subject suffixes (sections 9.4.1 and 9.5). The historical scenario is that the irrealis future verb derived from an old periphrastic subordinate verb + final verb construction: the old subordinator was reinterpreted as the future tense suffix, and its final vowel filled phonological gaps in the following subject markers which were formerly prefixes on the final verb before the entire construction fused into a single word form (section 9.5).

It is also worth noting that while subject markers may be clitics in some Omotic languages (Hellenthal 2010:448ff), they may not be separated from the Northern Mao verbal word.

Other verbal morphology of particular interest includes valence-decreasing derivational suffixes (the passive, reflexive and reciprocal, section 9.7.1) and valence increasing derivational suffixes (the applicative and causative, section 9.7.2). Some verbal morphology appears to be the historical result of serialization and then compounding of verb stems (sections 9.8 and 12.6). Today, the new complex verb stems

are surrounded by verbal prefixes and suffixes, showing the entire construction to be a single verbal word. Verbal compounding is particularly relevant to the historical development of perfect, completive and durative realis aspectual constructions (sections 9.8.1 and 12.6) which involve the productive addition of the grammaticalized verb stems ‘have,’ ‘finish’ and ‘sit’ (respectively) to lexical verb stems. Additionally, the cislocative and translocative directional constructions involve historical compounding of the grammaticalized verb stems ‘come’ and ‘go’ (section 9.8.2).

Northern Mao final verbs carry word-final utterance type (mood) markers for declarative, hearsay (a subset of the declarative), interrogative, imperative and jussive (section 10.4)

1.11.3. Pronouns

Northern Mao has a set of nine pronouns, with singular, dual and plural forms for each person (section 5.1). The pronominal inventory has undergone several important innovations, which has resulted in only two of the nine pronouns (the 1SG and 2SG) clearly corresponding to pronouns of the other Mao languages (section 5.1.1).

The first major innovation involved degrammaticalization of subject prefixes which had previously accreted to themselves the intrusive affirmative prefix (see above and section 5.1.2). This was accomplished simply by pronouncing the now-“large” prefix as a separate word with addition of the nominal terminal vowel, so that a bound element became free.

The degrammaticalization could have been motivated by the fact that subject prefixes are required on verbs and are thus much more frequently attested than were any

original free form pronouns in Northern Mao.

The second major innovation in the pronominal system was the development of dual marking (section 5.1.2). Dual marking developed first in 1st and 2nd persons: the original simple plural was apparently reinterpreted as semantically dual (along with a polar tone change, L > H) when a plural suffix on the pronoun began to be used for plural meaning (section 5.1.2.3).

The 3rd person pronouns are also new developments internal to Northern Mao. They all involve the same old demonstrative base, with the addition of number marking suffixes found on nouns, followed by the terminal vowel (section 6.3). The old demonstrative has also been separately grammaticalized as a definite article (section 6.3).

1.11.4. Syntax

In the brief summary of typologically significant syntactic features, below, I introduce Northern Mao's constituent order, verbal valence, a class of labile verbs, non-final/medial verbs and clause chaining, subordinate clauses, case marking, and alignment patterns.

By far the most frequently attested word order in transitive constructions is SOV. In terms of a typology of constituent order, Northern Mao follows the OV pattern outlined by Greenberg (1963). Table 1.1 lists Northern Mao constituent order patterns relative to Greenberg's universals (Table 1.1 is inspired by a similar table in Payne 1997:67). The final column of Table 1.1 provides cross-references to sections where the relevant constituency order is illustrated in the grammar.

Table 1.1. Northern Mao's OV Constituent Order and Greenberg's Universals

Greenberg's Universal	Parameter	Northern Mao Pattern	Cross-referenced Sections
1	main clause	OV	11.2 and 11.3
3, 4	adposition	postposition	8.3.2
2	genitive (possessor) and head noun	Genitive - N Possessor - N	4.4.2.2 and 8.1 and 8.3.1.3 4.4.3 and 8.1
17	modifier and head noun	Modifier - N	4.4.2 and 8.1
24	relative clause and head noun	Relative Clause - N	8.1 and 13.2
22	comparatives	Standard-Marker-Quality	11.1.4
16	inflected auxiliaries	sentence final	9.1 and 10.3
9	question particles	sentence final	10.4.2
12	question words	sentence initial or <i>in situ</i>	5.4.2
27	affixes	primarily suffixes	4.2 (nouns) and 9.1 (verbs)

Northern Mao is a highly consistent OV type. Perhaps the only exception is the presence of two verbal prefixes (the affirmative prefix and subject marking on the realis verb), where one might expect exclusive suffixing in an OV language.

While most Northern Mao verbs can be classified as intransitive (section 11.1), transitive (section 11.2) or ditransitive (section 11.3), some verbs are labile and can occur in transitive or intransitive constructions with no morphological marking to change the valence (section 11.4). These verbs can be classified as either middle or experiencer verbs. The middle verbs take a patient or theme subject in intransitive constructions and an agent subject with patient or theme objects in transitive constructions. The experiencer verbs take experiencer objects in transitive constructions and may be subdivided into those which always require a semantic experiencer, regardless of the construction, and those that allow a wider variety of semantic roles as subject but take experiencer objects when the subject is a non-referential 3rd person.

Northern Mao utterances frequently involve non-final (medial) clauses. If the non-final clauses convey temporally sequential events, then they are morphologically marked as either having the same or different subject as the following clause's verb. If

the non-final clauses convey temporally-integrated (overlapping to some extent) events with the event of the following clause, they are simply marked as “non-final” and carry subject marking prefixes; they do not carry switch-reference markers (section 12.1). Events expressed with the same- and different-subject non-final verbs may also be read as causes or reasons for the following event, or as the manner of the following event when the context allows (sections 12.2.1 and 12.2.2). In each instance, however, the sequential reading appears to be the most basic and is always an option. It is not at all unusual to find as many as five or six non-final same-/different-subject clauses in a single sentence.

The temporally-integrated non-final verbs function more like adverbials, and as such fit better with Haspelmath’s 1995 definition of a converb, which he defines as prototypically adverbial. Unlike the same-/different-subject non-final verbs/clauses, temporally-integrated non-final verbs/clauses do not express main line events; they more prototypically express presupposed information. In natural discourse, I’ve not observed more than one temporally-integrated non-final clause in a single sentence--another feature which suggests that temporally-integrated non-final clauses may be best analyzed as adverbial.

Separately from the non-final constructions, Northern Mao’s subordinate clauses include relative clauses (section 13.2), highly nominalized subject complements (section 13.3.1), object complements which show a range of finiteness degrees (section 13.3.2), and a wide array of adverbial clauses (section 13.4) including three morphosyntactically distinct conditional constructions: the simple conditional (‘if, then’), the uncertain

conditional ('whether X or not, Y obtains'), and the hypothetical conditional ('if X were to obtain, Y would occur') (section 13.4.2).

Northern Mao's alignment system is generally a nominative-accusative system. There is a relationship between the single ('S') argument of an intransitive and the most agent-like ('A') argument of a transitive. This relationship is apparent through both coding and behavioral properties, including word-order, bound-pronominal verbal morphology, and case marking, (sections 14.2 and 14.3), as well as the switch-reference system on non-final verbs (sections 12.2 and 14.3). I gloss the required morphological case marker on 'S' and 'A' arguments as 'subject' (SBJ) (section 8.3.1.1).

The other argument of a transitive construction ('P') exhibits distinct coding from the 'A' (and 'S') argument: an optional object case marker when in canonical pre-verbal position but which is required when the object is positioned before the subject (section 8.3.1.2). Objects are not marked on the verb and are not relevant to the switch-reference system itself, though same-objects are frequently elided in each transitive clause in a clause chain; when a different object is not overt, the same object is a definite null (section 12.4).

The object case form is functionally less-marked than the subject case form (which is used only for grammatical subjects): 1) the object case marker is not required on syntactic objects (patients, themes, recipients or benefactives) when they are preverbal (section 8.3.1.2); 2) it is also used for semantic goals in movement predications (section 8.3.4); and 3) it marks the standard in comparative constructions (section 11.1.4). Given that subject case is both morphologically and functionally marked and that object case is

functionally less marked, the Northern Mao alignment system can be characterized as a particular subtype of a marked-nominative system (section 14.4), if one does not disqualify such terminological choice on the grounds that the object case marker is not used on the citation form of the noun (König 2006). Nouns cited extrasyntactically exhibit only a terminal vowel, not either of the case marker forms (section 4.2.1).

To summarize, throughout section 1.11 we have surveyed a number of important features of the Northern Mao language. We are now ready to begin exploring the language in its myriad details.

CHAPTER II

CONTRASTIVE PHONOLOGY

2.1. Introduction

Issues of more general typological interest in the Northern Mao phonological system include the phenomenon of sibilant harmony which exhibits itself both as a root constraint word-internally as well as a harmony system across morpheme boundaries, vowel harmony, contrastive vowel length, a set of four ejectives including the areally rare /pʔ/ and a tone system with three contrastive heights.

This chapter²⁶ is limited in scope to an examination of the contrastive features of the phonological system as well as word-internal constraints. The discussion includes inventories of contrastive consonants, contrastive vowels, an examination of the vowel space, contrastive vowel length, vowel harmony in roots, syllable patterns, sibilant harmony, and an inventory of surface tonal melodies in nouns and verbs in citation form.

2.2. Consonants

There has been some discussion in the literature regarding the inventory of contrastive consonants. While Wedekind and Wedekind (1993:11-13) have provided a brief sketch of various aspects of Northern Mao phonology and posit 23 consonants,

²⁶ An earlier form of Chapter II was originally presented as a paper at the 5th Cushitic-Omoti Conference in Paris in 2008 and later published as “Aspects of Northern Mao Phonology” in *Linguistic Discovery* (Ahland 2009). In keeping as much as possible with the published version, tones are written with letters H (High), M (Mid), and L (Low) with a raised arrow to indicate downstep: ⁴H, ⁴M. Changes to the original publication which appear here include: an abbreviated introduction (removing material covered in Chapter I) and the addition of 2. to section numbers, designating the sections as subparts of Chapter II. In some cases, data have been parsed and glossed differently, as required by more recent findings. These changes include: the separation of the terminal vowel /-e/, glossed as TV; the parsing of the relativizer (REL) as /-t/; the /ha-/ prefix is now glossed as AFF- as it is no longer considered a declarative marker; the final /-a/ on verbs in citation form is now glossed as declarative (DECL); when the tone of the DECL /-a/ marker is M (after H verb roots), this is now indicated as a downstepped H (⁴H).

Bender (2000:182) lists 24 with significant differences. Bender posits a set of voiced plosives, whereas Wedekind and Wedekind suggest these are in an allophonic relationship with the voiceless series. Wedekind and Wedekind report the existence of an alveolar implosive / retroflex, as well as a voiced post-alveolar affricate and a palatal nasal, all of which Bender notes as lacking in his data. Baye Yimam adds to the discussion, claiming the existence of the voiced post-alveolar [ʒ] (2006:168), which is usually found to be in complementary distribution with other consonants within Omotic, as is the case of [ʒ]~[dʒ] in Koyra (Hayward 1988:273).

2.2.1. Phonemic Consonants

Table 2.1 exhibits the full inventory of contrastive consonants found in Northern Mao. As noted in the introduction, these data are based on a collection of more than 3,000 words and phrases, as well as thirty fully interlinearized texts. There are a total of 22 contrastive consonants. The voiced plosives are indeed contrastive, as Bender suggested. While there is an alveolar implosive, its distribution is predictable relative to the ejective /tʰ/, as discussed below. The presence of the affricates is limited: only a single example of the voiceless post-alveolar affricate has been found in the entire set of data and this is in free variation with the /ʃ/ across the speech community; the voiced counterpart [dʒ] is more frequent, though limited entirely to borrowed words, mainly from Arabic and is thus not included in the chart below. The ejective post-alveolar affricate is also limited to borrowed words and is not included in Table 2.1. The palatal nasal is predictable in relation to the alveolar, which is far more frequent, as noted in the discussion below, section 2.2.5.

Table 2.1. Contrastive Consonant Inventory

		Bilabial	Alveolar	Post-Alveolar / Palatal	Velar	Glottal
Plosives		p b	t d		k g	
	glottalized	p'	t'		k'	
Fricatives			s z	ʃ		h
Affricates				(tʃ)		
	glottalized		ts'			
Laterals			l			
Taps			r			
Nasals		m	n		ŋ	
Approximants		w		j		

The data in Appendix A provide evidence of contrast between each of the consonants and their most phonetically similar counterparts. Since long vowels in monomorphemic words carry only a single level tone, only one tone is indicated per long vowel. These tones are represented by the letters H, M or L.²⁷

2.2.2. Suspect Consonants and Those Limited to Borrowed Words

As noted above, only a single example of the affricate /tʃ/ has been found in non-borrowed words. This is found in the far-distal demonstrative /gjetʃ-e/ HH ‘that’. It is quite clear that this affricate has today merged with the /ʃ/ for the most part. Some speakers still produce it consistently in this one word while others alternate between the affricate and the fricative. As a result, the consonant is listed in parentheses in the consonant chart in Table 2.1. The other examples of post-alveolar affricates (either voiced or glottalized) are found exclusively in borrowed words:

²⁷ H, M and L notations indicate high, mid and low tones, respectively. These are the only levels which are contrastive in Northern Mao and typically are the only levels found at the level of the ‘word’. Within long phrases and clauses, additional levels are detectable but are due to processes which are beyond the scope of an examination of contrastive phonology. These phenomena are covered in Chapter III.

(2.1) /kʷurtʃˀ-maŋkʰ-e/ H MM cut-disease-TV
‘leprosy’ (perhaps from ‘cut’ in Amharic).

(2.2) /dʒa:nib-e/ LHH hell-TV
‘hell’ (from Arabic)

(2.3) /aldʒa:b-e/ LHL charm/amulet-TV
‘charm; amulet’ (from Arabic)

Bender reports the existence of /ts/ and /dz/ in Northern Mao (2003:305). Only the ejective /tsʰ/ is attested as contrastive according to this author’s data. In the forms where Bender reports [dz], this author finds /z/ in the speech of most speakers: in words for ‘dig’ /ha-kwinz-a/ MH^lH and ‘hit’ /ha-hez-a/ MH^lH. Two of the speakers consulted do exhibit the alternative [dz] in ‘hit’, though not in ‘dig.’ Since this is the only instance of this phone found thus far, and since [dz] is not found initially, the interpretation as a sequence is preferable. No example of the non-glottalized [ts] has been found.²⁸

In terms of borrowed words, Arabic loans are found throughout the speech of those living in and around Bambassi (most typically related to names for clothing as well as religious terminology) but are not found in the speech of those speakers living in the Diddesa valley. It seems likely that the Arabic loans found in Bambassi were borrowed after the emigration to Diddesa, which is said to have occurred an estimated 60 years ago (Siebert et al. 1994:9).

²⁸ It should also be mentioned in this discussion of sounds which have been reported for Northern Mao, that while Fleming reconstructs *mb as a prenasalized stop for the Mao languages, (Fleming 1988:39) there is no evidence for prenasalization in Northern Mao (i.e. no nasal-obstruent sequences occur word-initially).

2.2.3. Free Variation within /p/: [p], [f] and [ɸ]

The phoneme /p/ exhibits variation between the phones [p], [f] and [ɸ], found in every environment, initial, medial and final (final is only attested in connected speech and is thus not utterance final).

(2.4) [puw-ε] ~ [fuw-ε] ~ [ɸuw-ε] HH traditional.beer-TV

(2.5) [hup-ε] ~ [huf-ε] ~ [huɸ-ε] MH brooding.of a hen-TV

(2.6) [ʔap pʔiʃ-ε] ~ [ʔaf pʔiʃ-ε] ~ [ʔaɸ pʔiʃ-ε] MML uncle + child-TV

This variation is optional, and in many words all three variants are recognizable to speakers as the same sound,²⁹ represented in this paper with /p/, undoubtedly the historical source (Fleming 1988; Bender 2003). Some speakers show signs of a split, where [f] is produced without variation in a small number of lexical items, as in /a:p-e/ HH eye-TV ‘eye’, but this is not yet spread widely throughout the community of speakers.

Fleming (1988:38) notes a ‘small tendency’ for /p/ to be expressed as its allophone [f], noted in both the Bambassi-Diddesa and Sezo varieties. Fleming reconstructs *p which is attested in other so-called Mao varieties (including Hozoid and Sezoid) but does not reconstruct the innovative [f] (1988). In Northern Mao today, the variation is most frequent intervocally but, as noted above, is attested in all environments, in both the Bambassi and Diddesa varieties of Northern Mao.

²⁹ When speakers have been questioned about any of these three sounds, the response is that different speakers will use different pronunciations [p], [f] or [ɸ]. In some cases, however, speakers will produce all three variants in the same word in different utterances.

Baye Yimam suggests that labial stops /p/ and /b/ are weakened (spirantized) in intervocalic environments (2006:173). While the spirantization of /b/ must be a feature of the speech of some (according to Baye Yimam's findings), it is not indicative of the entire community. The spirantized /b/, as a voiced bilabial fricative, is not attested in the data in this study, nor was it found when Baye Yimam's data were re-elicited from this author's Northern Mao consultants. The database used in this study yields the following results: 1) only the voiceless labial stop appears to weaken, exhibiting the fricatives [ɸ] or [f]; 2) spirantization of [p] is also attested in both initial and final environments; and 3) the relationship is best characterized as variation and not complementary distribution, as the process is not obligatory and is not found to be consistent within the speech of even a single speaker (among those consulted), much less the community.

This variation of [p], [f] and [ɸ] is found elsewhere in Omotic, as well. Rapold notes that in Benchnon, /p/ may be expressed as [p], [f] or [ɸ] in any environment (2006:73) and notes that the process appears to be optional. Variation between [f] and [ɸ] is noted in Dizin (Beachy 2005:26).

2.2.4. Glottal Stop Epenthesis

The glottal stop is predictable under a strictly phonemic analysis, as an onset to all vowels which exhibit no other onset, and is thus considered epenthetic. Unambiguous syllable patterns in Northern Mao show CV and CVC types (section 2.4). Where an onset is not already filled, a glottal stop is realized:

- (2.7) /es-e/ [ʔɛ.sɛ] ML person-TV 'person'
 epenthesis to fill onset in nominal root

- (2.8) /ha-ɨʃ-a/ [ha.ʔiʃ.a] MMH AFF-drink-DECL ‘s/he drank’
epenthesis to fill onset in verbal root
- (2.9) /maw-es-e/ [ma.wɛ.sɛ] LHL Mao-person-TV ‘Mao person’
onset provided by first word in compound
- (2.10) /ham-ɨʃ-a/ [ha.mi.ʃa] MMH 1PL-drink-DECL ‘we drank’
onset provided by prefix

In both (2.7) and (2.8), the glottal stop is inserted to meet an onset requirement; in (2.9), the first word in the compound, /maw/ L ‘Mao’, provides the onset for /es-e/ [ʔɛ.sɛ] ML person-TV ‘person’. Likewise in (2.10), an onset is provided by the 1PL prefix /ham-/. Some speakers occasionally maintain the glottal stop in very slow careful speech as an onset to verb roots, even when an onset is provided. This has not been attested in nouns (as in example (2.9)). But no speaker consulted has exhibited this maintenance of the glottal in verb roots consistently, even in hyperarticulated speech. The analysis of the glottal stop as an epenthetic consonant finds further support in that the glottal stop is severely limited in its distribution, only occurring word-initially in monomorphemic words and word- or root-initially in verbs carrying a vowel-final prefix. The other glottal consonant, /h/, on the other hand, may be found word-initially and intervocalically³⁰ in monomorphemic words and is considered a phoneme.

The /ha-/ prefix, as seen in (2.8) above, is discussed in detail in section 9.6. The form is found optionally on realis and irrealis affirmative declarative verbs and

³⁰There are differences in behavior between the glottal stop and glottal fricative: /ham a:ts’-e/ [ham] 1PL + [ʔa:ts’-ɛ] tooth/language-TV > [ham ʔa:ts’ɛ] ~ [ham a:ts’ɛ] M ML ‘our language’, where the glottal often does not appear in hyperarticulations where a preceding word’s consonant can be interpreted as an onset, and /ham ha:ts’-e/ [ham] 1PL + [ha:ts’-ɛ] water-TV > [ham ha:ts’ɛ] M ML ‘our water’. The /h/ appears regardless of hyper-/hypoarticulation.

obligatorily on polar interrogatives (where the expected answer is affirmative). The prefix is prohibited in negatives, content-interrogatives, imperatives and jussives (cf. section 9.6.3). I gloss /ha-/ as affirmative (AFF), tentatively.

2.2.5. Complementary Distribution

The major phonological processes which may be observed in Northern Mao include voicing assimilation (both voicing and devoicing), deglottalization (loss of glottalized release of stops), gemination of stops produced at the same point of articulation, and nasal assimilation. Each is discussed below. The post-alveolar groove fricative [ʒ], which Baye Yimam reports and lists within his chart of contrastive consonants of Northern Mao (2006:168), must be considered an allophone of /ʃ/: these data include [biʒa] ‘be present’ (2006:194) and [kaʒäya] ‘baboon’ (2006:221). This author has found [biʃa] H[↓]H a variant of /ha-biʃ-a/ MH[↓]H ‘AFF-EXIST-DECL (the realis non-future existential) and [ka:ʃajɛ] /ka:ʃaj-e/ LHL baboon-TV, respectively. No speaker with whom this author has consulted produces the [ʒ] form in the same words; rather each instance is pronounced as [ʃ]. In less-careful, fast speech however, the voiced variant has been found in these intervocalic environments, in these words.

The alveolar ejective /t'/ exhibits a voiced implosive allophone [d] intervocalically. Fleming notes this phenomenon, only for Northern Mao (1988:40).

(2.11) [kjad̥-ɛ] ML house-TV
 ‘house’

(2.12) [kjad̥' kjad̥-a] M H[↓]H house house.build-DECL
 ‘s/he built a house’

In (2.11), the /t'/ is found in the intervocalic position before the final nominal ending [-ε] /-e/ while in (2.12), the [t'] is found in the less sonorant environment, preceding the [k] (in connected speech, terminal vowels of nouns are not pronounced and are limited to utterance-final and citation form environments).³¹ The phenomenon is also noted root-internally, as in /kit'if-e/ MLL neck-TV 'neck' which, apart from very slow, careful speech, is pronounced [kɪdɪfɛ] MLL.

In agreement with Fleming, Wedekind and Wedekind (1993:11) also report the existence of the alveolar implosive in the Bambassi variety. This author's research shows that the phenomenon is found in both Bambassi and Diddesa varieties and the relationship between the ejective and the implosive may even be seen in loanwords such as the toponym Diddesa [dɪdɛsa] which in very slow careful speech is pronounced [t'it'ɛsa] as well as [t'ɪdɛsa] by speakers from each area, where even the initial implosive, which is not normally found in Mao words, is reanalyzed as an ejective.

Wedekind and Wedekind suggest the implosive is retroflexed (1993). Greenberg writes, "A recurrent feature of injectives [implosives] which deserves special mention and treatment is that the injective corresponding to a noninjective dental is often retracted to the alveolar or alveopalatal position and is consistently apical, often with accompanying retroflexion" (1970:129). He continues, noting that these retroflexed implosives are quite common, "The examples in the sample were so numerous that this property can be considered normal and one may suspect that it is present in some

³¹ Out of the 3,000 entries in the database, only 61 instances of [d] are found in comparison to 322 instances of [t'].

instances without being noted in the phonetic description” (1970:129). Greenberg’s observations were supported by Haudricourt’s earlier work (1950), where it was suggested that “the tendency towards retroflexion and retraction in apical injectives...could...be attributed to the rarefication of the air in the supraglottal cavity caused by the descending larynx. While it is not clear that the pressure difference is substantial enough to cause this (Greenberg 1970:139), it is important to note that several researchers have remarked on the frequency of the retroflex implosives which are formed posterior to the dental region.

While no palatography or linguagraphy which could aid in identifying both passive and active articulators has yet been attempted on the Northern Mao data, it is possible to note that the implosive does appear to be produced with the tongue tip slightly posterior to the alveolar ejective, in the post-alveolar region. However, retroflexion does not appear to be involved and is not observed in perturbations of the third formants of surrounding vowels, as can be seen in Figures 2.1 and 2.2, below.

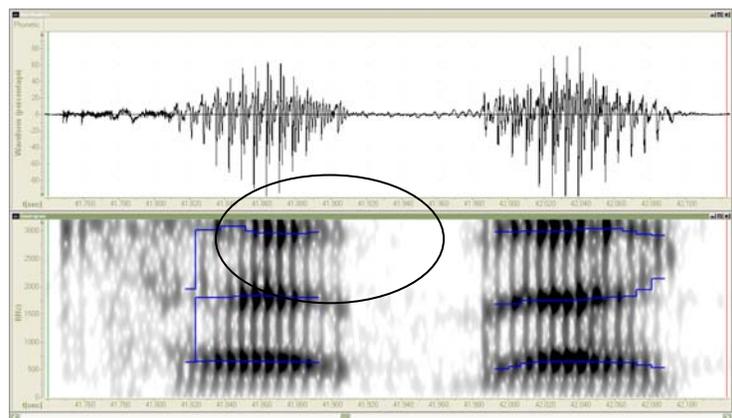


Figure 2.1. Waveform and Spectrogram for [kjad-ε] ML house-TV ‘house’

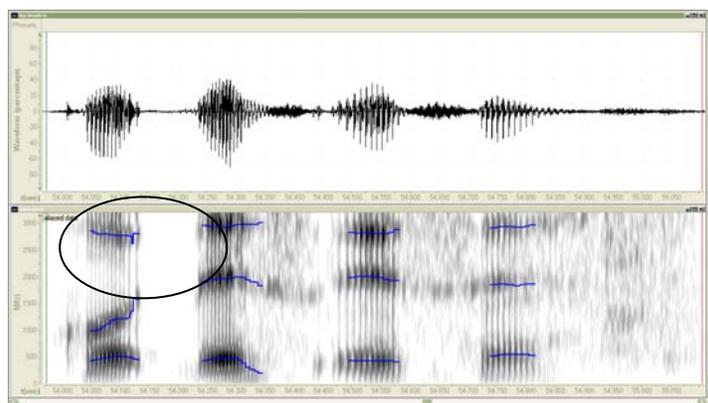


Figure 2.2. Waveform and Spectrogram for [kod-εs εs-ε] LH ↓ML have-NEG:REL person-TV ‘a person who doesn’t have’

In each case, there is no appreciable drop in the third formant which could indicate retroflexion.

2.2.5.1. Stop Sequences

When voiced stops immediately precede voiceless stops, forming a sequence, the first stop devoices, assimilating to the following stop. Consider the following examples where the final consonants of the verb root devoice before the relativizer /-t/:

- (2.13) /ha-harab-a/ MMLH AFF-be.rotten-DECL + /-t/ L REL
 > [a-harap-t mi-mis-ε] MMLMLL³²
 AFF-be.rotten-REL eat:INF-thing-TV
 ‘food that is rotten’

- (2.14) /ha-pe:mb-a/ MLH AFF-brush.off.dust-DECL + /-t/ L REL
 > [ha-pe:mp-t εs-ε] MLML AFF-brush.off.dust-REL person-TV
 ‘one who brushed off’

Alternatively, some speakers tend to epenthesize the /i/ before the relativizer /-t/ when it immediately follows another stop. The result in this instance is that the first stop

³² There is a co-occurrence restriction which results in the loss of the initial [h] in the /ha-/prefix when the verb root begins with an [h].

is not devoiced.

In Northern Mao, if a glottalized consonant (ejective) is immediately followed by a non-glottalized stop, the first consonant loses its glottalized release and is pronounced as an unreleased oral stop at the same point of articulation—a case of assimilation in manner.

- (2.15) /ak'-e/ MM grain/corn-TV
+ /ha-tul-a/ MH[↓]H AFF-harvest-DECL
> [ʔak tul-a] MH[↓]H grain/corn harvest-DECL
's/he harvested grain/corn'

- (2.16) /ha-int'-a/ MMH AFF-see-DECL + /-t/ REL
> [ʔint:-ɛ] HL see:INF:REL-TV 'that s/he saw'

In the first instance, the ejective [k'] of /ak'-e/ MM grain/corn-TV is unreleased when the [k'] immediately precedes the [t] of 'harvest', /ha-tul-a/ MH[↓]H. The affirmative /ha-/ prefix, which is generally included in the citation forms³³ of verbs in Northern Mao, is not always obligatory. It is the lack of this prefix that allows the final consonant of the noun to become adjacent to the initial consonant of the verb root. For an additional example, see 'harvest time' (2.19) below. In (2.16) above, the verb 'see' is relativized with the /-t/ relativizer. The result is a geminate (phonetically lengthened) [t:] without a glottalized release.

This process of loss of glottalized release is part of a more general phenomenon in

³³ This citation form, while morphologically complex, is the form preferred by the author's Northern Mao consultants when making reference to a verb in conversation or in isolated elicitation. The infinitive form, which is fully nominal and exhibits a tonal melody different from finite verbs (these melodies correspond to the tone class system exhibited by other nominals) as well as the terminal vowel /e/, is actually the least complex form but serves as a nominal rather than verbal form in syntactic function.

Northern Mao, where initial stops in a sequence of two are generally unreleased. Of course, the involvement of loss of glottalized release is more interesting because it leads to neutralization between the ejective and oral stops in this environment. As might be expected, in CC sequences where the final C is a glottalized stop, the release of the stop is maintained and no neutralization is observed, as in the example ‘nephew’ (2.20) below. This is likely due to the fact that the consonant’s release is before a vowel and not hampered by any following consonant.

As has already been seen in the data above (2.16), stops which are produced at the same point of articulation and which are found in sequence form a lengthened stop. Of course, these processes which involve the lack of release of the first stop in a sequence of stops, the loss of glottalization of the first stop in a stop sequence, and voicing assimilation of the first stop in a sequence actually allow for the sequence to be produced as a single long stop. Gemination is only attested across morpheme boundaries and is best understood as epiphenomenal to the processes above, which leave no alternative for phonetic production of stops in sequence when they are produced at the same point of articulation. Additional examples of this heteromorphemic gemination are provided below:

(2.17) /oʃk-e/ ML meat-TV + /gombol-e/ HHH mortar-TV
 > [ʔoʃg:ombol-ε] MMMM meat:mortar-TV ‘meat mortar’

(2.18) /ha-kwind-a/ MLH AFF-land/alight-DECL + /-t/ REL
 > [kwint:-ε] LL land/alight:REL-TV ‘that which alighted’

- (2.19) /akʔ-e/ MM grain/corn-TV
 + /ha-kum-a/ MLH AFF-cut.grain-DECL
 + /gis-e/ HH time/season-TV
 > [ʔak:um-gis-ε] MLMM grain/corn:harvest-time-TV ‘harvest time’
- (2.20) /ob-e/ HL brother-TV + /pʔiʃ-e/ MM child-TV
 > [ʔop:ʔiʃ-ε] H[↓]ML brother:child-TV ‘nephew’ (‘brother’s child’)

While voiceless stops which are immediately followed by voiced stops do not typically undergo voicing, the voiceless / voiced stop sequence in example (2.17) forms a long stop which begins with a period of voicelessness and is followed by 30 ms of prevoicing before its release into the following vowel. Due to the lack of release of the first stop and the presence of prevoicing, the series may be perceived as [g:] and is transcribed as such here. The waveform and spectrogram is provided in Figure 2.3. Figure 2.4 highlights the [ʃg:o] sequence from the same file, showing the prevoicing before the release of the stop.

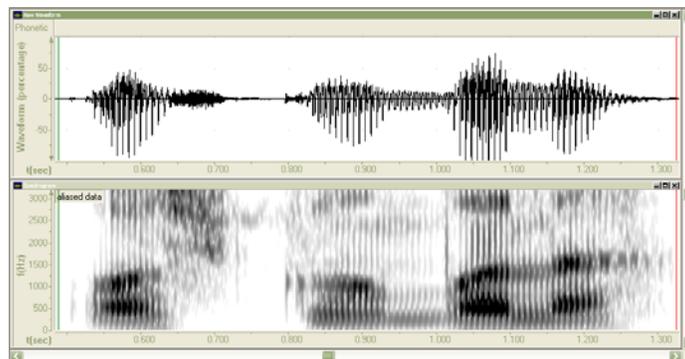


Figure 2.3. Waveform and Spectrogram for [ʔofg:ombole] MMMM ‘meat mortar’

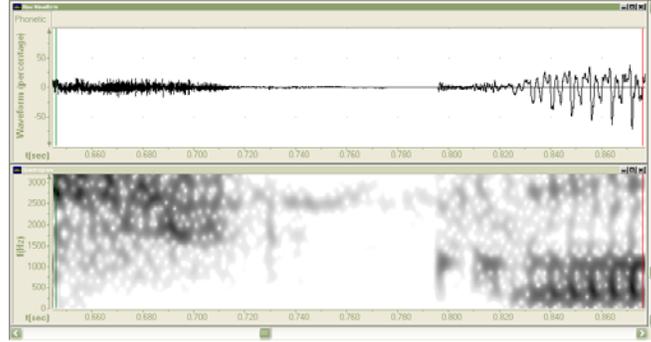


Figure 2.4. Waveform and Spectrogram for [ʃg:o] sequence

2.2.5.2. Nasal Assimilation

While the bilabial nasal [m] and the alveolar nasal [n] occur initially, intervocally and root-finally,³⁴ the [m] shows no indication of involvement in assimilation and may be found preceding alveolar or velar consonants. The alveolar nasal [n], on the other hand, when preceding a consonant, is found only before alveolars, [t, t', d, s, ts', z], exhibiting assimilation to the place of the following consonant. The velar nasal [ŋ] occurs intervocally and root-finally; before consonants, it exhibits assimilation to the following consonant, preceding only the velars [k, k', g].

The presence of a palatal nasal was reported by Wedekind and Wedekind (1993:21): [nú:nɪnà] 'how?'. The data gathered for this study show [nu:ɲa] /nu:n-ja/ HLL 'how is it?', where the root [nu:n-ɛ] HL is the interrogative 'how?' followed by /-ja/, a bound copula found on most interrogatives and employed in stative verb derivations. The /-ja/ suffix whose presence triggered the assimilation which led to the root's final nasal becoming palatalized also carries the low tone of the /-a/ L question marker (some speakers lengthen the [a] vowel of the copula while others do not). This same copula is

³⁴ It is important to note that root-final consonants on nominals become word-final in connected speech, where the final /e/ vowel of nominals is frequently absent (cf. section 8.2).

found to the right of other interrogatives pronouns: /komis-ja/ HHL ‘what?’, /nat-ja/ HL ‘when?’, /hind-et-ja/ MHL where-LOC-COP ‘where?’. The only other instance of a palatal nasal in Wedekind and Wedekind’s wordlist is in the word [hãḞú:ná] ‘swim’ (1993:25). But when checked carefully with various speakers, the nasal is velar, not palatal: /ha-pa:ŋ-a/ MMH AFF-swim-DECL. Bender also notes that the nasal in ‘swim’ is a velar (2003:307). This author has found no data to suggest the existence of a contrastive palatal nasal.

2.2.6. Sibilant Harmony

Northern Mao, in contrast to some other Omotic languages, exhibits a smaller inventory of sibilant consonants. Hayward has suggested that Proto-Omotic likely had *s, *z, *ts’, *ʃ, *ʒ, *tʃ’, *ʂ, *z̥, *ç’ in initial position and an additional three *ts, *tʃ, *ç, in non-initial positions (1988: 292). In Northern Mao, only the following sibilants are contrastive and attested apart from loanwords: /s, z, ts’, ʃ, tʃ/; of course, both [tʃ’] and [dʒ] may be added to this inventory, when loanwords are considered. As noted above, [ʒ] is only attested occasionally, as a voiced variant of /ʃ/.

It is well-known that sibilants within roots in Omotic languages tend to agree in terms of place of articulation. Hayward writes, “There is, in fact, in many languages a very strictly observed co-occurrence constraint or morpheme structure condition for roots, to the effect that co-occurring sibilants must agree with respect to palatality” (1988:287). This claim obtains for Northern Mao. Within roots, without respect to airstream mechanism, sibilants are found only at the same place of articulation. Tables 2.2 and 2.3 provide evidence, below. There are no counterexamples where sibilants of different

places of articulation may be found in the same root except in the loanword /ʃemiz-e/ LHH shirt-TV ‘shirt’. It should be noted, however, that due to the weak attestation of /z/, no word containing the voiced alveolar sibilant and any other sibilant has been found—apart from this loanword, where the expected harmony does not apply. Roots containing palatal sibilants are provided in Table 2.2 while those containing alveolar sibilants are featured in Table 2.3.

Table 2.2. Sample Roots with Palatal Sibilants

/ʃe:ʃ-e/ MM	urine-TV
/ʃaʃ-e/ HL	tendon/vein-TV
/ʃa:ʃ-e/ MH	ade.ababa/yellow.flower-TV
/ʃu:ʃ-e/ HH	spit:INF-TV
/ʃo:ʃ-e/ HH	snake-TV

Table 2.3. Sample Roots with Alveolar Sibilants

/sewis-e/ LHL	young.man-TV
/so:nts'-e/ ML	child-TV
/su:nts'-e/ MH	back-TV (of body)
/mamses-e/ HHL	fairness-TV
/ts'ets'-e/ MH	ask:INF-TV (of God)

This phenomenon of sibilant harmony does not extend to suffixes regularly in Northern Mao. At times, in the texts collected thus far, there is some evidence that this optionally occurs in fast, connected speech: /diʃ-es maŋk'-e/ LH ¹MM be.known-NEG:REL sickness-TV ‘unknown disease’ sometimes pronounced [diʃeʃ maŋk'ε], where the negative relative clause marker /-es/ H(L) undergoes harmony with the root, becoming [-eʃ]. This is also seen in [t'ɔʃ-eʃ k'ets'-ε] HH ¹MM sprout-NEG:REL land-TV ‘barren land’. The /-es/ negative relative clause marker is unaffected when following roots without palatals: [ʔe:ŋ kod-εs εs-ε] MMH ¹ML³⁵ heart have-NEG:REL person-TV

³⁵ The relative clause markers /-t/ and /-es/, affirmative and negative, respectively, each carry a final low tone, which can be clearly observed in the citation form of a headless relative construction. When

‘one who doesn’t have heart’ (i.e. ‘coward’).

This phenomenon where sibilants in suffixes agree with the place of articulation of sibilants in roots appears only to be a tendency with exceptions existing, particularly in careful speech. Rapold has found a similar phenomenon, though more frequent in Benchnon, which does exhibit sibilant harmony (where a more elaborate harmony system is attested with marked sibilants imposing on less marked, requiring harmonization) where sibilants in suffixes harmonize with root sibilants only optionally and not in slow, careful speech (2006:67).

Certainly, it is clear that in Northern Mao, the subject case marker /-iʃ/ H does not exhibit any harmony with sibilants in the root noun, as in the following examples: [so:nts’-iʃ] ML child-SBJ and [ɛs-iʃ] ML person-SBJ. It may be that, as Rapold has found in Benchnon, markedness plays a role where roots with more marked³⁶ sibilants, such as palatal sibilants, impose upon less marked sibilants in suffixes (2006:67). That is, in Benchnon, sibilants in roots are preserved and do not agree with marked sibilants in suffixes nor do the more marked palatal sibilants in suffixes agree with non-palatal sibilants in roots. The smaller inventory of sibilants in Northern Mao may obscure this phenomenon, as sibilants are found only at the alveolar and palatal places of articulation.

the relative clause is modifying a noun, however, the terminal vowel /e/ the final tone bearing unit of the relative clause marker, is lost (as is the case with the final vowel of all nominals, see section 8.2), and its final L tone is in some cases (H and M tones may be downstepped while L tones merge with floating L’s and do not exhibit a downstep) preserved by causing downstep on the following noun, here indicated by [↓]. The specifics related to this phenomena are discussed in Chapter III as well as in a paper detailing the results of a phonetic study of downstep phenomena, which has been co-written with Dr. Mary Pearce, University College London and SIL International and was presented at the World Congress of African Linguistics (WOCAL 6) in August 2009.

³⁶ Here, markedness is used in the sense that palatal sibilants may be considered less common (as opposed to alveolar sibilants) in the world’s languages.

There are no alveo-palatal sibilants (as in Benchnon), and the post-alveolar /tʃ/ is found in only one word, thus far.

2.3. Phonemic Vowels

Northern Mao has a five vowel system, each of which also exhibits a long counterpart: /i, e, a, o/ and /u/. Examples of length contrast are attested throughout the five-vowel inventory: /intʰ-e/ HH see:INF-TV ‘seeing’ and /i:ntʰ-e/ HL grunt:INF-TV ‘grunting’; /jeʃ-e/ HH DIST.DEM-TV ‘that’ and /je:ʃ-e/ HH honey-TV ‘honey’; /ap-e/ ML maternal.uncle-TV ‘maternal uncle’ and /a:p-e/ HH eye-TV ‘eye’; /tʰuʃ-e/ LL strap:INF-TV ‘strapping’ and /tʰu:ʃ-e/ HH meet:INF-TV ‘a meeting’; /tʰoʃ-e/ HH sprout:INF-TV ‘sprouting’ and /tʰo:ʃ-e/ MH vomit:INF-TV ‘vomit’.

Table 2.4. Contrastive Vowel Inventory

	Front	Central	Back
High	i, i:		u, u:
Mid	e, e:		o, o:
Low		a, a:	

The terminal vowel /-e/, present on all nominals in citation form, never exhibits contrastive length. Duration and fundamental frequency measurements of 50 words with short root vowels and 50 words with long root vowels show that long vowels are 1.5 to 2 times the length of short vowels. It is also clear that pitch does not necessarily rise with increased length; pitch and vowel length are wholly independent phenomena in Northern Mao.

Evidence of contrast between each of the five vowel qualities is provided in Appendix B, including examples of both short and long counterparts for each quality (except /i/ vs. /a/ and /u/ vs. /a/, since it is assumed that these are too distant from one

another to be in any likely relationship).

2.3.1. Vowel Quality

In order to describe the vowel space most accurately, measurements of the first and second formants, which show the actual place of articulation of vowels acoustically, of ten words featuring each short vowel and each long vowel have been completed.³⁷

This F2 x F1 examination of vowel space provides a more detailed account of the vowel target and variation within space than can be conveyed by IPA transcription alone. The measurement of the formant was made at the vowel mid-point to lessen the effect of consonant perturbation. The full set of words used in the study, along with each measurement, is found in Appendix C. These measurements provide the actual vowel qualities produced by speakers without relying on the transcriber's ability to determine vowel status—a phenomenon that becomes difficult as the articulatory space for vowels is difficult to gauge between languages and even between speakers with different vocal tract lengths.

Figure 2.5. shows the vowel space derived from acoustic measurement of the first and second formant midpoints of short medial vowels in 50 Northern Mao words. In general, an expected V shape is visible for the five-vowel inventory in Northern Mao as is seen in other five-vowel systems (Ladefoged 2001:35,42).

³⁷ Of course, since nouns end in /e/, only the non-final vowels were measured.

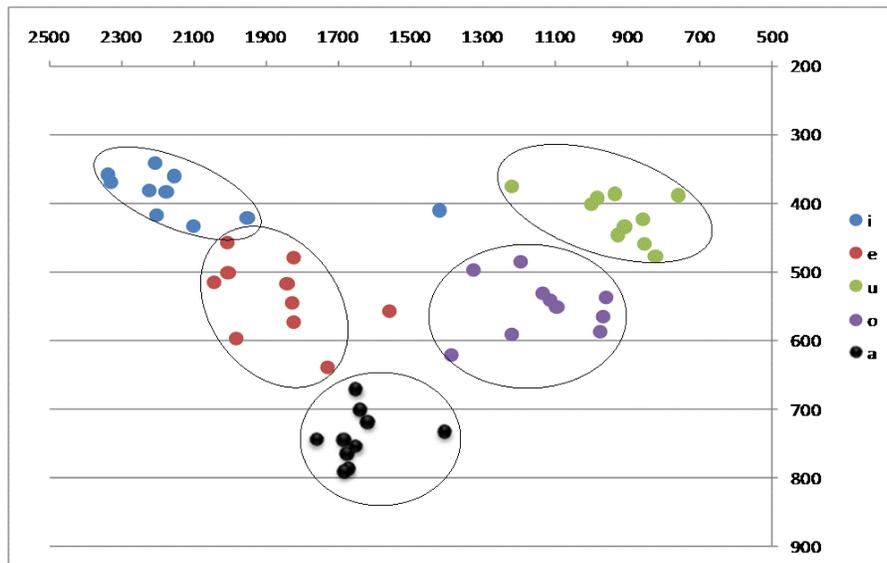


Figure 2.5. Plot-Chart for Short Vowels

The ranges of the formants in Hz and length in ms are provided in Table 2.5.

Table 2.5 Ranges and Means for Formant and Length Measurements –Short Vowels

	F1	Mean F1	F2	Mean F2	ms	Mean ms
i	341-434	388	1419-2335	2109	60-94	76
e	458-639	539	1560-2006	1864	72-113	97
u	376-478	419	759-1217	925	61-106	88
o	497-621	551	959-1385	1136	63-114	91
a	671-791	741	1405-1761	1644	71-109	89

Figure 2.6. provides the formant chart for the long vowels. For the most part, the vowel space is quite similar to that of the short vowels, showing a lack of other vocalic phenomena such as ATR contrast.

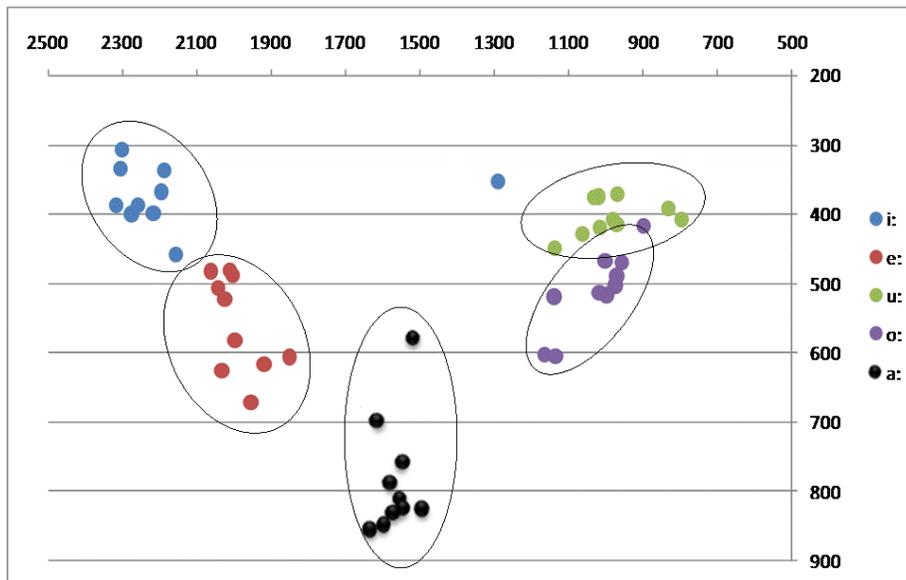


Figure 2.6. Plot-Chart for Long Vowels

Again, the ranges of formants for the long vowels as well as the length in ms are provided in Table 2.6.

Table 2.6. Ranges and Means for Formant and Length Measurements –Long Vowels

	F1	Mean F1	F2	Mean F2	ms	Mean ms
i:	308-458	373	1290-2317	2151	119-216	152
e:	481-673	559	1850-2062	1989	144-208	182
u:	372-450	405	796-1136	981	169-204	186
o:	418-606	511	900-1164	1027	136-190	165
a:	579-856	782	1495-1636	1567	140-193	170

In Table 2.5, the average length of short vowels is 88ms while the average length of long vowels in Table 2.6 is 171ms, a significant difference to be sure. The long high vowels /i:/ and /u:/ are twice the length of their short counterparts, while the long vowels /e:/, /o:/ and /a:/ are well over 1.5 times the length of their corresponding short vowels.

As can be seen in the ranges and means of Tables 2.5 and 2.6, the long /e:/ vowels tend to be a bit higher and more to the front of the oral cavity than their short /e/ counterparts. As a result the short /e/ vowels tend to be phonetically closer to [ɛ] than [e]

and are transcribed as such when phonetic brackets are used in this work. Baye Yimam 2006 transcribes these short vowels with the [ā], the Ethiopianist symbol which corresponds to the I.P.A.'s [ɛ]. At times, the short vowel /e/ may be realized phonetically as [e], especially in the environment of post-alveolar/palatal sounds (as seen in [diʃ-eʃ maŋkʰ-ɛ] LH ↓MM be.known-NEG:REL sickness-TV 'unknown disease' and [tʰoʃ-eʃ kʰetsʰ-ɛ] HH ↓MM sprout-NEG:REL land-TV 'barren land', repeated here from section 2.6 above). Since the long [e:] and short [ɛ] vowels correspond to the same phonological space (despite some phonetic differences) within the larger Northern Mao vocalic system, they are represented with the /e:/ and /e/ phonologically. The slight differences in formant means between the short and long /e/ vowel and to a lesser extent, the short and long /o/ vowel, may be due to the increased amount of time in lengthened articulation, allowing speakers to more consistently reach the articulatory target and produce less-centralized vowels.

Some speakers exhibit an assimilatory process where the terminal vowel /-e/, may become [a] when the nominal root contains an /a/ vowel. This is not attested consistently throughout the entire speech community but is observable in the speech of some, where /kawe/ LL 'top; upwards' and /ka:we/ LL 'griddle' may be alternatively pronounced as [kawɛ]~[kawa] LL and [ka:wɛ]~[ka:wa] LL respectively.

2.3.2. On the Lack of the Terminal Vowel in Connected Speech

As noted above, nominals carry a final /-e/ vowel in citation form, regardless of whether they are derived forms (e.g. deverbal nouns) or not. Thus, verbal nouns, such as the infinitive, and non-derived prototypical nouns carry the same nominal suffix. The

terminal vowel is frequently absent in many morpho-syntactic contexts, a phenomenon first observed by Baye Yimam (2006:176) and observable thus far in various examples above (2.6, 2.12, 2.15, 2.16, 2.19) and (2.20). In the case of (2.6), the citation form of the noun /ape/ ML ‘maternal uncle’ is not provided and is thus provided here for the sake of demonstrating the loss of the final /-e/ vowel in connected speech.

Ultimately, the distribution of this terminal vowel in syntax shows it to be relevant to the noun phrase, as a phrasal affix, which is found when the noun phrase is in citation form, at the ends of utterances, or at the end of a main clause (cf. section 8.2). Additionally, in texts, some speakers produce the final /-e/ on nominals before pauses, but this is not consistent throughout the speech community. The full discussion is presented in section 8.2. Additionally, adverbs of time also lose their final vowels ([e], [o] or [a]) in the same environments as the terminal vowel.

2.3.3. Epenthesis of the Vowel [i]

The epenthetic vowel in Northern Mao is the high front [i]. This may be found before the relativizer /-t/ on erstwhile verbs such as [ge:tsʰ-it εs-ε] LH [↓]ML be.beautiful:INF-REL person-TV ‘a person who is beautiful’, from the verb /ha-ge:tsʰ-a/ MLH ‘be beautiful’ and [nok-it muntsʰ-ε] HH LL be.good:INF-REL woman-TV ‘a woman who is good’ from the verb /ha-nok-a/ MMH ‘be good’. Verbs whose roots end in an approximant, do not exhibit the epenthetic [i]: /ha-ka:w-a/ MMH ‘be white’ > [ka:w-t wa:r-ε] H [↓]ML be.white:INF-REL clothes-TV ‘clothes that are white’, nor do verbs whose roots end in a vowel: /ha-ki-a/ MH-M³⁸ ‘come’ > [ki-t εs-ε] MML come:INF-REL

³⁸ The vowel of the verb root ‘come’ is reduced to the [j] approximant in the perfective form and its H tone combines with the M tone of the final perfective suffix to form a H-M fall; this is an irregularity,

person-TV ‘a person who came’. As expected, the verb root’s vowel [i] is not lengthened since the requirements for epenthesis are not satisfied. In some instances, this epenthetic vowel appears internally within nouns, as in /kogʃ-e/ [kokʃ-ɛ] ML lung-TV ‘lung’ which may alternatively be pronounced [kogiʃɛ] MLL. Only in the most careful speech does the /g/ maintain its voicing in the absence of the epenthetic vowel—the same devoicing phenomenon noted in section 2.2.5.1, above.

2.3.4. Vowel Harmony (a Root Constraint) in Tri-Syllabic Nouns

Tri-syllabic noun roots show vowel place harmony in terms of backness: /kit’ijf-e/ MLL neck-TV ‘neck’; /ilijf-e/ HHL pot-TV ‘pot’; /ts’ugun-e/ HLL squirrel-TV ‘squirrel’; /ugum-e/ HLL snail-TV ‘snail’; /ʃundo:r-e/ LHH donkey-TV ‘donkey’; /ewet-e/ HLL eavesdrop:INF-TV ‘eavesdropping’; /t’epil-e/ HLL patch-TV ‘patch’; /kolo:l-e/ HLH malaria-TV ‘malaria’.

This phenomenon is not observable in the far more frequently attested bi-syllabic nouns: the terminal vowel /-e/ does not participate in this root constraint; any of the five vowels may co-occur with the final /-e/. Harmony is observable only in nouns which are three or four syllables where either only front or back vowels may be found in roots.

There are no monosyllabic nouns in Northern Mao.

Baye Yimam (2006:180) notes the preponderance of bi-syllabic nouns in Northern Mao and hypothesized that the few tri-syllabic nouns found in his set of 250 words might be loans. The larger corpus gathered in the course of this research has yielded far more of these tri-syllabic nouns (as well as the four-syllable nouns which are

and no other verb exhibits such behavior.

provided in Table 2.20, below), suggesting that while these are certainly far rarer than the bi-syllabic nouns, the tri-syllabic nouns are likely not borrowed. In these tri-syllabic nouns, unlike the bi-syllabic nouns, all but two examples of non-borrowed words³⁹ out a set of 146 attest to this root constraint in terms of front-back status of the root vowels: [k'ok'iʃ-ɛ] HHH crust-TV 'crust', and [kogin-ɛ] LHH sew:INF-TV 'sewing'.

Table 2.7. Vowel Harmony in Tri-Syllabic Nouns

	Front Vs in Root	Back Vs in Root
High Vowels	/dipil-e/ HLL hem-TV	/kuʃum-e/ HLL chin-TV
Mid Vowels	/gergef-e/ LLL wall-TV	/gobol-e/ HHH window-TV
High and Mid Vowels	/ʃek'iʃ-e/ HHH vervet.monkey-TV	/ʃundo:re/ LHH donkey-TV

By far the most common sort of harmony is where each of the root vowels is either /i/ or /u/. There are far fewer examples of both root vowels at the mid aperture. Thus far, for instance, only one root has been found including the back vowels /o/ and /u/, provided in Table 2.7. Finally, as is often the case in instances of harmony, the most sonorant, low vowel /a/ (in the case of Northern Mao, a low-central vowel) does not participate in the harmony system and may be shown to co-occur with each of the other vowels: /alim-e/ LHL turban-TV 'turban', /hadem-e/ HLL work:INF-TV 'work', /k'awon-e/ MLL be.short:INF-TV 'dwarf', and /kaʃuw-e/ LHL medicine-TV 'medicine'. The constraint prevents roots containing both front vowels and back vowels.

As noted above, two possible exceptions to this tendency have been found: [k'ok'iʃ-ɛ] HHH crust-TV 'crust', and [kogin-ɛ] LHH sew:INF-TV 'sewing'. These two examples may be instances of the epenthetic vowel [i] inserted between unallowable CC

³⁹ Among the speakers consulted, loanwords do not conform to any harmony specifications.

sequences, as noted in the variant pronunciation of /kogʃ-e/ [kogiʃ-ε] ML lung-TV ‘lung’ in section 2.3.3. It may also be the case that the examples with both high and mid front vowels in the same root are actually instances of the epenthetic vowel [i] as well. No examples where /i/ precedes /e/ have been found out of 3,000 entries.

There is some corroborating evidence for vowel harmony observed in the allomorphy of the subject case marker /-iʃ/.

- (2.21) /in-e/ LH mother-TV ‘mother’
 > [ʔin-iʃ ha-biʃ-a] LH MHM mother-SBJ AFF-EXIST-DECL
 ‘there is a mother’
- (2.22) /es-e/ ML person-TV ‘person’
 > [ʔes-iʃ ha-biʃ-a] ML MHM person-SBJ AFF-EXIST-DECL
 ‘there is a person’
- (2.23) /ald-e/ LH know:INF-TV ‘knowledge’
 > [ʔald-iʃ ha-biʃ-a] LH MHM know:INF-SBJ AFF-EXIST-DECL
 ‘there is knowledge’
- (2.24) /mots’-e/ LH grass-TV ‘grass’
 > [mots’-iʃ ha-biʃ-a] LH MHM grass-SBJ AFF-EXIST-DECL
 ‘there is grass’
- (2.25) /tug-e/ HH foot-TV ‘foot’
 > [tug-uʃ ha-biʃ-a] HH MHM foot-SBJ AFF-EXIST-DECL
 ‘there is a foot’

When this suffix attaches to front-vowel, /o/-vowel or /a/-vowel roots, the shape [-iʃ] is found. However, when the suffix attaches to roots with the /u/-vowel roots, the allomorph [-uʃ] results. Both height and backness are required for triggering harmony

(the /o/-vowel roots do not trigger any vowel harmony morphophonologically); this would support the existence of the roots containing both [o] and [i] vowels (as opposed to the interpretation of [i] as an epenthetic vowel), in the discussion above.

2.4. Syllable Structure

The most common and unambiguous syllable patterns are provided in Table 2.8.

Phonotactics is discussed in section 2.4.1, below.

Table 2.8. Syllable Patterns involving Short Vowels

Unambiguous CV Pattern	Example	Gloss
CV	/po.t'-e/ HL	thigh/hip-TV
CVC	/tal.k'-e/ HL	headpad-TV

As noted in the discussion on consonants, the glottal stop is epenthesized to meet the requirement of an onset as in the following: /es-e/ [ʔɛ.sɛ] ML person-TV ‘person’ and /ald-e/ [ʔal.dɛ] LH know:INF-TV ‘knowledge’. Thus, each of these words exhibits the CV.CV pattern.

Only three monomorphemic forms exhibiting complex codas (of the pattern CVNC) have been found out of the entire Northern Mao data set.⁴⁰ The first consonant in the complex coda is limited to the nasal /n/ which is then followed by either of the sibilants /ts'/ or /s/, where the following onset is either /k/ or /k'/.

⁴⁰ In addition to the two CVNC forms provided in Table 9, there is also the single occurrence of a CCVNC pattern, as seen in /ha-k'winsk-a/ [ha.k'wɪns.k'a]MLH AFF-kneel-DECL ‘knee’. Additionally, there is a variant of /amp'its'-e/ [am.p'i.ts'e] LLL bead-TV ‘bead’, which is pronounced as [ʔamp'.ts'ɛ] LL—without the epenthetic vowel [i].

Table 2.9. Limited CVNC Pattern

CV Pattern	Example	Gloss
CVNC	/wints'.k'-e/ ML	aunt-TV (father's sister)
	/kants'.k'-e/ HL	thorn-TV

The long vowels fit within the CVV and CVVC syllable patterns, as seen in Table 2.10 below:

Table 2.10. Syllable Patterns involving Long Vowels

Unambiguous CV Pattern	Example	Gloss
CVV	/be:z-e/ HL	broom-TV
CVVC	/ma:l.t'-e/ ML	bone-TV

The VV pattern is limited to geminate (i.e. identical vowel) sequences and, despite the addition of vowel length, does not exhibit tonal contours in monomorphemic words.

2.4.1. Phonotactics

Table 2.11 provides a list of consonants which may be found in initial, intervocalic and in CC sequences across syllable boundaries in isolated⁴¹ monomorphemic words. Those consonants which are suspect on account of very few attestations (as in the case of [tʃ]) or their being found only in borrowed words ([dʒ, tʃ']) are included in the distribution chart. All consonants, except [tʃ, tʃ', ɲ] may be found initially. Of these, only [ɲ] never occurs as a syllable onset; that is, all other consonants

⁴¹ Of course, when the final vowels of nominals are dropped in certain morphosyntactic environments (as discussed above in 2.3.2), complex codas become far more common. Also, the noun-noun associative and noun-noun compound constructions involve nouns which are phonologically bound and where the non-final nouns do not carry their final /e/ vowel. This greatly complicates the consonant clusters in Northern Mao. This present examination of phonotactics is limited to monomorphemic words, as noted above.

may serve as syllable onsets. However, [r] is found initially only in borrowed words.

There is only one example of the lateral serving as an onset /luk-e/ LH curdle:INF-TV ‘curdling’. All consonants except [dʒ] are found intervocalically.

Within CC sequences across syllable boundaries, the first consonant (i.e. the coda of the preceding syllable) may not be any of the following [p', t', k', h, tʃ, dʒ, j or w].

The second consonant in the sequence (i.e. the onset of the following syllable) may not be any of these: [tʃ, ŋ, l, r].

Table 2.11. Consonant Distribution Chart

	Initial # V	Medial V V	Clusters C.C (across syllables)	Examples
p~f~ϕ	+	+	mp, pk	/ʃapkow-e/ MHL shoe-TV
b	+	+	mb, nb, rb, lb, bd	/danb-e/ HH tradition/ culture-TV
t	+	+	lt, rt, nt	/ma:lt-e/ ML fat-TV
d	+	+	bd, nd, ld, gd	/obd-e/ HH threshing.floor-TV
k	+	+	pk, rk, sk, lk, ʃk, ŋk, kn	/piʃk-e/ HH whistle:INF-TV
g	+	+	rg, lg, ŋg, gd	/gergeʃ-e/ LLL wall-TV
p'	+	+	mp'	/amp'its'-e/ LLL bead-TV
t'	+	+	nt', lt'	/t'e:nt'-e/ ML worm-TV
k'	+	+	ŋk', rk', lk', ts'k'	/burk'-e/ HL spring-TV (water)
s	+	+	ms, ns, sk, sm	/mamses-e/ HHL fairness-TV
z	+	+	nz, zn	/wanzib-e/ MLL fingernail/claw-TV
ʃ	+	+	ŋʃ, ʃk	/oʃk-e/ ML meat-TV
h	+	+	--	
ts'	+	+	nts', mts', ts'k'	/wints'k'-e/ ML aunt-TV (father's sister)
tʃ (1 ex)	-	+	--	
dʒ (loans only)	+	-	ldʒ	/aldʒa:b-e/ LHL charm/amulet-TV (Arabic)
tʃ' (loans only)	-	+	rtʃ'	/kurtʃ'-e/ HH cutting-TV (Amharic)
l	+	+	lb, lt, ld, lk, lg, lt', lk', lm, lj, lw, ldʒ	/p'elk'-e/ MH study:INF-TV

Table 2.11. (cont.)

	Initial # V	Medial V V	Clusters C.C (across syllables)	Examples
r	+ (loans)	+	rb, rt, rk, rg, rk', rn, rm, rtʃ'	/p'erk'-e/ HH lightening. flash-TV
m	+	+	rm, lm, sm, mp, mb, ms, mp', mts'	/k'embil-e/ MLL loincloth-TV
n	+	+	rn, zn, kn, nb, nt, nd, nt', ns, nz, nʃ, nts'	/hants'il-e/ MLL slip/slide:INF-TV
ŋ	-	+	ŋg, ŋk, ŋk'	/ʃaŋk'-e/ HH front.room-TV (house)
w	+	+	lw	/akilwaj-e/ MMLL Mao. clan-TV (name of a clan)
j	+	+	lj	/k'ilj-e/ MH leave:INF-TV

2.4.2. Interpretation of Labialization and Palatalization

Northern Mao exhibits an ambiguous sequence where certain obstruents may be followed by either the labio-velar [w] or palatal [j] approximants, word-initially. Consonants with a following labio-velar approximant have not been found before the vowels /u/ or /o/ but are attested before each of the other vowels. The labio-velar approximant has not been attested following the obstruents [p, b, d, p', z, h, or ts']. The full inventory found thus far is noted in Table 2.12, along with the number of times attested and the following vowels.

Table 2.12. Consonants with Labio-Velar Approximants

Consonant	Number of times attested	Following Vowels
tw	5	i, e, a
kw	13	i, e, a
gw	3	i, a
t'w	1	a
k'w	9	i, e, a
ʃw	4	i, a

Consonants with a following palatal approximant have not been attested before

the vowels /i/, /o/ or /u/. Word-initially, they are not found following the obstruents [b, t, d, t', s, z, ʃ, h, or ts']. The full inventory is noted in Table 2.13, again with the number of times attested and the vowels which are found following.

Table 2.13. Consonants with Palatal Approximants

Consonant	Number of times attested	Following Vowels
pj~fj~ɸ	4	a
kj	6	a
gj	5	e, a
p'j	2	a
k'j	3	a

There are limited instances of these consonant-approximant sequences found medially: [k'] and [k] may precede [w] while [k] and [p'] may precede the [j].

These consonant-approximant sequences are ambiguous in that they could be interpreted as a single C (that is, as a labialized or palatalized consonant), as a CC cluster, as a consonant followed by a VV sequence with [u] or [i] as the first vowel, or as a diphthong [ɥV] and [ɨV], formed with the following vowel. These phenomena are interpreted as CC clusters on the grounds that positing complex consonants would increase the consonant inventory by 11 and lead to an inventory which does not follow a principle of economy nor which exhibits natural class symmetries; that is the sets of labialized and palatalized consonants would not be found systematically distributed throughout the inventory. Additional observations, which are perhaps less convincing as phonological arguments but which are relevant to the consonant-approximant sequences, include: 1) there are no non-geminate (i.e. non-identical) VV sequences in monomorphemic words; 2) there is no evidence of diphthongs, and the distribution of the

approximants would require positing five diphthongs; 3) in the vast majority of cases, they are found word-initially and when they do occur medially, consonant distribution and syllable structure suggest they must be seen as onset clusters; it might be expected that were these single Cs, they could be found more often internally—more generally distributed. All unambiguous Cs which occur initially also occur as medial onsets, apart from [d₃], which occurs only in borrowed words.

In short, as all analyses are problematic, it is preferable to minimize the consonant inventory rather than complicate it in a nonsymmetrical, nonsystematic manner. It is the assumption of the author that more data may yield other examples of these CC clusters, where additional obstruents may be followed by either of the approximants.

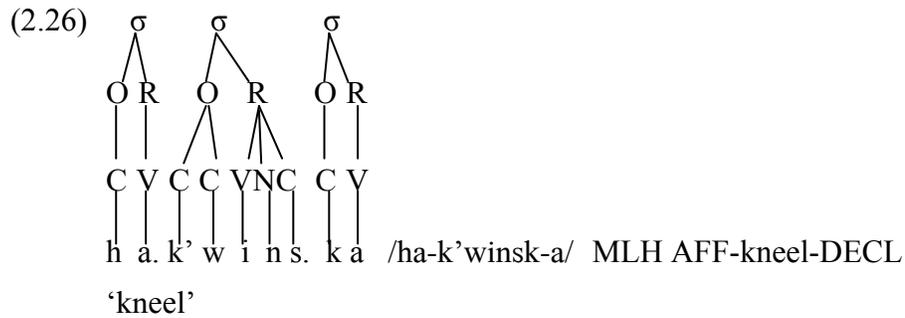
It is worth noting that Rapold finds a somewhat similar situation, at least with regards to the palatalized consonants,⁴² in *Benchnon* (Gimira-Omoti) (2006), where “all four analytical possibilities” are considered and found to be problematic (2006:102). Ultimately, a CC cluster analysis is also chosen. In general, labialized and palatalized consonants are not included in the inventory of contrastive consonants in Omotic languages, as is the case in *Benchnon* (Rapold 2006) in particular, as well as in *Maale* (Azeb 2001), *Dizin* (Beachy 2005), a wide variety of languages and reconstructed Proto-Languages (Bender 2003).

2.4.3. The Maximal Syllable

Given the evidence above concerning the obstruent-approximant CC sequences,

⁴² Rapold is able to argue convincingly for an alternative analysis concerning the labialized consonants, where an alternative variant pronunciation C[uj] is analyzed as an underlying form (2006:100). No such phenomenon has been observed in Northern Mao.

the most common maximal syllable attested in Northern Mao is CCVC, apart from the very rare example of CCVNC. This latter example may be parsed as follows:



2.5. Tonal Melodies

Northern Mao, like other Omotic languages, exhibits contrastive tone. Wedekind and Wedekind (1993:12) report the existence of two distinctive pitch levels in two-syllable words: H and L (with an allotonic M), though no discussion of the allotonic M tone is provided. Four tonal melodies are reported for two syllable words but discussion is lacking as to tonal melodies on words of more than two syllables. Baye Yimam 2006 also reports the existence of the H and L tones.

2.5.1. Three Levels of Tone

First, it is helpful to establish the levels of tone which appear to be contrastive. Contrary to Wedekind and Wedekind and Baye Yimam's findings, current research suggests there are three levels of tone in Northern Mao. Consider the following words, which are distinguishable only by melody:

- (2.27)
- | | | |
|---------|----|-------------------------------|
| /kaw-e/ | HH | hang:INF-TV (a hanging thing) |
| /kaw-e/ | MM | bamboo.mat-TV |
| /kaw-e/ | LL | top/upwards-TV |

Table 2.14. Measurements for 3 Levels of Tone

Lexeme	Tone	Gloss	Mean F0 for each syllable (from 3 tokens)	Mean Vowel Length (from 3 tokens)
/kaw-e/	HH	hang:INF-TV	160 / 166 Hz	110 ms
/kaw-e/	MM	bamboo.mat-TV	146 / 146 Hz	96 ms
/kaw-e/	LL	top/upwards-TV	120 / 120 Hz	92 ms

There is a large set of nouns for each of the three level melodies.⁴³ Table 2.14 provides the fundamental frequency measurements and mean vowel lengths based on three utterances of each word. The three examples in (2.27) are controlled for vowel length, demonstrating that each features a short vowel, as well as the same syllable pattern and part of speech. That is, only tonal melody distinguishes these otherwise identical nouns. Each of these words is well within the typical length range for short vowels, as discussed above.

2.5.2. Surface Melodies of Nouns Arranged by Syllable Type

Of course, as is expected of languages with three levels of tone, a variety of possible melodies is found on words. In the discussion below, the melodies of words of various syllable patterns are inventoried. Tone melodies are inventoried by syllable type to show contrast relative to syllable patterns. Tonal phenomena, apart from contrastive tone, are beyond the scope of this analysis and will be dealt with in Chapter III and in pertinent places throughout the grammar.

With these three levels of tone, seven (of the nine possible) melodies may be found for two-syllable nouns. There are three level melodies, two rising melodies and

⁴³ Additional minimal and near-minimal pairs involving these same consonants include /ka:w-e/ HH white:INF-TV ‘white thing’, /kaw-e/ LH arm-TV ‘arm’ and /ka:w-e/ LL griddle-TV ‘griddle’.

two falling melodies. The two melodies not attested are HM and LM; the M tone is limited in distribution in the second syllable, following only M:

Table 2.15. Melody Inventory of Two-Syllable Nouns

	H	M	L
H	HH	HM	HL
M	MH	MM	ML
L	LH	LM	LL

Thus, before a H tone or a L tone, each of the three levels is clearly contrastive, as may be observed on the [ka] syllable in each of the following words: /kaw-e/ HH hang:INF-TV ‘hanging thing’; /kan-e/ MH dog-TV ‘dog’; /kaw-e/ LH arm-TV ‘arm’; /kal-e/ HL corral-TV ‘corral’; /kaw-e/ MM bamboo.mat-TV ‘bamboo mat’; /kam-e/ ML fire-TV ‘fire’; /kaw-e/ LL top/upwards-TV ‘top/upwards’.

The tables below provide evidence of the full seven-melody inventory, arranged by CV pattern. While it has been well established that so-called depressor consonants may interact with tone systems in African languages (Hyman and Mathangwane 1998; Pearce 1998; Kutsch Lojenga 2000), the phenomenon is not observed in Northern Mao. Regardless of consonants involved, the full set of expected melodies is attested. Table 2.16 provides the full set of melodies for the most common short vowel syllable shapes.

Syllables with nasal codas have not been found to impact surface tonal melodies (as seen in Table 2.16); thus, from this point forward, nasal codas will be specified only in those positions which are limited to nasals in the Northern Mao database.

Table 2.16. Tonal Melodies of the Common Short Vowel Shapes

	HH	LL	HL	LH	MM	MH	ML
CV.CV	/k'ets'-e/ floor-TV	/kes-e/ swell:INF-TV	/koŋ-e/ gather:INF-TV (grain)	/k'an-e/ arrange:INF-TV	/kut-e/ skin-TV	/kan-e/ dog-TV	/kez-e/ top-TV
CVC.CV	/golg-e/ throat-TV	/wets'k'-e/ earthworm-TV	/talk'-e/ headpad-TV	/belg-e/ star-TV	/p'erk'-e/ lightning flash-TV	/mosk-e/ semen-TV	/t'ulk'-e/ pit/stone-TV (fruit)
CVN.CV	/damb-e/ tradition/culture-TV	/pons-e/ mouth-TV	/k'onts'-e/ comb-TV (rooster)	/ʃanj'-e/ leopard-TV	/ent'-e/ male-TV	/ints'-e/ - be.afraid:I NF-TV	/konts'-e/ face-TV
CCV.CV	/kwap'-e/ wing-TV	/kwaf-e/ bridge-TV	/pjats'-e/ plaster-TV	/twag-e/ bushbuck-TV	/ʃwot'-e/ antelope-TV	/k'win-e/ wipe-TV (excrement)	/k'wil-e/ squash-TV

Table 2.17 provides examples of the most common two-syllable CV shapes with long vowels. As noted in the section 2.4, two-syllable nouns with long vowels exhibit the same seven melodies as two-syllable nouns with short vowels.⁴⁴ As noted above, M tone is found on the terminal vowel only when following a M tone.

Table 2.17. Tonal Melodies of the Common Long Vowel Shapes

	HH	LL	HL	LH	MM	MH	ML
CVV.CV	/pur-e/ apply.lotion:INF-TV	/pur-e/ flour-TV	/pe:ʃ-e/ slap:INF-TV	/p'ai-l-e/ digging tool-TV	/pai-e/ be.heavy:INF-TV (a heavy thing)	/se:m-e/ find:INF-TV	/ʃa:m-e/ collard greens-TV
CVVC.CV	/ts'a:ld-e/ bone marrow-TV	/ge:nd-e/ rainbow-TV	/sa:nts'-e/ bed-TV	/di:ld-e/ bless:INF-TV	/ki:nts'-e/ snot-TV	/su:nts'-e/ waist-TV	/ma:lt-e/ fat-TV
CCVV.CV	/ʃwe:m-e/ shin-TV	/ʃwi:l-e/ canoe-TV	/gja:j-e/ many-TV	/swir-e/ hawk-TV	/gjar-e/ peace-TV	/kwa:ŋ-e/ shield-TV	/kwa:ŋ-e/ descendent-TV

While additional CV patterns are attested for two-syllable nouns (provided in Table 2.18, below), these are far less frequent than the others. In each instance, the data

⁴⁴ While it may be expected that phonetic contours would exist when a long vowel with H tone precedes a syllable carrying low tone, this is not the case. There are, in fact, no contour tones in monomorphemic words.

are too few to attest a full set of the seven melodies found in the tables above. However, it should be noted that there are no additional melodies attested in words with these syllable patterns; gaps in the melodic inventory are assumed to be accidental.

Table 2.18. Tonal Melodies of Rare Two-Syllable Shapes

Syllable Type	HH	LH	ML
CCVN.CV	/kjamb-e/ penis-TV		/kjamb-e/ hunt:INF-TV
CCVVN.CV	/kwint'-e/ hair-TV	/gwint'-e/ sweep:INF-TV	
CVNC.CV			/wint'.k'-e/ aunt-TV (father's sister)
CCVNC.CV		/k'wins.k-e/ kneel:INF-TV	

Three-syllable nouns are less common than two-syllable nouns in Northern Mao and they exhibit a wider variety of surface melodies; a full 12 different surface melodies have been attested in the set of 146 three-syllable nouns: three level melodies (HHH, MMM, LLL), three melodies where the pitch rises across the word (LHH, LLH, MHH), three melodies where the pitch falls (HLL, HHL, MLL), two melodies where the pitch rises and then falls (LHL, MHL) and one melody where the pitch falls and then rises (HLH). Important generalizations regarding this melodic inventory include 1) the lack of MML and MMH melodies, a notable absence while both LLH and HHL are found and 2) the only melody attested with all three pitch levels present is MHL. Thus, the M tone is lacking in some distributions where we do find H and L attested, just as was the case with the two-syllable nouns.

Unlike the two-syllable nouns, there is no single syllable pattern of three-syllable words which exhibits all twelve of the melodies attested. Thus, the number of tokens of each melody by syllable type is provided in Table 2.19 and an example of each is

provided in Appendix D. The syllable patterns are arranged by frequency of occurrence in the database.

Table 2.19. Surface Melodies of Three-Syllable Nouns by Shape

Syllable Pattern	HHH	LLL	HHL	HLL	HLH	LHH	LLH	LHL	MMM	MHH	MHL	MLL	Total
CV.CV.CV	8	7	2	12		17		23	6	1	1	6	83
CVC.CV.CV	5	3	2	7	7		1		3		4	7	39
CV.CVV.CV		2			1			4					7
CV.CVC.CV			1				2	1			1		5
CCV.CV.CV	2			1				1			1		5
CVV.CV.CV	1							1				1	3
CVC.CVV.CV						1		1					2
CCVN.CV.CV	1											1	2

It is not possible at this point to say with any certainty that the gaps in Table 2.19 are ‘accidental’. It is, however, assumed that this is the case—that these gaps are due to the overall small inventory of tri-syllabic words. It is admitted, though, that these gaps may be due to tonal phenomena which have yet to be discovered.

Only seven examples of four-syllable nouns have been found. No clear indication of borrowing or internal morphology is present in these examples.

Table 2.20. Tonal Melodies of Four-Syllable Nouns

Syllable Shapes	Example	Melodies Attested
CV.CV.CV.CV	/alat'im-e/ ring-TV (of finger)'	MHML
	/aneger-e/ big.drum-TV	LLHL
CV.CVN.CV.CV	/ts'amengil-e/ porcupine-TV	MMLL
	/ts'erenk'et'-e/ leech-TV	LHML
CV.CVV.CV.CV	/haba:lag-e/ adultery-TV	MMLH
CCV.CV.CVV.CV	/k'wek'ila:k-e/ chameleon-TV	MLLL
CCVC.CV.CVV.CV	/k'jan:k'ila:p-e/ kidney-TV	HLLL

2.5.3. Tonal Melodies of Verbs in Citation Form

The citation form of the verb is marked with the affirmative /ha-/ M-toned prefix and the declarative /-a/ H-toned suffix. There are three tonal melodies found on verbs in

this citation form, regardless of syllable pattern: M-H-[↓]H, M-M-H, M-L-H, where the initial M corresponds to the /ha-/ AFF prefix. These melodies then allow for roots with a surface H, M or L tone. The tone of the suffix is H underlyingly; it is realized as a [M] tone following H roots--the result of a downstep due to a floating root-final L tone. A few examples of verbs in their citation form, their surface melody and the surface melodies of corresponding nominal forms⁴⁵ are provided in Table 2.21, below.

Table 2.21. Tonal Mapping Between Verbs and Nouns

Citation Verb	Tone	Gloss	Citation Noun	Melody	Gloss	Construct Noun Melody
/ha-kas-a/	MMH	AFF-cook-DECL	/kas-e/	HH	cook:INF-TV	MM
/ha-kow-a/	MLH	AFF-sit-DECL	/kow-e/	HH	sit:INF-TV	LL
/ha-ke:w-a/	MH [↓] H	AFF-wound-DECL	/ke:w-e/	MM	wound/bruise. INF-TV	ML
/ha-kes-a/	MH [↓] H	AFF-swell-DECL	/kes-e/	LL	swell:INF-TV	ML
/ha-kol-a/	MMH	AFF-speak-DECL	/kol-e/	HL	speak.ING-TV	ML
/ha-kur-a/	MLH	AFF-smoke.meat-DECL	/kur-e/	HL	smoke.meat:INF -TV	LL
/ha-k'op-a/	MLH	AFF-cut-DECL	/k'op-e/	LH	cut-ING-TV	LL
/ha-kuʃ-a/	MH [↓] H	AFF-wash-DECL	/kuʃ-e/	MH	wash.ING-TV	ML
/ha-kjamb-a/	MH [↓] H	AFF-hunt-DECL	/kjamb-e/	ML	hunt.ING-TV	ML

It is clear here that there is not a simple relationship between the surface melodies of verbs and nouns in these data. The following generalizations, however, may be drawn:

- 1) nouns with the melodies HH and HL relate to verbs with either MMH or MLH
- melodies 2) nouns with the melodies LL, MM, ML, and MH relate only to verbs with the melody MH[↓]H;
- 3) nouns with the melody LH correspond to the verbal melody MLH
- 4)

⁴⁵ These verbal nouns are considered nominal due to their overlapping syntactic distribution with more prototypical nouns. For instance, the verbal nouns can be modified by other nouns in common noun-noun constructions. Additionally, they tend to occur in highly integrated, nominalized modality (same-subject) complements, some purposive constructions as well as deverbal nominalizations (agentive and instrumental, for example).

the verbal melody MMH is found in correspondence with nominal melodies HH and HL and with nothing else. This is unlike the other two melodies found with the set HH and HL; they may be found in verbs with MLH melodies. These generalizations are represented in Table 2.22, below.

Table 2.22. Melodic Correspondences Between Nouns and Verbs

Nominal Melodies		Verbal Melodies
HH, HL	-----	MMH, MLH
MM, MH, ML, LL	-----	MH [↓] H
LH	-----	MLH

Thus, nouns with HH citation melodies may correspond to either of two different verbal melodies. The same is true of HL citation melody nouns. This splitting of the HH and HL melody classes is attested in various subsystems and must be the result of historical processes which have given rise to the tone classes today (cf. section 3.3.1).

The final column of Table 2.21 provides the melody of the noun in its construct form. Nouns and other nominals take this form when they are modified (i.e. by any element, such as another noun, a relative clause, a demonstrative, etc.) (cf. section 4.3). The seven melodies found on nouns in citation form collapse into three melodies on the construct noun form: MM, ML and LL (cf. section 3.3). The modifying noun maintains its citation melody. While this sort of phenomena involving both syntax and morphology is beyond the scope of this chapter, it warrants mentioning on the grounds that it further supports the notion that nouns with the citation melody HH may be split into two classes, those which become MM (H1) and those which become LL (H2), when modified (i.e. in the construct form). These two classes relate to the verbal melodies perfectly: H1 nouns exhibit MM construct noun melodies and MMH verbal melodies; H2 nouns exhibit LL

construct noun melodies and MLH verbal melodies. This same division into classes can be undertaken for the HL nouns: HL1 nouns exhibit ML construct noun melodies and MMH verbal melodies; HL2 nouns exhibit LL construct noun melodies and MLH verbal melodies. There are nine tone classes, one for each nominal citation melody, and an additional class for each of the HH and HL citation melodies, as observed in both the verbal citation form and the construct noun melody.

A further examination of tonal phenomena requires morphosyntactic input that is beyond the scope of this chapter, which focuses on contrastive elements within the phonological system as well as constraints within the phonological word. These phenomena as well as hypotheses as to the genesis of the tone classes will be discussed in Chapter III.

2.3. Conclusions

The discussion above shows that in addition to consonants and vowels, contrastive phenomena in Northern Mao also include both vowel-length and tone. Each of the five vowels in the system exhibits a long counterpart which apart from length, patterns in other ways as the short vowels: they carry only the same inventory of single level tones as do short vowels and they fit within the same syllable patterns. Three heights of contrastive tone are exhibited, but no contour tones in monosyllabic words are found.⁴⁶

Two types of harmony systems are attested: 1) sibilant and 2) vocalic. The sibilant

⁴⁶ Contours may be found in polymorphemic words as in /ha-ta-a/ AFF-give-DECL MLH ‘give’, where the root vowel and the declarative marker /-a/ H form a geminate /a:/ with a rising L-H contour.

harmony system in Northern Mao is less complex, due to its smaller inventory of sibilants, than in many other Omotic languages (Hayward 1988), though it is still clear that the phenomenon operates as both a root constraint as well as harmony across morpheme boundaries. The vocalic harmony system is one of backness, where root vowels must agree without regard to height. The vowel /a/, which is a low-central vowel, does not participate in the harmony system and may co-occur in either front or back roots, as may the terminal vowel /-e/, which is found on the citation form of all nouns.

CHAPTER III

TONE

This chapter explores tone phenomena in Northern Mao, building on the discussion of contrastive tone levels at the end of Chapter II. In simple nouns (noun stem + terminal vowel), there are three levels of contrastive tone (cf. the introductory discussion of tone in section 2.5. above) which are arranged into seven surface melodies on two-syllable nouns: HH, HL, LL, LH, MM, MH, and ML (Ahland 2009). Before a M tone, however, in the two syllable nouns (including a stem and terminal vowel) only a M may be found; that is HM and LM are not attested. This lack of full distribution is the result of the M tone being a more recent development (a claim discussed in detail in Ahland and Pearce 2009 and revisited in this chapter). The verbal system also attests to the three contrastive tone levels with each stem carrying either a H, M or L tone (Ahland 2009).

Major points of interest in the Northern Mao tonal system include: different underlying melodies for nouns in the construct form (MM, ML and LL--the result of a non-productive historical downstep);⁴⁷ total downstep, where tones downstep to the next contrastive tone level (H > [M]; M > [L] and L > [extra L]); the development of a M level from two historical sources (a downstepped H and a default tone which surfaces on underlyingly toneless tone-bearing-units, which are today found at the same level but which behave differently). The discussion below highlights each of these findings while providing an overview of tonal processes throughout the language.

⁴⁷ Nouns and other nominals which serve as head nouns of noun phrases and which are modified syntactically exhibit these construct noun melodies. The tonal melody is the only morpho-phonological indicator of the construct noun form in Northern Mao (cf. section 4.3).

3.1. Register and Tone

Let's begin with an examination of tonal phenomena in realis (non-future) declarative verbs. Finite verb stems carry either a M, L or H surface tone, as noted in Chapter II and as found in each column of Table 3.1, below. There are six morphemes which follow the verb stem directly in these data: the declarative, non-singular, perfect, passive, reflexive and reciprocal suffixes. In row (1), the declarative suffix /-á/ follows the verb stem immediately (this is the citation form for verbs). This suffix is also found at the right edge of the other verbs in the set, though not immediately adjacent to the verb stem as that position is filled by other suffixes. In row (1), the declarative suffix carries a H tone after M and L stems but a M after the H verb stem (in column 3). In rows (2) and (3), the non-singular /-and/ and perfect /-ti/ suffixes follow each of the verb stems. The tones of these two morphemes behave identically one to another. They each carry a M tone and, in fact, the declarative suffix which follows them always carries a H--contra the behavior of the declarative suffix when it immediately follows the H verb stem, where it carries a M. Rows (4) and (5) show the passive /-ekʔ/ and reflexive /-iɲk/ suffixes after the verb stems. The tones of these two suffixes also behave identically, though different from the non-singular and perfect suffixes in rows (2) and (3). Like the non-singular and perfect suffixes, the passive and reflexive carry M tones after the M and L verb stems but, unlike the non-singular and the passive, they carry L tones after the H verb stem, and the declarative suffix that follows carries a M, as opposed to the H it carries after the non-singular and perfect suffixes. In row (6), the reciprocal carries a L tone after each of the verb stems, and the declarative suffix is H in each of the three instances (Table 3.1).

Table 3.1. Tone Behavior in the Realis Verb

M Verb Stem	L Verb Stem	H Verb Stem
<p>1. Citation Form</p> <p>[-- -] ha-int' -á AFF-see-DECL 'S/he saw.'</p>	<p>[- - -] ha-àld-á AFF-know-DECL 'S/he knew.'</p>	<p>[- - -] ha-héz-[↓]á AFF-hit-DECL 'S/he hit (it).'</p>
<p>2. Non-singular /-and/ M₁</p> <p>[-- - -] ha-int' -and-á AFF-see-NSG-DECL 'They saw.'</p>	<p>[- - - -] ha-àld-and-á AFF-know-NSG-DECL 'They knew.'</p>	<p>[- - - -] ha-hez-and-á AFF-hit-NSG-DECL 'They hit (it).'</p>
<p>3. Perfect /-ti/ M₁</p> <p>[-- - -] ha-int' -ti-á AFF-see-PF-DECL 'S/he has seen.'</p>	<p>[- - - -] ha-àld-ti-á AFF-know-PF-DECL 'S/he has known.'</p>	<p>[- - - -] ha-héz-ti-á AFF-hit-PF-DECL 'S/he has hit (it).'</p>
<p>4. Passive /-ek'/ M₂</p> <p>[-- - -] ha-int' -ek' -á AFF-see-PASS-DECL 'S/he was seen.'</p>	<p>[- - - -] ha-àld-ek' -á AFF-know-PASS-DECL 'S/he was known.'</p>	<p>[- - - -] ha-héz-[↓]ek' -á AFF-hit-PASS-DECL 'S/he was hit.'</p>
<p>5. Reflexive /-iṅk/ M₂</p> <p>[-- - -] ha-int' -iṅk-á AFF-see-REFL-DECL 'S/he saw her/himself.'</p>	<p>[- - - -] ha-àld-iṅk-á AFF-know-REFL-DECL 'S/he knew her/himself.'</p>	<p>[- - - -] ha-héz-[↓]iṅk-á AFF-hit-REFL-DECL 'S/he hit her/himself.'</p>
<p>6. Reciprocal /-mùnd/ L</p> <p>[-- - - -] ha-int' -mùnd-and-á AFF-see-RECP-NSG-DECL 'They saw one another.'</p>	<p>[- - - - -] ha-àld-mùnd-and-á AFF-know-RECP-NSG-DECL 'They knew one another.'</p>	<p>[- - - - -] ha-héz-mùnd-and-á AFF-hit-RECP-NSG-DECL 'They hit one another.'</p>

The facts that we can gather from the data in Table 3.1 include: 1) the declarative suffix carries a H tone when it immediately follows the verb stem, except when it immediately follows the H verb stem; 2) the non-singular and the perfect suffixes carry

M tones throughout the data and the declarative suffix which follows is H throughout; 3) the passive and reflexive carry M tones, which are phonetically identical to the non-singular and perfect suffixes' tones following M and L stems, but which carry a L tone after the H verb stem, and the declarative suffix which follows is H when the preceding suffixes carry a M and carries a M when the preceding suffixes carry a L; 4) the reciprocal carries a L tone throughout the data.

It is clear that there is something about H verb stems which can produce a lowering (a downstep--as will be discussed below) of tones which follow. It is also clear, though, that this downstep does not always occur, as is the case when the non-singular and perfect suffixes immediately follow the H verb stem, and when the reciprocal suffix, which carries a L, follows the verb stem.

We also have to consider why it is that suffixes which carry a M tone after the M and L verb stems do not all behave the same with respect to downstep after the H verb stem--the M tones of the passive and reflexive suffixes (which, along with the following declarative suffix, drop from M > [L]; and the declarative suffix drops from H > [M]); but the M tones of the non-singular and perfect suffixes remain M toned after the H verb stem and their declarative suffix remains H in all instances. I will use the term M₁ for those M tones which do not downstep and M₂ for those M tones which do undergo downstep.

The account for these phenomena must include the notion of register, where tones can be lowered or raised due to a 'register' setting.⁴⁸ The discussion of tone in theoretical

⁴⁸ Snider offers a metaphor for register: register is a raising or lowering of the 'key' in which tones occur, not unlike a musical key where relative intervals remain constant even though the actual notes

phonology has for the last 30 years (since Yip 1980) frequently included the notions of both tone and register features,⁴⁹ most often using either a binary system (such as Yip's 1980: +Upper / -Upper registers with + high / - high tones) or a unary system (such as Snider's 1999: h / l registers with H / L tones); what is important is that these approaches (and a variety of others as well) have made use of the features 'tone' and 'register'.

The incorporation of register into the discussion of tone actually does more than just account for the raising and lowering of tones. Register serves two functions: addressing tone inventories as well as tone behavior (Yip 2002:40). Yip argues that since systems with as many as four contrastive tones are commonly attested in the world's languages,⁵⁰ a set of features for tone must (among other things) account for four tones without overgenerating. Any set of features for tonal inventories, however, should also be relevant to tonal behavior such as assimilation, contour formation and downstep and should distinguish degrees of relative markedness between tones in a system (Yip 2002:40-1). Just as distinctive features in segmental phonology predict natural classes which can find support in phonological behavior, so features of tone and register should predict behavior (e.g. where all tones with high register behave similarly, for instance). Thus, higher/lower 'register' and higher/lower 'tone' features combine to form as many as four underlying tones while also accounting for behavior like downstep and even

(pitches) may change according to the key signature (1999:21).

⁴⁹ Yip notes that simple binary distinctions of H and L features (without recourse to the notions of 'tone' and 'register' as distinct settings) yield nonsensical feature arrangements, such as +H with +L (2002:42).

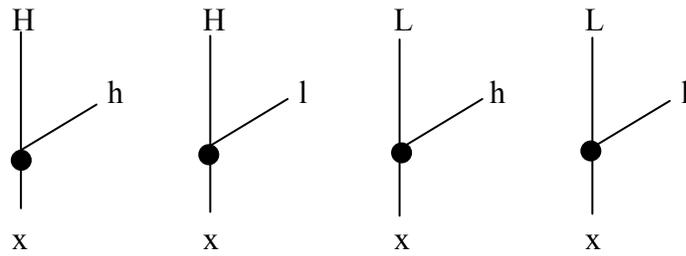
⁵⁰ There are a small number of languages with as many as 5 levels; Benchnon, an Omotic language of Ethiopia is one of these, with 6 tones (5 levels and 1 contour) (Rapold 2006).

multiple downsteps in an utterance, where all tones move down yet retain their distinction from one another.

Snider employs the ideas of tone and register features in his Register Tier Theory (1999), which formalizes and models tonal phenomena, including downstep. Register Tier Theory provides a phonological model of tone and tonal phenomena which accounts for downstep phenomena by the use of high (h) and low (l) register tier settings in addition to the high (H) and low (L) tones themselves. Under such a model, a tone-bearing-unit may be marked with a tone as well as a register setting. It is the relative nature of the register tier settings (the h and l) which is able to account for downstep and even series of downsteps, common in some African languages, including Northern Mao. After a brief introduction to Register Tier Theory, we will consider how to handle the M tones which subdivide into two classes with respect to downstep.

3.1.1. Register Tier Theory

Register Tier Theory generates multiple levels of contrastive tone through combinations of H and L tones as well as the h and l register settings (Snider uses uppercase for tones and lowercase for register settings--this convention is adopted here). Figure 3.1, below, shows a possible configuration for a 4-tone language, where two types of M tones are at different levels phonetically.



4 tones:

H M₁ M₂ L

Figure 3.1. 4-Tone System in Register Tier Theory

The H tone is a composite of H tone and h register; M₁ is a composite of H tone with l register; M₂ is a composite of L tone with h register; the L tone is composed of L tone with l register.

It is important to note that Register Tier Theory predicts that languages with three levels of tone may exhibit mid tones which could be either a M₁ type or a M₂ type. Tonal behavior within the system may allow the linguist (at times, at least) to determine which of the two M tones is present. But, Yip notes, M tones are often “undetermined” in nature in a three-tone system, where the M could be a H tone on a lower register or a L tone on a higher register (2002:43).

In languages where the distance between the H and L tones on the same register is different from the distance between h and l registers, it would be possible to distinguish each of these four tone-register composites, as they would be heard at distinct levels. This sort of tone-register configuration can be seen in Fig. 3.2, where the distance between tones is larger than the distance between the h and l register.

The solid horizontal lines mark the pitch target of the H/L while the dotted lines represent the register on which the tones are aligned. In Fig. 3.2, the H tone on the lower register (the M₁) target is higher than the L tone on the higher register (the M₂) target. A

language with the configuration above (where the distance between H and L tones is roughly twice as large as the distance between the two registers) would produce a downstepped H tone at a higher pitch than the M (M_2) tone.

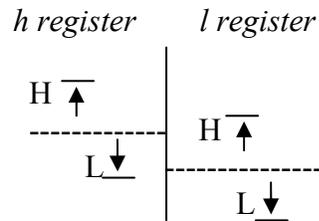


Figure 3.2. 4-Tone System where M_1 is higher than M_2
(adapted from Snider 1999:24)

3.1.2. The 4-Tone / 3-Level System

In Northern Mao the downstepped H tone is heard at the same level as other M tones which show no evidence of downstep.⁵¹ In (3.1) and (3.2), the /ha-/ AFF prefix carries a M (M_2) tone, as it always does. The declarative suffix carries a H tone after L and M root verbs. Examples of these affixes on verbs with L, M and H toned stems follow below.

- (3.1) M_2 L H
 $\left[\begin{array}{ccc} - & - & - \end{array} \right]$
 ha-pè:ʃ-á
 AFF-slap-DECL
 ‘S/he slapped (it).’

The waveform and pitch trace (indicated by the fundamental frequency with the solid lines in the bottom graph) for example (3.1) are shown in Fig. 3.3, below.

⁵¹ While examples of the downstepped H and the M tone are provided here for the present discussion, downstep is discussed more fully in section 3.2.1, below.

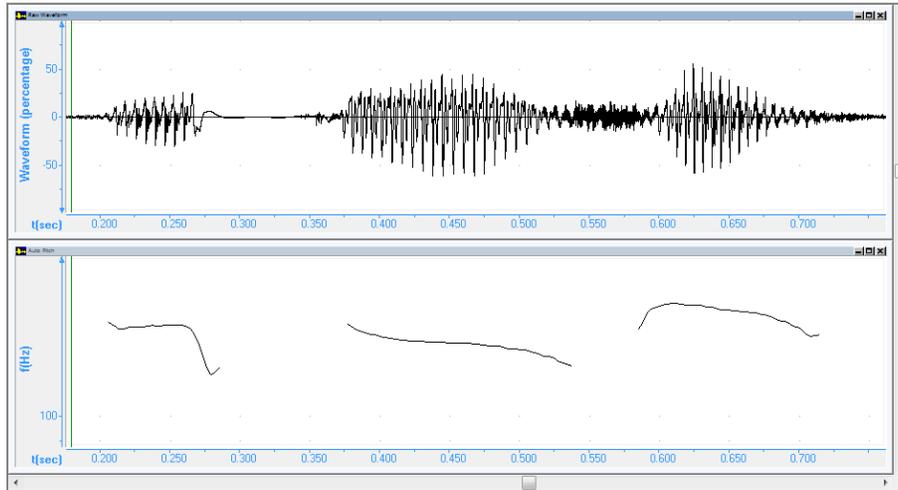


Figure 3.3. /ha-pè:ʃ-á/ AFF-slap-DECL

The actual hertz measurements (taken at $\frac{3}{4}$ through the vowel periodicity) are 146 Hz, 134 Hz and 159 Hz. In this word, in this utterance, these measurements correspond to M_1 , L and H tone levels. The affirmative /ha-/ prefix is a M_2 tone, as indicated in the notation above example (3.1).

Example (3.2), below, illustrates a M toned verb stem with the affirmative prefix and the declarative suffix.

- (3.2) $M_2 M_1 H$
 $\left[\begin{array}{ccc} - & - & - \end{array} \right]$
 ha-ku:ʃ-á
 AFF-clog/stop.up-DECL
 ‘S/he stopped (it) up.’

Again, the waveform and pitch trace are provided below, in Fig. 3.4.

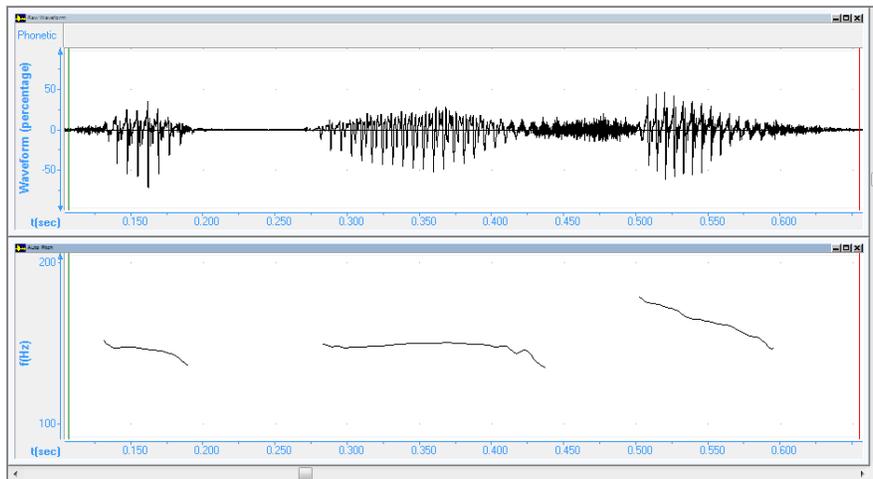


Figure 3.4. /ha-ku:f-á/ AFF-clog/stop.up-DECL

The hertz measurements in this word are 138 Hz, 140 Hz, and 157 Hz, corresponding to the M_1 , M_2 and H tone levels. The slight difference in hertz between the M_1 and the M_2 (a difference of only 2 Hz) is not perceptible to the human ear. In both examples above, the declarative suffix /-á/ is clearly H.

After H tone verbs, the declarative suffix is downstepped from H to the M level (3.3); downstep is indicated by the raised downward arrow [\downarrow].

- (3.3) M_2 H M_1
 $\left[\begin{array}{ccc} & & \\ - & - & - \end{array} \right]$
 ha-káʃ- \downarrow á
 AFF-close-DECL
 ‘S/he closed (it).’

The pitch trace corresponding to example (3.3) shows clearly that the declarative suffix’s tone is no longer H (Fig. 3.5).

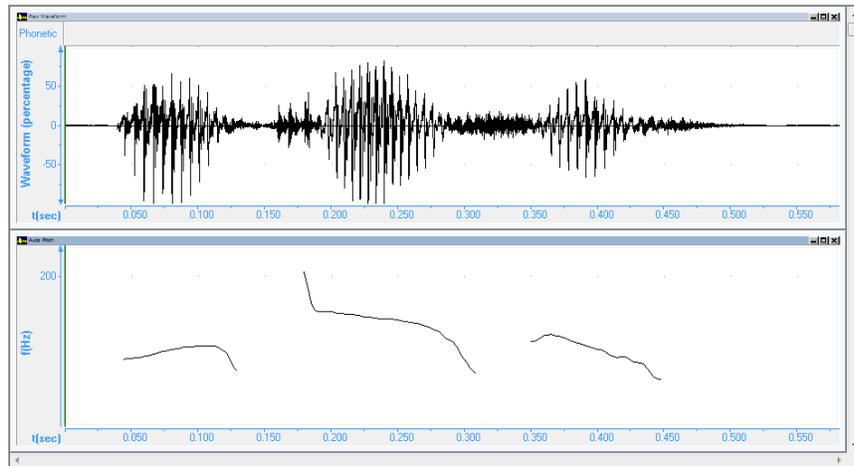


Figure 3.5. /ha-káʃ-á/ AFF-close-DECL

The actual hertz measurements are 147 Hz, 163 Hz, and 145 Hz. In this case the M_2 tone on the affirmative prefix is imperceptibly higher (by 2 Hz) than the downstepped H (the M_1 tone) of the suffix. In Fig. 3.4, the M_2 tone was lower by 2 Hz than the M_1 of the verb stem. These differences are thus not consistent and as imperceptible to the human ear, are not part of the phonological system. That is the M_1 and M_2 are produced at the same level.

The downstepped H tone is produced at the same level as all M (M_2 and M_1) tones, and is indicated as such by the same level indication in the examples (3.1-3.3). The M tone levels for these examples include the M_2 /ha-/ AFF prefix (in all three), the verb stem in (3.2), a M_1 tone, and the downstepped /-á/ suffix, also an M_1 tone (in 3.3).

Figure 3.6 provides a diagram of a system where the distance between tones and the distance between h and l registers is equal--this is the configuration which can account for Northern Mao's M tones which occur at the same level, where the M_2 is a L tone on the h register and the M_1 is a H tone on the l register.

In the system represented in Fig. 3.6, the M_1 and M_2 are heard at the same level, as indicated by the solid horizontal lines indicating pitch targets.

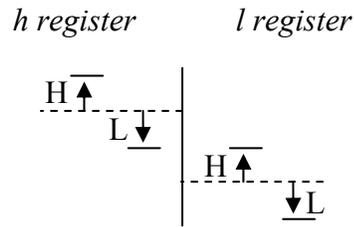


Figure 3.6. Four-Tone System with Three Surface Levels

In Table 3.1, above, the M_1 tone (a composite of H tone with l register--perhaps a relic of the history of this tone, derived from a downstepped H) does not downstep,⁵² while the M_2 tone (a composite of the L tone with h register) does undergo downstep, presumably because it is positioned relative to the h register and can thus be lowered.⁵³ What is certain is that these two M tones behave differently with regard to environments which cause downstep. Fig. 3.6 is modified below (Fig. 3.7), where the labels H, M_1 , M_2 and L are provided to show the levels in Northern Mao.

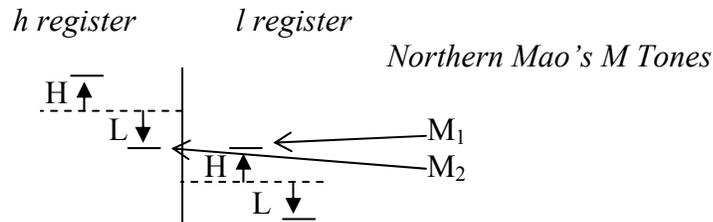


Figure 3.7. Northern Mao's Tone and Register System

Historically, we may think of this configuration as having arisen from two splits:

⁵² The M_1 and L tones do not downstep when *immediately* adjacent to a low register, that is. Since the M_1 and L tones are already on a low register, the low registers of the M_1 or L merge with the immediately adjacent low register in an attempt to resolve a violation of the Obligatory Contour Principle, which prohibits identical elements on the same tier. If, however, any tone with a high register followed by tones on the low register were to occur adjacent to a downstepping environment, the tones would all be downstepped, as the low registers would not be immediately adjacent to the trigger for downstep (say a floating low register, for instance, which is the trigger for downstep in Northern Mao) and could not merge with the low register. This is in fact, what is happening in example (3.10), where a tone with a high register is downstepped and as a result, the tones which follow are also downstepped.

⁵³ It will be shown below that the M_2 tone is a default tone which surfaces on lexically toneless tone-bearing units.

1) where H tone splits into H and M (by downstepping the H with a l register) and 2) where L tone splits into L and M (by raising the L with a h register). By no means is the development of a M tone from either of these sources strange (as noted by Yip (2002:43)); however, the fact that these M tones share the same pitch target, rendering them identical, apart from certain environments where they show their true colors (or their composition relevant to their history), is perhaps somewhat surprising. The distances between H and L tones and the distances between h and l registers appear to be equivalent in Northern Mao, allowing for a 4-tone system with 3 levels where two M tones surface at the same pitch level. The use of the register feature allows us to capture the behavior of tones with h registers relative to tones with l register--a natural class behavior relevant to downstep.

Register Tier Theory (RTT) will be used as a means for modeling tonal phenomena where it is most pertinent. The benefits of RTT for a language like Northern Mao include:⁵⁴ 1) unique representations for each of the tonemes (contrastive tones) in the language; 2) the identification of natural classes such as tones on the high register vs. tones on the low register, or H tones on any register vs. L tones on any register--both of which turn out to be relevant classes for Northern Mao tonal behavior; and 3) a way to represent tonal phenomena such as assimilation and downstep.

The use of register and tone features to attempt to account for both the tonal inventory and tonal behavior conflates, to some extent, the distinction between what is historical and what is synchronically productive. While it is clear that register lowering

⁵⁴ This is not to say that other theories and approaches to tone which incorporate the notions of register and tone could not offer similar benefits.

(i.e. downstep) is productive and, once triggered, produces changes which lower subsequent tones, the different behavior of M_1 and M_2 tones relevant to the downstepping environment is surely the result of their historical development. I suggest here that the histories of these tones (as the result of a split from either the H or the L tone) through the shaping of their tone and register features play some part in the synchronic system. That is, the tone and register features which combine to form the four-tone inventory, while they are the result of historical processes, appear to be relevant to synchronic behavior both as conditioning environments and as results of processes (e.g. downstep and assimilation). This being said, I also suggest that there is some evidence that these tone-register features which distinguish the two M tones are in some environments undergoing reanalysis and merging into a single M tone (section 3.5). In this chapter, I am attempting to describe the tone system in its current state (which may play a part in one portion of the synchronic system while being lost in another portion), to identify natural classes based on tonal behavior and to represent tonal interactions in a way that incorporates natural class behaviors through the use of register and tone features in line with current tone theories.

3.2. Tonal Processes

Five tonal processes are found in Northern Mao: downstep, partial tone assimilation, tone spread, H-tone insertion and the development of contour tones. Each is discussed in turn below.

3.2.1. Downstep

Downstep, a widely attested tone phenomenon, especially in African languages

(Snider 1999:22), is a lowering of tonal register where tone distinctions are maintained but at a lower level (i.e. lower fundamental frequency). Thus, when downstep occurs, tones which occur after the point of downstep are lower than they are before the point of downstep.

As a starting point in our examination of downstep in Northern Mao, let's begin by reviewing the citation (declarative-realiz) forms for verbs with M, L and H⁵⁵ stems, seen in row (1) of Table 3.1. New data featuring these three patterns are provided below for the convenience of the reader. As discussed above, the affirmative prefix /ha-/ always carries a M tone while the declarative suffix /-á/ carries a H tone after the M (3.4) and L (3.5) verb stems but is downstepped after the H verb stem (3.6).

	$\left[\begin{array}{cc} \text{---} & \text{---} \end{array} \right]$	
(3.4)	ha-int [?] -á AFF-see-DECL 'S/he saw.'	M-tone verb stem

	$\left[\begin{array}{cc} \text{---} & \text{---} \end{array} \right]$	
(3.5)	ha-àld-á AFF-know-DECL 'S/he knew.'	L-tone verb stem

⁵⁵ As noted in section 2.5.3, and the discussion in 3.1 above, these are the three types of single-syllable verb stems--by far the most common verb forms in the language.

(3.8) $\left[\begin{array}{cc} - & - \\ - & - \end{array} \right]$
 íʃ p'íʃ-íʃ ha-jé:ts'-[↓]á
 DEF child-SBJ AFF-run-DECL
 'The child ran.'

The second downstep in (3.7) is also present in (3.8). This is the downstep of the /-á/ declarative suffix which occurs after the H verb stem, just as in (3.6) above.

Downstep in Northern Mao offers three particularly interesting findings. First, tones, when they undergo downstep, do not downstep partially (i.e. to an intermediate level between the contrastive levels), but lowers to the next contrastive level (Ahland and Pearce 2009). That is, H downsteps to the M level, M to the L, and L (when it follows a downstepped tone, as L tones don't undergo downstep directly but may follow a downstepped M for instance) to extra L. Ahland and Pearce (2009) reported the results of a phonetic study of 400+ tokens, in which tone levels and downstepped tone levels' fundamental frequencies were measured⁵⁶ in the possessive construction. Figure 3.10, adapted from a figure in Ahland and Pearce (2009:30), shows the interval difference between tone levels (the length of each bar represents the size of the interval between the two tones on the left), measured here in semitones.⁵⁷

⁵⁶ The recordings were made with the Marantz PMD 660 digital recorder with a Shure SM 10A headset microphone. Measurements were taken of the fundamental frequency and semitone at roughly $\frac{3}{4}$ the way through the vowel, to insure time for the speaker to reach the tone target and to minimize preceding consonant perturbations. A set of 10 constructions featuring each of the 8 tone intervals was recorded and the averages of the semitones measured were included in the chart.

⁵⁷ A semitone is a musical interval (there are twelve semitones in an octave) which is derived logarithmically from the Hertz scale, where one semitone "roughly corresponds to a frequency difference [in Hertz] of 6 percent" (Hardcastle and Laver 1997:645). This is helpful in tonal or intonational analysis where one wishes to compare tonal intervals in the higher Hertz ranges with tonal intervals in the lower Hertz ranges (a particular Hertz interval in the higher frequencies will be perceived as a smaller interval than the same Hertz interval in the lower frequencies). According to Rietveld and Gussenhoven (1985), a semitone (ST) difference as low as 1.5 ST may be perceived as prominence. The semitone measurements

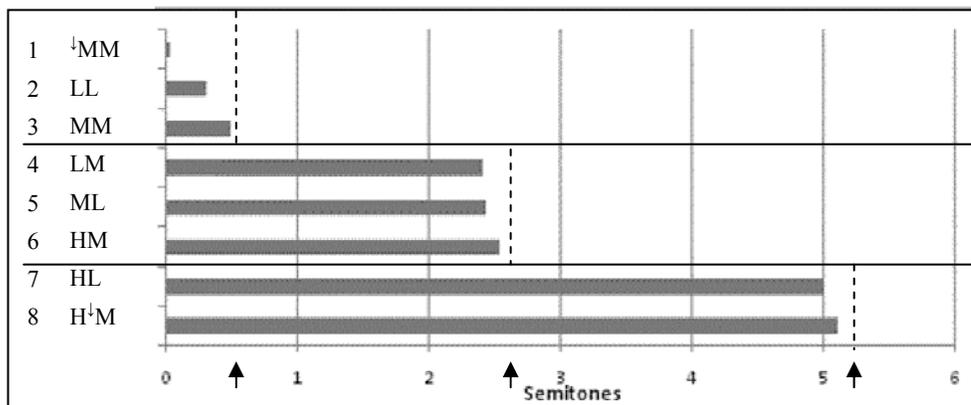


Figure 3.8. Intervals Measured in Semitones

Rows 1-3 of Fig. 3.8 provide a baseline comparison for the intervals in rows 4-8. In rows 1-3, we expect only those pitch differences which are not significant enough to indicate a contrastive change in pitch (i.e. intervals which are too small to play into the phonological system). This is because the two tones in each of these first three rows are identical one to another in terms of Northern Mao's tone system. These measurements include the size of the pitch interval between a downstepped M followed by another (identical) M (row 1), a L tone followed by another L tone (row 2) and a M tone followed by another M tone (row 3). In each case the difference in pitch is less than 1 semitone--in other words the interval difference is likely not easily perceivable to the human ear. In fact, this slight drop between two like-pitches appears to be due to declination, the general tendency for pitch to drop slightly across an utterance.

Rows 4-6 provide single interval differences: from L to M, from M to L, and from H to M. These single interval drops exhibit a drop of approximately 2.5 semitones. This

which appear in this chapter have been produced by an automated feature of Speech Analyzer 3.2.

is the size of the interval between two tones with no further contrastive tone level between them.

Rows 7 and 8 provide the double interval differences: from H to L and from H to downstepped M (at the same level as the L). These are approximately 5 semitones. In Fig. 3.8, we can see that the interval between the H and the downstepped M (row 8) is heard as the same pitch interval as the difference between the H and L (row 7). That is M, when it downsteps, downsteps to the L tone target, called total downstep by Meeusen (1970). In fact, the interval of H to M (row 6) is heard the same as the interval H to downstepped H (not included in Fig. 3.8); thus the tone levels can be represented by Fig. 3.9 (adapted from Ahland and Pearce 2009:34).

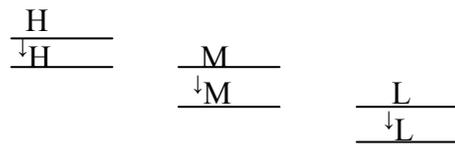


Figure 3.9. Tone Levels and ‘Phonological’ Downstep

While tone systems that downstep to the level of the next contrasting tone may be rare, Northern Mao is not the only language to exhibit downstep at the phonological level, as noted by Gussenhoven (2004) regarding data from Chumburung (Snider 1999), as well as Kikuyu (Clements and Ford 1980). The H tone in Bimoba also downsteps to the phonological M level (Snider 1998). Some speakers of Maa (Maasai) also downstep H tone to the next phonological level (L) (Doris Payne, personal communication 2011).

The second interesting finding exhibited by Northern Mao’s downstep phenomena is that downstep only occurs after floating tones which have a l register which are not themselves realized, apart from the downstep they cause. That is, L tones

(L tone with l register) do not automatically cause the downstep of subsequent tones; only those L tones that are stranded from any tone-bearing unit and thus are left floating lead to downstep.⁵⁸ For example, no downstep is noted in (3.9), where the final H on the declarative suffix /-á/ follows two realized L tones.

(3.9)	53	54	54	47	47	53	Semitones
	179	190	188	125	129	173	Hertz
	H	H	H	L	L	H	Tones
	$\left[\begin{array}{cccccc} - & - & - & - & - & - \\ \hline \end{array} \right]$						
	i	te	ob	-na	ald	-a	
	í-té	ób-nà	àld-á				
	3-SBJ brother-OBJ know-DECL						
	‘He knows (my) brother.’						

In (3.10), however, the insertion of a M tone before the two L tones does allow for downstep to take place (there is a floating L, or more precisely a L tone with l register) on the right edge of /ób-è/ HL brother-TV ‘brother’ which is the result of the terminal vowel dropping and thus stranding the L tone which *is* realized in citation form);⁵⁹ here, every tone to the right of the downstep is lower than would occur without the downstep (the M drops to the L target; the L to an extra L; and the H to a M); the H tone on the declarative suffix is significantly lower than the H tones preceding the downstep.⁶⁰

⁵⁸ Since downstep is a register phenomenon, it may be observed that only the l register setting is pertinent here. Theoretically, tones which trigger downstep could be either the M_l or L since each of them carry a l register. However, since we don’t find M tones at the right edge of words in Northern Mao (see discussion in section 2.5 regarding the limited distribution of the M tone), we don’t find M tones stranded by loss of the terminal vowel and left floating.

⁵⁹ While some M tones, which occur after a floating L tone in Northern Mao, do exhibit downstep, L tones do not in this same environment. In the case of contiguous L tones, there is a merger of l registers (due to the obligatory contour principle) and downstep does not occur.

⁶⁰ As noted above, an interval indicating a one-level change (H to M or M to L, for instance)

(3.10)	53	54	54	48	46	46	50	Semitones
	175	186	190	131	117	122	158	Hertz
	H	H	H	↓ M	L	L	H	Tones
	$\left[\begin{array}{ccccccc} - & - & - & - & - & - & - \\ \hline \end{array} \right]$							
	i	te	ob	↓ p'ijf	-na	ald	-a	
	í-té	ób	↓ p'ijf-nà	àld-á				
	3-SBJ brother child-OBJ know-DECL							
	‘He knows (my) brother’s child.’							

The intervals from H to L (in 3.9) and from H to ↓M (in 3.10) are not significantly different from one another and lend further support to the claim above that the target of downstep is the next level of contrastive tone. The slight drop noted in the fundamental frequency of the final /-á/ in (3.9) is here assumed to be the result of declination, i.e. the tendency for tone levels to drop slightly over utterances. The difference in semitones between the final H in (3.9) and the first H tone, earlier in the utterance, is not significant enough to indicate more than a single interval drop--based on the measurements reported in Fig. 3.8.

It has been suggested that non-automatic downstep (from floating L tones or l registers) generally implies the presence of automatic (from a realized L tone) downstep (Pulleyblank 1986). Yet, Northern Mao is not the only language to not exhibit this phenomenon. Dschang and Kikuyu also exhibit downstep from floating lows but without downstep following realized L tones (Yip 2002) and (Gussenhoven 2004), respectively.

corresponds to roughly 2.5 semitones. In this case the final downstepped H is 3 semitones lower than the first H tone. It seems likely that the increase of .5 semitones (from the 2.5. semitone drop, which normally attests to a single interval difference, to a drop of 3 semitones) is due to phonetic declination over the scope of the utterance.

The third interesting finding related to downstep in Northern Mao is that the downstep is only found when floating l registers follow H tones. That is, floating l registers after a M tone do not produce downstep. The reason for this has not been determined.

Before continuing on, we must note that downstep is not simply the result of two H tones meeting (at a morpheme boundary, for instance). While it can be argued that the obligatory contour principle could trigger a downstep when two H tones become adjacent; it is clear, however, that this is not the case in Northern Mao. A floating l register must be involved. For instance, no downstep occurs when the H toned 1SG subject marker /tí-/ is followed by a H tone on the verb stem /héz/ ‘hit’. The H verb stem, on the other hand, like all other H toned verb stems does cause a downstep of the following declarative suffix.

- $$\left[\begin{array}{cccc} & - & - & - \\ - & - & - & - \end{array} \right]$$
- (3.11) ha-tí-héz-^lá
 AFF-1SG-hit-DECL
 ‘I hit (it).’

This lack of downstep between the 1SG subject marker and a H toned verb stem obtains for all H verb stems in the language. The presence of two adjacent H tones, themselves, does not produce downstep. It appears there is something in the history of the H verb stems which has led to the development of a l register at the right edge of the verb, and it is this l register which produces a downstep.

We can now return to our discussion of the third finding related to downstep.

While the floating l register is necessary for downstep, it alone is not enough to act as a trigger. The floating l register must follow a H tone; a M tone followed by a floating l register does not trigger downstep. For instance, in the data below, there are four sets of noun + noun collocations in the possessive construction. The possessor noun (the first noun in each of the collocations) is provided in citation form below each of the four examples with its full tone melody and the terminal vowel. Across each of these four examples, the second noun (the possessum) is /kús-é/ hand-TV ‘hand’ which is a H1 class noun and thus carries a MM construct noun melody (cf. the discussion of construct noun melodies in 3.3, particularly 3.3.1). This MM melody is constant in all but one of the four examples.

The first noun’s full tonal melody is not realized in the possessive construction because the terminal vowel is found only at the right edge of the noun phrase and, thus, only on the second noun (cf. the discussion of the terminal vowel in section 8.2). While in the first example, the possessor noun exhibits a H tone on the noun root and the terminal vowel, the possessor noun in each of the following three examples exhibits a L tones on the terminal vowel after H, M and L tones on the first tone-bearing unit, respectively.

H1 + MM	HL1 + MM	ML + MM	L + MM
$\left[\begin{array}{ccc} - & - & - \end{array} \right]$	$\left[\begin{array}{ccc} - & \downarrow & - \\ & - & - \end{array} \right]$	$\left[\begin{array}{ccc} - & - & - \end{array} \right]$	$\left[\begin{array}{ccc} - & - & - \end{array} \right]$
(3.12) te:f kus-e	ób ^h kus-e	es kus-e	wòf kus-e
/té:f-é/	/ób-è/	/es-è/	/wòf-è/
sister.in.law-TV	brother-TV	person-TV	shaman-TV

Apart from the HL1 + MM collocation, the second noun’s (the possessum’s) tone

melody is consistently MM. In the second example, the sequence of a H tone and a floating L tone (L tone with l register)--stranded due to a loss of the terminal vowel--effects a downstep on the second noun's MM melody. This downstep does not occur when the floating L tone (with l register) immediately follows a M tone (as in the third example). Nor do we find a downstep in the fourth example, where the L tone of the terminal vowel is not actually stranded, having been spread from the noun's first tone-bearing unit to the terminal vowel, which is lexically toneless. These tones which surface on these terminal vowels (cf. the discussion in 8.2) are predictable by the tone class of the noun. In all cases of downstep, throughout the language, we find that the triggering environment must be a H tone followed by a floating L tone (with l register). No other environment triggers downstep.

3.2.1.1. Downstep and the Two M Tones

Let's now return to the discussion of the two M tones and their behavior relevant to downstep, as introduced in Table 3.1 above. We have established that the M tones (M_2) of the passive and reflexive suffixes downstep from M to L after the H verb stems (as does their declarative suffix), while the M tones (M_1) of the non-singular and perfect suffixes do not downstep. In fact, the tones of the non-singular and perfect suffixes appear to absorb the l register, as evidenced by the fact that the following declarative suffix does not downstep even after the H verb stems. Essentially each of the types of M tones behaves like either a H or a L tone with respect to the downstepping environment. The suffixes with M_2 tones behave like the declarative suffix, which carries a H tone. The M_2 and the H each downstep. The suffixes with M_1 tones behave like the reciprocal suffix,

which carries a L tone. Register Tier Theory predicts this sort of behavior as the M₂ and H tones each exhibit h registers which can then be lowered by spreading a l register to them, while the M₁ and L tones each exhibit l registers which merge with floating l registers and thereby absorb (or bleed) the downstep environment.

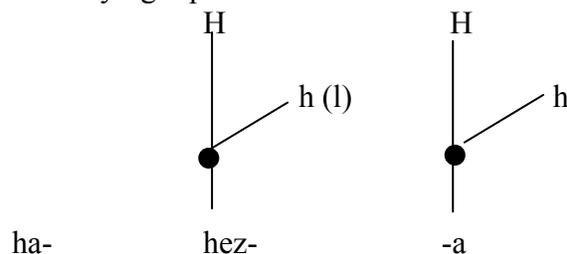
In summary, then, it is observed that while the non-singular, perfect, passive and reflexive suffixes carry M tones following M and L verb stems and are followed by the H tone declarative suffix, they do not behave the same following H stems. These H verb stems must apparently carry a l register on their right edge (this l register must be considered lexical and is perhaps the result of something in the history of the H stems themselves); but we can't say that the downstep is simply 1) a dissimilatory effect triggered by two H tones meeting (see 3.11, above) or 2) that it occurs only on the last tone-bearing unit in the utterance (i.e. an utterance final phenomenon), as the data in Table 3.1 show the downstep occurs immediately following the H verb stem and is not positioned relative to the end of the word or utterance. It is here proposed that while the non-singular, perfect, passive and reflexive suffixes carry a M tone, the M tones are not all composed of the same underlying structures and that, just as is shown in the discussion of tone in the nominal system below (section 3.3), two distinct M tones, each with different tone and register composite configurations, and each produced at the same phonetic target level, are present in Northern Mao.

3.2.1.2. A Formal Representation of Downstep

The derivation of the citation form (i.e. 3SG, declarative-realis) for a H stem verb is provided in (3.13)-(3.17). The example here exhibits the H verb stem 'hit' preceded by

the affirmative /ha-/ prefix which is underlyingly toneless, carrying a default (filled-in) M₂ tone configuration.⁶¹ The verb stem, itself, carries a H tone with h register but also carries a floating l register on the right edge--this is the trigger for the downstep.⁶² The declarative suffix /-á/ carries a H tone with a h register and follows the verb stem.

(3.13) Underlying representation for H verb stem in citation form



The default fill-in rules apply first (3.14.), requiring the insertion of a L tone with a h register (the default M₂ configuration) when no other tone is floating adjacent to the toneless tone-bearing-unit, in this case, the /ha-/.

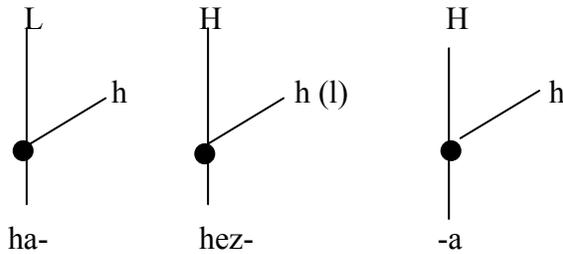
This default process is followed by an application of the Obligatory Contour Principle (OCP),⁶³ which prohibits all identical, adjacent elements which are on the same tier.

⁶¹ Evidence that the /ha-/ AFF prefix is toneless is provided in example (3.28) below, where it carries a L tone with l register, spread from the subject marker /-w/ which fused with it. A M₁ tone, if it had been present, would not have behaved this way, as the l register of the M₁ and the following L would have merged.

⁶² The source for the floating l register after all H toned verb stems is not clear to me. It seems likely that this is a relic of an old boundary tone. Certainly nouns, when modified, (apart from the H1 noun tone class, cf. section 3.3) show a L tone at the right edge. It is hypothesized that this likely effect of a boundary tone may be related to the floating l register which is maintained after H toned verb stems and presumably lost after M and L toned stems, as there is certainly no downstep exhibited following them. Alternatively, it could be that the floating l register is maintained after the M and L toned verb stems as well and that it merges (in response to the OCP) with the l registers of the M₁ and L tones on those verb stems, though. I have found no data which allows me to say for sure. In order to keep the diagrams as simple as possible, I've only shown the floating l register where it clearly exists, after the H tone verb stems.

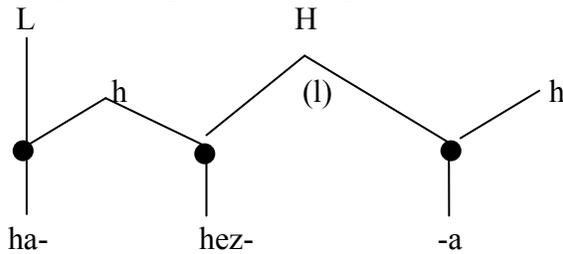
⁶³ The need for the OCP to occur after default fill-in processes and before l-register spread is necessary for some verbal derivations (cf. the passive derivation below 3.18-3.21). This order of fill-in rules applying before the OCP is also assumed by Snider (1999:37).

(3.14) Default fill-in



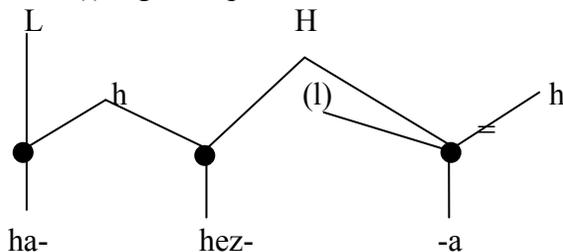
In Northern Mao, this constraint (or combination of constraints), is satisfied by a merger of identical elements which are on the same tier (as in 3.15).

(3.15) Merger in response to Obligatory Contour Principle (OCP)



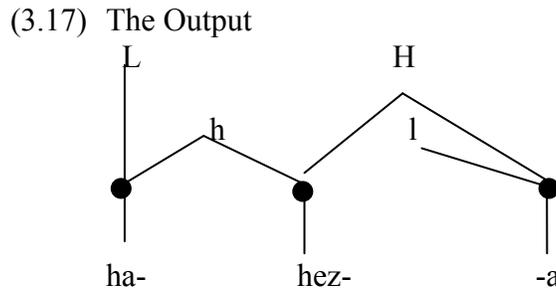
Finally, after the OCP joins all adjacent elements and the floating (l) register has prevented the h register of the /-á/ suffix from being joined with the earlier h register, the l register spreads right, delinking the h register (3.16).

(3.16) Low (l) register spread



The delinked and subsequently floating h register is erased as a stray and the output (3.17) is produced. While the first and last tone-bearing-units are both realized at the same phonetic [M] level, the tone and register configurations for these are different: the /ha-/

AFF carries a L tone with h register (an M_2) and the /-á/ DECL carries a H tone with l register--the result of a downstepped H (M_1).



The output tone map (Figure 3.10) shows the H and L tones positioned on registers, which are indicated by a dotted line. The bar above the H and below the L indicates the actual target of the tone. Figure 3.10 shows that both the L tone with h register (M_2) and H tone with l register (M_1) configurations are produced at the same level, though on different registers.

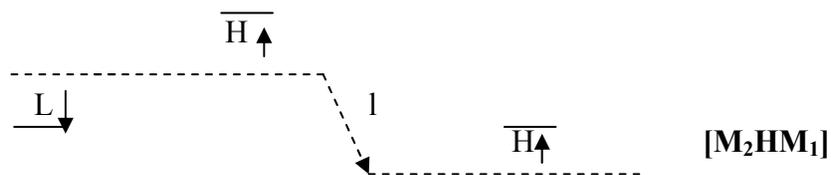
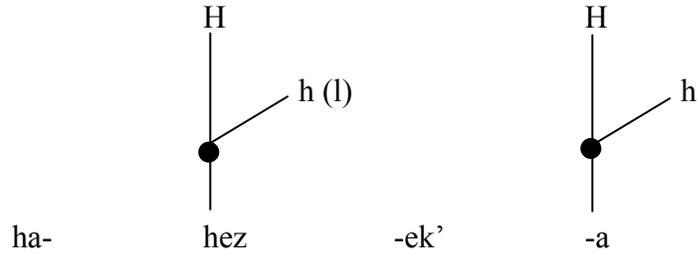


Figure 3.10. Tone Map for /ha-héz-á/AFF-hit-DECL

It is clear in Table 3.1, above, that the passive and reflexive suffixes exhibit downstep following the H verb stem. The underlying configuration of the passive and reflexive suffixes is toneless, the same as the affirmative prefix. As such, the M_2 default tone (i.e. the tone which surfaces on lexically toneless morphemes), is assigned to toneless units which don't receive a tone from an adjacent tone-bearing unit; there are instances, especially prevalent in the nominal system, but in the verb system as well, where toneless TBUs, which in other environments surface with an M_2 tone, do receive a

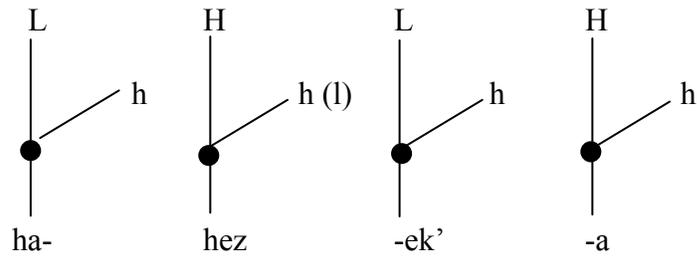
tone and register composite configuration by way of spread (cf. section 3.2.3 below).

(3.18) Underlying representation for H verb stem with passive /-ekʔ/

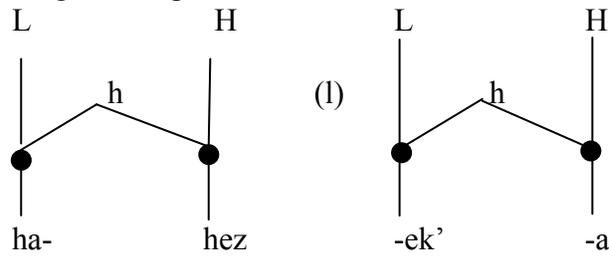


The derivational diagrams for the H stem verb with the passive marker continue below, with the same processes in the same order, as shown in the derivation of the citation form of H stem verbs above.

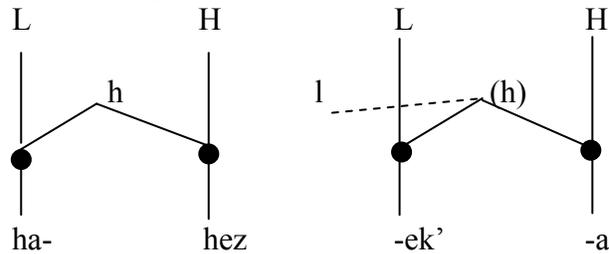
(3.19) Default fill-in



(3.20) Merger in response to OCP



(3.21) Low (l) register spread



The default fill-in rules must apply before the Obligatory Contour Principle, since the downstep following the verb stem /héz-/ applies to both the passive marker and the declarative suffix, showing that both h register features have been joined and then delinked by the spreading l register. The result of this is provided in the Output Tone Map (Fig. 3.11) below.

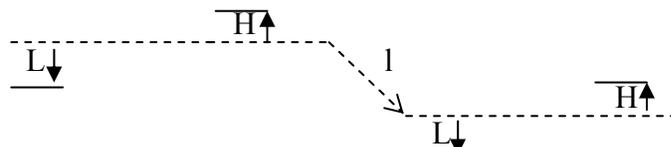
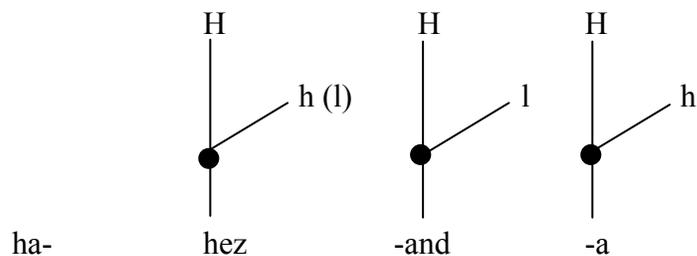


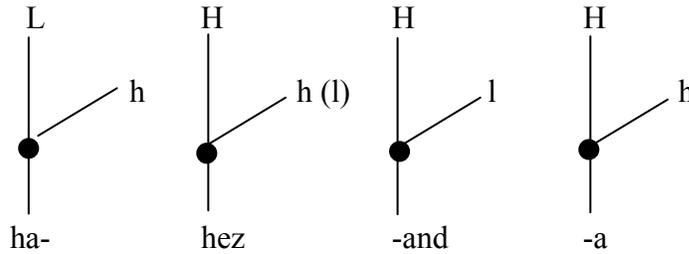
Figure 3.11. Tone Map for /ha-héz-'ek'-á/ AFF-hit-PASS-DECL

When suffixes following the H verb stem carry a l register, whether the suffix be a M₁ or L tone, downstep does not occur as the floating l register to the right of the H verb stem merges with the l register of the suffix. This merger is not a surprise, given the OCP's prohibition of identical elements, which are adjacent on the same tier. In Northern Mao, identical elements on the same tier merge. The data below provide the derivation of the non-singular suffix /-and/.

(3.22) Underlying representation for H verb Stem with non-singular /-and/

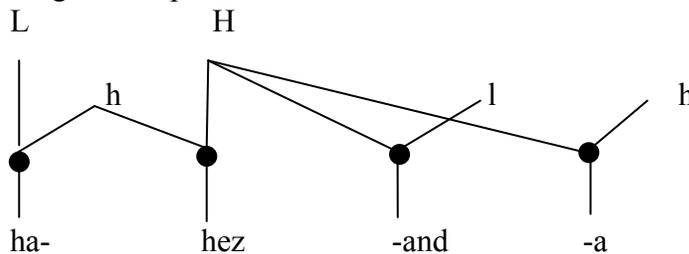


(3.23) Default fill-in



The l register after the verb stem merges with the l register of the /-and/ suffix, just as the h registers and the H tones merge with identical adjacent elements.

(3.24) Merger in response to OCP



The output for this configuration does not include any downstep. The final declarative suffix /-á/ is produced at the same level as the H verb stem. This bleeding of downstep by means of l register merger also accounts for the reciprocal derivation with the suffix /-mùnd/, see Fig. 3.12.

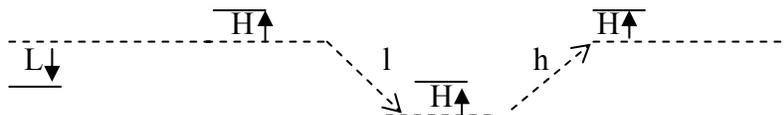


Figure 3.12. Tone Map for /ha-héz-and-á/ AFF-hit-NSG-DECL

3.2.2. Low (l) Register Spread and Partial Assimilation

Verbal prefixes which carry L tones (and even floating l registers) trigger partial assimilation of verb stem tones. This partial assimilation is somewhat idiosyncratic as the L tone of subject prefixes affects only H tones on verb stems, resulting in the H assimilating to the preceding L and being realized as a M. This should not be considered

downstep, however, as the following declarative suffix maintains its H tone. The L tone of the durative marker /kò-/ triggers assimilation of H and M tones on verb stems: with the Hs being realized as M and the Ms being realized as L.

In the partial assimilation which occurs after subject prefixes, the L tones of subject prefixes (/ham-/M(L) 1PL, /hi-/ L 2SG and /hàw-/ L 2PL) trigger partial assimilation of the H tone on verb stems, producing a M tone on the verb (examples 3.26-3.28). Verb stems carrying M or L tones exhibit no change in tone.

- (3.25) $\left[\begin{array}{ccccc} & - & & - & - \\ - & & & & - \end{array} \right]$
 kan-ná ha-héz-¹á (verb in citation form with H tone)
 dog-OBJ AFF-hit-DECL
 ‘S/he hit a dog.’

- (3.26) $\left[\begin{array}{ccccc} & - & & - & - \\ - & & & & - \end{array} \right]$
 kan-ná ham-hez-á
 dog-OBJ 1PL-hit-DECL
 ‘We hit a dog.’

- (3.27) $\left[\begin{array}{ccccc} & - & & - & - \\ - & & & & - \end{array} \right]$
 kan-ná hi-hez-á
 dog-OBJ 2SG-hit-DECL
 ‘You hit a dog.’

- $$\left[\begin{array}{ccccc} - & - & - & - & - \end{array} \right]$$
- (3.28) kan-ná hàw-hez-á
 dog-OBJ 2PL-hit-DECL
 ‘You all hit a dog.’

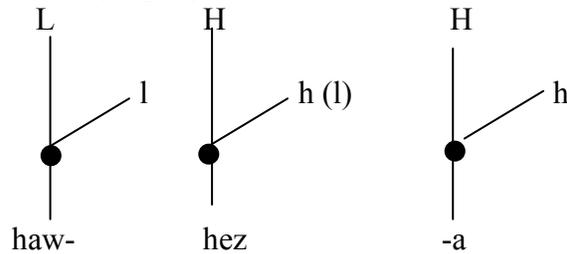
While the 2SG and 2PL prefixes carry L tones (with l registers), the 1PL prefix carries a M tone as well as a floating l register at the right edge.⁶⁴ This floating l is the trigger for this partial tone assimilation. These are the only subject prefixes which carry a L tone (with l register) and are, as a result, the only subject prefixes that produce the tone change demonstrated above.

In terms of RTT, this phenomenon appears to be l register spread, but unlike the downstep examples in the preceding section, subsequent tones (e.g. the H of the declarative suffix /-á/) are unaffected. The spread which results from these prefixes is local in nature and affects only one tone-bearing unit. That is, the final declarative suffix /-á/ is produced at the same level as the H on the object case marker /-ná/. Here, the l register spread effectively bleeds the downstep which would otherwise occur on the declarative suffix /-á/ when the suffix follows a H-toned stem. This suggests that l registers spread toward the right, which then allows the spreading l register to trigger partial assimilation of a verb stem and remove the possibility of downstep as the spreading l register merges with the floating l register (see 3.32 below) which would have triggered a downstep. Examples (3.29) through (3.33) show a derivation of /hàw-hez-á/ 1PL-hit-

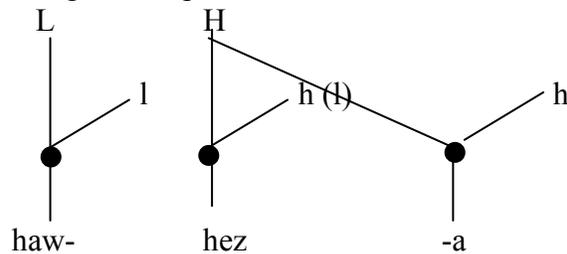
⁶⁴ In fact, the citation forms of the corresponding full pronouns (the sources of these subject prefixes) also provide evidence that these three forms end in L tones /hambèl-è/ 1PL-TV, /hij-è/ 2SG-TV, and /hàwèl-è/ 2PL-TV. None of other pronouns end in L tones (cf. section 5.1).

DECL ‘we all hit (it)’.⁶⁵

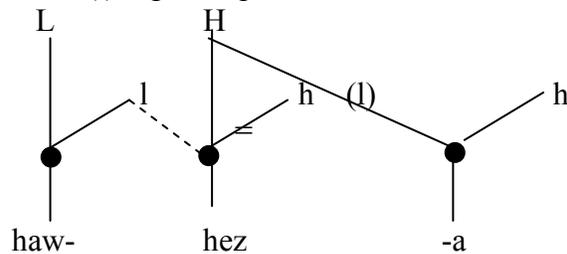
(3.29) Underlying representation of verb /hàw-hez-á/ ‘you all hit’



(3.30) Merger in response to OCP



(3.31) Low (l) register spread

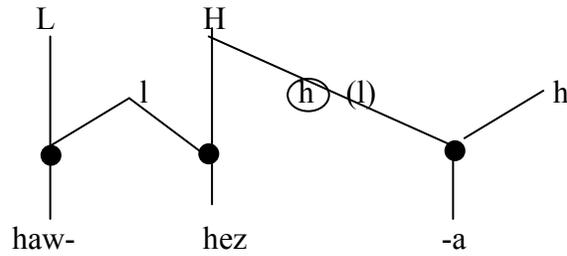


Here, the h register of the verb stem is delinked by the spreading of the l register from the prefix and is then lost. I assume that it is lost here, because otherwise, the verb stem’s floating l register could not merge with the l register of the prefix and stem. If the h register would remain floating, preventing the l registers from merging, the result would be a downstep on the final declarative suffix, and that is not what happens.⁶⁶

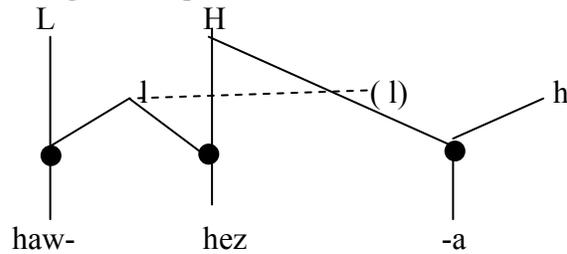
⁶⁵ In my phonemic representation, I do not show the verb stem as being a downstepped H; rather, I leave it unmarked (which in my system is the indication that the tone is a M). If I were to mark this as a downstepped H, it would follow that the declarative suffix also would be produced at a lower tone, and this is not the case.

⁶⁶ As noted previously, downstep requires the environment of a floating l register after a H tone (on

(3.32) Erasure of the stray h



(3.33) Merger in response to OCP



(3.34) Output

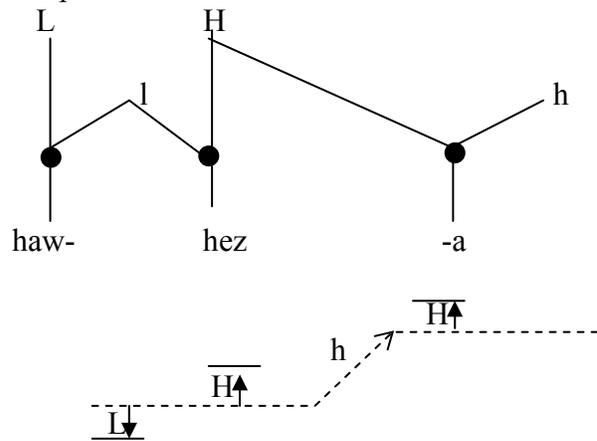


Figure 3.13. Tone Map for /hàw-hez-á/ 1PL-hit-DECL

As noted above, M or L verb stems show no change in tone after these same subject prefixes. In the examples below, each of the subject prefixes is positioned before M and L verb stems. The tone patterns show the final ‘output’ here.

a h register). In the present case, the verb stem has become a M1. Perhaps the fact that floating l registers can merge with the l registers of M₁ and L tones is part of the reason for the very limited distribution of downstep in Northern Mao.

$$\left[\begin{array}{ccccc} & - & & & - \\ - & & - & - & - \end{array} \right]$$

- (3.35) kan-ná ha-int'-á (M verb stem in citation form)
 dog-OBJ AFF-see-DECL
 'S/he saw a dog.'

$$\left[\begin{array}{ccccc} & - & & & - \\ - & & - & - & - \end{array} \right]$$

- (3.36) kan-ná ham-int'-á
 dog-OBJ 1PL-see-DECL
 'We saw a dog.'

$$\left[\begin{array}{ccccc} & - & & & - \\ - & & - & - & - \end{array} \right]$$

- (3.37) kan-ná hì-int'-á
 dog-OBJ 2SG-see-DECL
 'You saw a dog.'

$$\left[\begin{array}{ccccc} & - & & & - \\ - & & - & - & - \end{array} \right]$$

- (3.38) kan-ná hàw-int'-á
 dog-OBJ 2PL-see-DECL
 'You all saw a dog.'

$$\left[\begin{array}{ccccc} & - & & & - \\ - & & - & - & - \end{array} \right]$$

- (3.39) kan-ná ha-pè:ʃ-á (L verb stem in citation form)
 dog-OBJ AFF-slap-DECL
 'S/he slapped a dog.'

$$\left[\begin{array}{ccccc} - & - & - & - & - \end{array} \right]$$

(3.40) kan-ná ham-pè:ʃ-á
 dog-OBJ 1PL-slap-DECL
 ‘We slapped a dog.’

$$\left[\begin{array}{ccccc} - & - & - & - & - \end{array} \right]$$

(3.41) kan-ná hì-pè:ʃ-á
 dog-OBJ 2SG-slap-DECL
 ‘You slapped a dog.’

$$\left[\begin{array}{ccccc} - & - & - & - & - \end{array} \right]$$

(3.42) kan-ná hàw-pè:ʃ-á
 dog-OBJ 2PL-slap-DECL
 ‘You all slapped a dog.’

A second case of partial tone assimilation involves the durative marker /kò-/ (cf. section 10.2.2.7, where the durative marker is shown to be a grammaticalization of the verb ‘sit’ /ha-kòw-á/ AFF-sit-DECL). This L-toned prefix /kò-/, however, affects both H and M tones, not just H, as was the case with the L-toned subject prefixes above. When the durative precedes a verb stem with either H or M tone, the L tone’s l register spreads rightward, triggering an assimilation of both the following H and M toned verb stems: H > M (3.43) and M > L changes (3.44). L verb stems exhibit no change (3.45).

(3.43) $\left[\begin{array}{cccccc} - & - & - & - & - & - \end{array} \right]$ $\left[\begin{array}{ccc} - & - & - \end{array} \right]$
 kan-ná ha-kò-hez-á (/ha-héz-^lá/) H Verb Root
 dog-OBJ AFF-DUR-hit-DECL
 ‘S/he beat the dog (for a while).’ (not just ‘hit’)

(3.44) $\left[\begin{array}{ccc} - & - & - \end{array} \right]$ $\left[\begin{array}{ccc} - & - & - \end{array} \right]$
 ha-kò-ʃòk-á (/ha-ʃòk-á/) M Verb Root
 AFF-DUR-sow-DECL
 ‘S/he sowed (the field) (for a while).’

(3.45) $\left[\begin{array}{cccccc} - & - & - & - & - & - \end{array} \right]$ $\left[\begin{array}{ccc} - & - & - \end{array} \right]$
 ha-kò-hùmb-mùnd-and-á (/ha-hùmb-á/) L Verb Root
 AFF-DUR-embrace-RECP-NSG-DECL
 ‘They embraced (for a while).’

Here, again, the l register spread produces a partial assimilation of the verb stem’s tone. But this assimilation is somewhat irregular in behavior. The phonology (or tonological system) cannot predict why the subject prefixes discussed earlier and the durative marker just presented behave differently with respect to which tones on verb stems assimilate. Thus, while these forms are the only L-toned prefixes in the verbal system, it appears that their effects today may best be seen as the result of more than phonological/tonological processes. Certainly, the history of the /kò-/ prefix’s grammaticalization (by way of serialization) must have played a role in distinguishing its behavior from other prefixes.

3.2.3. Full Tone Spread

Just as l registers features may spread toward the right in certain environments, so

full tone composites (i.e. the entire tone plus register composite) may spread to the right onto tone-bearing-units (TBU) which appear to be otherwise toneless.

Full tone spread is observed on the subject and object case-markers (case-markers are discussed in section 8.3.1). The subject marker /-iʃ/ and the object marker /-na/ occur at the right edge of noun phrases and receive their tone from the left (usually from the head noun of the noun phrase to which they attach or from suffixes on this head noun which carry their own tone).

	Citation Form	Subject Form	Object Form
MH class	$\left[\begin{array}{cc} - & - \end{array} \right]$	$\left[\begin{array}{cc} - & - \end{array} \right]$	$\left[\begin{array}{cc} - & - \end{array} \right]$
(3.46)	kan-é	kan-iʃ	kan-ná
	dog-TV	dog-SBJ	dog-OBJ

	Citation Form	Subject Form	Object Form
M class	$\left[\begin{array}{cc} - & - \end{array} \right]$	$\left[\begin{array}{cc} - & - \end{array} \right]$	$\left[\begin{array}{cc} - & - \end{array} \right]$
(3.47)	pʰiʃ-e	pʰiʃ-iʃ	pʰiʃ-na
	child-TV	child-SBJ	child-OBJ
	Citation Form	Subject Form	Object Form

	Citation Form	Subject Form	Object Form
HL2 class	$\left[\begin{array}{cc} - & - \end{array} \right]$	$\left[\begin{array}{cc} - & - \end{array} \right]$	$\left[\begin{array}{cc} - & - \end{array} \right]$
(3.48)	múntsʰ-è	múntsʰ-iʃ	múntsʰ-nà
	woman-TV	woman-SBJ	woman-OBJ

The tone of the subject and object markers is predictable only by the tone class of the noun (head noun of the noun phrase) to which it attaches. As noted earlier, the same is true of the terminal vowel (glossed as TV).

Full tone spread is also found in the irrealis future declarative verb, where the

vowel of the auxiliary verb (grammaticalized from the existential verb stem /bɨʃ-/)
 receives its tone from the left.⁶⁷ In each of the examples below, the auxiliary verb carries
 a H tone which is associated with the preceding subject marker--corresponding to the
 following pronouns /tɨj-é/ 1SG-TV, /han-é/ 1DU-TV and /háw-é/ 2DU-TV.⁶⁸

(3.49) háts`à ha-pò:n-gà-t-bɨʃ-á
 tomorrow AFF-go.out-FUT-1SG-EXIST:INF-DECL
 ‘I will leave tomorrow.’

(3.50) háts`à ha-pò:n-gà-n-bɨʃ-á
 tomorrow AFF-go.out-FUT-1DU-EXIST:INF-DECL
 ‘We two will come tomorrow.’

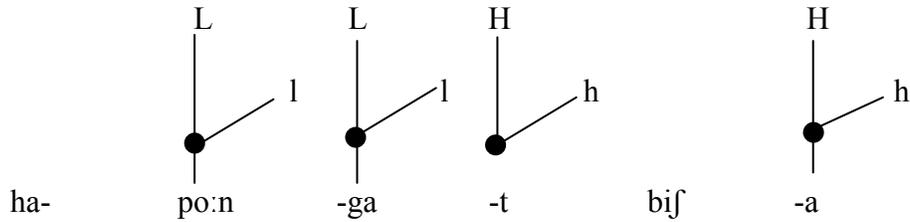
(3.51) háts`à ha- pò:n-gà-bɨʃ-á
 tomorrow AFF-go.out-FUT-2DU-EXIST:INF-DECL
 ‘You two will come tomorrow.’

The diagrams below model the full tone spread of the subject marker’s tone to the
 auxiliary verb in the form /ha-pò:n-gà-t-bɨʃ-á/ AFF-go.out-FUT-1SG-EXIST:INF-DECL
 ‘I will leave/go out’ (from example (3.49) above).

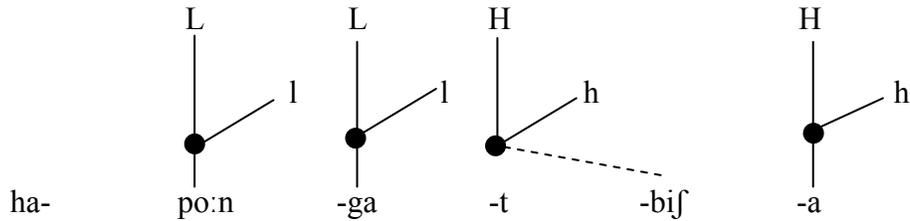
⁶⁷ While the existential verb stem carries a H tone with a floating l register (as seen in the citation form /ha-bɨʃ-á/ AFF-EXIST-DECL) on the right edge and produces a downstep on the following declarative suffix, the grammaticalized auxiliary /-bɨʃ/ is toneless. The tone of this grammaticalized auxiliary can be H or L, depending on the tones which precede it. Even when it receives a H tone from the left, as in examples (3.49-3.51) there is no downstep of the following declarative suffix.

⁶⁸ The full set of subject markers is presented in section 9.4.

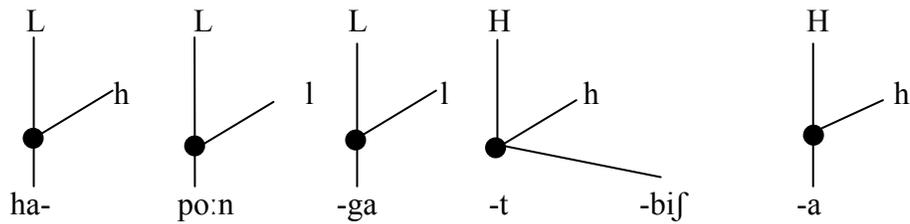
(3.52) Underlying representation for L verb with /-gà/ future tense suffix,
1SG /-t/ and the auxiliary /-bif/



(3.53) Full tone spread



(3.54) Default fill-in



(3.55) Merger in response to OCP

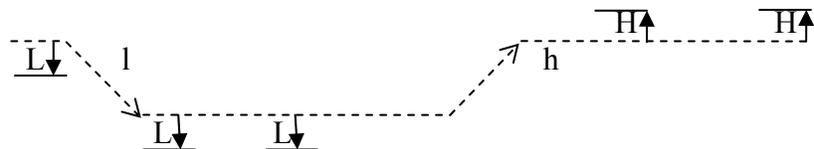
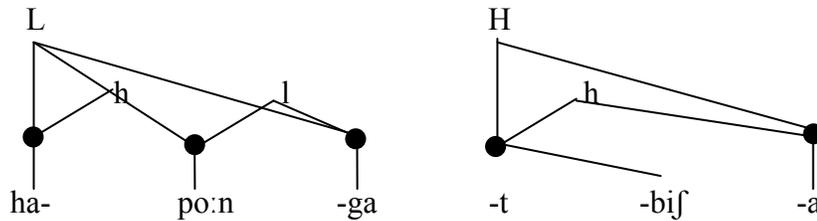


Figure 3.14. Tone Map for /ha-pò:n-gà-t-bíj-á/
AFF-go.out-FUT-1SG-EXIST:INF-DECL

In the examples, below, however, the same auxiliary carries a L tone, following

the 1PL, 2SG and 3rd person markers. The corresponding pronouns for the first two are /hambèl-è/ 1PL-TV and /hij-è/ 2SG-TV; the 3rd person marker /-m`/ comes from reanalysis of an earlier form of the future tense suffix, from /-gàm/ FUT to /-gà + -m`/ FUT + 3rd person (cf. section 9.5). As a result, the 3rd person free pronominal forms are not related to the 3rd person marker on affirmative irrealis future verbs.

(3.56) háts`à ha-pò:n-gà-m-bìf-á
 tomorrow AFF-go.out-FUT-1PL-EXIST:INF-DECL
 ‘We will leave tomorrow.’

(3.57) háts`à ha-pò:n-g-è-m-bìf-á
 tomorrow AFF-go.out-FUT-2SG-EXIST:INF-DECL
 ‘You will leave tomorrow.’

(3.58) háts`à ha-pò:n-ga-m-bìf-á
 tomorrow AFF-go.out-FUT-3-EXIST:INF-DECL
 ‘S/he will leave tomorrow.’

The subject marker tones spread to the bound auxiliary verb, but this does not happen with the existential when it serves as a finite lexical verb. Rather, the finite verb stem /bìf-/ ‘exist’ carries a H tone (as the existential is a H class verb) with a l register at the right edge.

(3.59) nà-àt ha-bìf-^lá
 here-LOC AFF-EXIST-DECL
 ‘S/he is here.’

(3.60) nà-àt ha-tí-bìf-^lá
 here-LOC AFF-1SG-EXIST-DECL
 ‘I am here.’

As noted in the discussion of tone assimilation, above, the L-toned prefixes (1PL, 2SG or 2PL) actually trigger a partial assimilation where the H tone is realized as M; the prefixes do not spread their full tone to the verb stem.

- (3.61) nà-àt ham-biʃ-á
 here-LOC 1PL-EXIST-DECL
 ‘We are here.’

So what would cause the existential verb to behave differently in terms of tone in its bound auxiliary function? It appears that the bound auxiliary is actually toneless and, if it cannot receive a tone from the left, it surfaces as a M tone (i.e. the default M₂ tone).

This is exactly what happens in the progressive construction, where the auxiliary is not bound to its lexical verb. In the progressive construction, the auxiliary follows the realis verbal word, is not phonologically bound to this verb, and is not immediately preceded by subject markers. Here, the auxiliary receives its surface tone from a default fill-in process.

- (3.62) ha-pò:n biʃ-á
 AFF-go.out EXIST:INF-DECL
 ‘S/he is leaving.’

- (3.63) ha-tí-pò:n biʃ-á
 AFF-1SG-go.out EXIST:INF-DECL
 ‘I am leaving.’

The free (i.e. phonologically not bound) auxiliary /biʃ/ in these examples carries the same M tone as does the infinitive form /biʃ-è/ EXIST:INF-TV. This is illustrated in the modality complement construction below.

- (3.64) nà-àt bɿʃ-nà ha-wó:l-^lá
 here-LOC EXIST:INF-OBJ AFF-want-DECL
 ‘S/he wants to be here.’ (literally: ‘S/he wants being here.’)

Some modality complements (cf. section 13.3.2), can be formed with fully nominal forms (as indicated by the verb stem carrying the class’ corresponding infinitive melody and appropriate case-marking).

Thus, it appears that the bound auxiliary could be formed from the infinitive form of the verb--as its tone marking matches the M tone of the infinitive form of the verb. The free, lexical existential verb stem (which is fully inflected) does not carry a M tone; it is fully finite and carries the H tone like other ML infinitival class verbs (cf. section 3.6, below, where the infinitive tone melodies are shown to correspond to the noun tone classes and to relate predictably to the finite verb stem melodies). Only the infinitival and auxiliary forms of the existential carry the M tone. No phonological account for the change in tone, from the H stem to the toneless stem, has been observed thus far.

3.2.4. Contour Development

Contour tones are not attested in monomorphemic words; rather, they are found only at morpheme boundaries, where two different full tone composites (i.e. two tone-register composites) are realized on a single tone bearing unit. Contour tones are composed of sequences of level tones. In Northern Mao, all six possible combinations of level tones, involving the three contrastive levels (H-M,⁶⁹ H-L, M-H, M-L, L-H and L-M), have been attested on single tone-bearing units.

⁶⁹ The only example of a H-M contour actually involves a downstepped H tone /H-^lH/. This is found in the verb /ha-kí-^lá/ AFF-come-DECL ‘S/he came’, where the H verb stem’s vowel is pronounced as an approximant (the only verb stem in the language which does not contain at least one vowel); as a result, the H tone of the verb stem is realized as a fall from H to the following downstepped H (at the same level as the M) on the final declarative suffix. This example is discussed below.

Northern Mao's contour tones appear to have been formed in one of two ways: 1) where two vowels of identical quality but with different tones meet at a morpheme boundary and then form a single long vowel with the tones forming a contour, and 2) where a H tone is stranded, due to loss of its associated tone bearing unit, and is then realized on an adjacent tone bearing unit.

Two instantiations of the first type of contour formation have been observed. The verb stem for 'give' /ha-tà-á/ ends with the vowel [a] which carries a L tone. When the declarative marker follows this verb, as it does in citation form (realis-declarative), the stem's [a] and the declarative suffix [a] form a single long vowel where the L tone of the verb stem rises to the H tone of the declarative suffix.

$$\left[\begin{array}{c} - / \end{array} \right]$$

(3.65) ha-tà-á L-H contour [hatǎ:]
 AFF-give-DECL
 'S/he gave (it).'

No tones are stranded in this derivation. The contour tone is simply the result of two vowels with different tones forming a long vowel. Each tone is then realized on this long vowel.

Polar interrogatives (cf. section 10.4.2.1) also provide an example of this first type of contour. Before examining the polar interrogative, however, we should first examine the content interrogative utterance type (speech act). Content interrogatives are marked with the suffix /-à:/ and the prohibition of the affirmative prefix /ha-/ (for a full discussion of interrogatives, see section 10.4.2).

$$\left[\begin{array}{ccc} - & - & - \\ - & - & - \end{array} \right]$$

(3.66) kɨ́-ɟ pʰiʃ-na wos-j-à:

who-SBJ child-OBJ take-away-INTR

‘Who took a child away?’

The subset of polar interrogatives, however, appears to be formed by simply adding the final interrogative marker /-à:/ to the declarative type, keeping the final declarative suffix /-á/ and the affirmative prefix /ha-/.⁷⁰

$$\left[\begin{array}{cccc} - & - & - & - \\ - & - & - & - \end{array} \right]$$

(3.67) ɨ́ɟ es-ɨ́ɟ pʰiʃ-na ha-wos-j-â:

DEF man-SBJ child-OBJ AFF-take-away-DECL:INTR

‘Did the man take a child away?’ (Slow Speech)

In slow speech, the H tone of the declarative marker is heard as a fall, from H to L after M and L stem verbs, and as a fall from M to L after H stem verbs (where the declarative suffix has been downstepped to the M level).

The process here is essentially the same as occurs between the verb stem ‘give’ and the declarative suffix above (3.65). In (3.67) we have two suffixes (/ -á/ DECL + /-à:/ INTR) which come together through vowel coalescence; the tones form a contour.⁷¹ Unlike the contour found on the verb ‘give’, this contour in the polar interrogative is lost in fast speech, where the final /-à:/ only carries a L tone (3.68).

⁷⁰ While the /ha-/ prefix is optional in the declarative, it is obligatory in the polar interrogative. As noted above, the /ha-/ is prohibited in content interrogatives (cf. section 9.6.3).

⁷¹ In this instance, however, as the INTR suffix is already a long vowel (/ -â:/), the resulting vowel is not longer, as there is no three-way length distinction in Northern Mao vowels.

(3.68)	$\left[\begin{array}{cccc} - & & & \\ & - & & \\ & & - & \\ & & & - \end{array} \right]$
	<i>íʃ</i> <i>es-íʃ</i> <i>pʰíʃ-na</i> <i>ha-wos-j-à:</i>
	DEF man-SBJ child-OBJ AFF-take-away-INTR
	‘Did the man take a child away?’ (Normal/Fast Speech)

Let’s now turn to the second type of contour tone formation, which involves a stranded H tone. In the associative construction (cf. section 4.4.1), two nouns may be joined phonologically.⁷² The first noun maintains its citation melody but loses its terminal vowel; the second noun carries the construct noun melody (with some additional modifications described below) which corresponds to its noun tone class. This construct noun also carries the terminal vowel.

When MH or LH class nouns serve as the first noun in this associative construction and precede nouns which carry the LL construct noun melody (that is, nouns which are of the H2, HL2 or LH noun tone classes), this second type of contour, involving a stranded H tone, occurs. In Table 3.2 (section 3.3.2 below) the full set of tonal melodies in the noun-noun associative construction is provided.

Examples (3.69) and (3.70) illustrate associative constructions made up of a MH class noun + a LL construct melody noun and a LH class noun + a LL construct melody noun, respectively. The second nouns in these constructions are members of the LH noun tone class and carry their corresponding LL construct noun melodies any time they are

⁷² This construction is one of four noun modification constructions (cf. section 4.4). The associative construction includes true lexicalized compound nouns as well as nouns which are phonologically joined in identical fashion but which do not exhibit any conventionalization of meaning (cf. section 4.4.1). In the case of true compounds, the meaning may not be restated with a genitive construction as conventionalization has occurred. In other associative constructions, where the meaning is not conventionalized, the collocation can be restated with a genitive. The associative construction may itself be relevant to tonal phenomena (cf. section 3.3.2.3, below).

modified (cf. section 3.3.1).

(3.69)	MH	+	LL	>	M-HLL
	citation		construct		associative construction
	melody		noun melody		
	$\left[\begin{array}{c} - \\ - \end{array} \right]$		$\left[\begin{array}{c} - \\ - \end{array} \right]$		$\left[\begin{array}{c} / \\ - \\ - \end{array} \right]$
	/kan-é/	+	/bòk-è/	>	kan-bok -è
	dog-TV		bark (dog)-TV		dog-bark-TV
					‘bark’

(3.70)	LH	+	LL	>	L-MLL
	citation		construct		associative construction
	melody		noun melody		
	$\left[\begin{array}{c} - \\ - \end{array} \right]$		$\left[\begin{array}{c} - \\ - \end{array} \right]$		$\left[\begin{array}{c} / \\ - \\ - \end{array} \right]$
	/ts'èg-é/	+	/pùw-è/	>	ts'è̄g-pùw-è
	be.bad:INF-TV		beer-TV		be.bad:INF-beer-TV
					‘liquor’
					(any strong drink)

A major point of interest here is that the stranded H, from the loss of the final /-é/ on ‘dog’ in the MH noun (3.69) still surfaces as a contour, where the pitch rises from M to H (the dash in the tone notation M-H is used to indicate that the two tones joined occur on a single tone-bearing unit and thus form a contour). In contrast, the stranded H in the LH noun (3.70) surfaces as a contour which rises from L to M. Again, it appears that partial assimilation where a preceding L tone lowers a H tone to a M, is taking place in the LH class noun associative constructions (as we have seen in section 3.2.2). It is not clear why this partial assimilation takes place in these constructions but is absent in

simple LH nouns.

When nouns of the MH class are the first noun in an associative construction, the contour is always found on the first TBU of the form, as in (3.69). When nouns of the the LH noun class serve as the first noun in the associative construction, however, some combinations result in contours on the first TBU of the resulting form (as with LH nouns joined with nouns of the H2 tone class), as in (3.69) and (3.70). Others like nouns of the LH class combined with nouns of the HL2, and nouns of the LH class combined with nouns also of the LH, result in contours on the second TBU of the compound, as in (3.71).⁷³

(3.71)	LH	+	LL	>	LM-LL
	citation		construct		associative construction
	melody		noun melody		
	$\left[\begin{array}{cc} & - \\ - & \end{array} \right]$		$\left[\begin{array}{cc} & \\ - & - \end{array} \right]$		$\left[\begin{array}{ccc} & \backslash & \\ - & & - \end{array} \right]$
	/kèm-é/	+	/dò:nd-è/	>	kèm-dô:nd-è
	be.big:INF-TV		rattle-TV		be.big:INF-rattle-TV
					‘big rattle’
					(musical instrument)

In fast speech, these contours are not normally present. The H tones of the first noun do not surface as part of a contour at all. However, these H tones are always whistled by speakers, suggesting that the H is ‘present’, to some degree. The fast speech pattern is illustrated below.

⁷³ Ten constructs of each type were elicited from three speakers. These patterns were consistent for each of the three speakers consulted. It appears though, that these contours themselves are only apparent in slow, careful speech--in the same way as the contour in the polar interrogative is present only in hyperarticulations.

(the downstepped H on the declarative suffix, which we have seen follows H stem verbs) when the verb stem's vowel was reduced from /i/ to the approximant.

$$\left[\begin{array}{c} - \quad \searrow \end{array} \right]$$

(3.75) ha-kí-^lá H-M contour [hakǎ]

AFF-come-DECL

'S/he came.'

This contour is formed in the same manner as occurs in the derivation of 'big rattle' in the associative construction above. The stranded H tone associates rightward, forming a contour with the tone already present there.

3.3. The Tonal Melodies of Noun Construct Forms

As noted in the introduction to this chapter as well as in Table 2.21, the citation melodies of two-syllable nouns (the vast majority of nouns in the language) collapse into three melodies when they are modified by any element: MM, ML and LL.

Table 3.2. Noun Tone Classes and the Noun Construct Melodies

Citation Tone Classes	Construct Noun Melody
H1	> MM
M, L, HL1, MH, ML	> ML
H2, HL2, LH	> LL

I call this modified noun form the noun construct form (cf. section 4.3) and its tonal melody, which is shown in the discussion below to be lexically determined, the noun construct melody.

Perhaps the most notable feature of these noun construct melodies is that not one of the melodies includes a H tone. Presumably, the source(s) of these construct noun melodies, while not derivable via synchronic phonological processes today must have

been derived historically from their corresponding citation melodies by a process which involved downstep, as the HH nouns (H1 class) are realized as MM, when modified, for instance--a change that fits the downstep pattern we have seen in the verb system above. While Pearce and I have speculated as to the historical derivation of these construct noun melodies (Ahland and Pearce 2009), the internal historical evidence is unfortunately sparse and its discussion is beyond the scope of the description of tone presented here.⁷⁵ Suffice to say that which construct noun melody appears is predictable only if one knows the tone class of the noun. The melody of the noun in an unmodified citation form is not enough: as nouns which carry a HH melody may take either a MM construct noun melody (i.e. the H1 class), or a LL construct noun melody (i.e. the H2 class). The same can be said of nouns which carry a HL melody in citation form: the construct noun melody may be ML (i.e. the HL1 class) or LL (i.e. the HL2 class).

In the discussion which follows, we will look more closely at the noun tone classes and their corresponding construct noun melodies and will also consider the evidence which shows that their relationship is lexically determined rather than phonologically motivated (today). Finally, it will be shown that the M tones in the ML construct noun melody bifurcate into two classes, and these two classes will be related to the earlier M₁ and M₂ discussion.

3.3.1. The Noun Tone Classes and Construct Noun Melody Correspondences

Each of the three construct noun melodies must be lexically specified for nouns,

⁷⁵ We will, however, briefly discuss data below, where possible historical relics of the source for one of the ML melodies appears to remain (see the discussion in sections 3.3.2.1 and 3.3.2.2 relevant to the H tones in the noun-noun construction).

as H-tone nouns bifurcate into H1 (with MM construct noun melody) and H2 (with LL construct noun melody) classes, and HL nouns bifurcate into HL1 (with ML construct noun melody) and HL2 (with LL construct noun melody). In the data below, one example of a noun in each tone class is provided: first, the noun is given in citation form; second, the noun is modified by the definite marker, which carries a H tone; and third, the noun is modified by the proximal demonstrative, which carries a L tone. These examples serve to show that these construct noun melodies are not the result (today!) of synchronically productive tonal processes like we have seen in section 3.2, above.

Nouns of the H1 tone class like /k'ets'-é/ land-TV are realized as M when they are modified (regardless of the tone of the modifying element):

H1 Class	After H tone: MM	After L Tone: MM
$\begin{bmatrix} - & - \end{bmatrix}$	$\begin{bmatrix} - & - & - \end{bmatrix}$	$\begin{bmatrix} - & & - & - \end{bmatrix}$
(3.76) k'ets'-é	íʃ k'ets'-e	nà k'ets'-e
land-TV	DEF land-TV	DEM.PROX land-TV
	‘the land’	‘this land’

The H1 class is the only tone class that has a MM construct noun melody. Likely this construct noun melody is the result of a downstep of the HH melody which these nouns exhibit in citation form.

Nouns of the M, L, HL1, MH and ML tone classes all have a ML construct noun melody. Again, these construct noun melodies are do not depend on the tones of the modifiers which precede them:

	M Class	After H tone: ML	After L Tone: ML
	$\begin{bmatrix} - & - \end{bmatrix}$	$\begin{bmatrix} - & - & - \end{bmatrix}$	$\begin{bmatrix} - & & - & - \end{bmatrix}$
(3.77)	p'iʃ-e child-TV	íʃ p'iʃ-è DEF child-TV 'the child'	nà p'iʃ-è DEM.PROX child-TV 'this child'
	L Class	After H tone: ML	After L Tone: ML
	$\begin{bmatrix} - & - \end{bmatrix}$	$\begin{bmatrix} - & - & - \end{bmatrix}$	$\begin{bmatrix} - & & - & - \end{bmatrix}$
(3.78)	wà:r-è clothing-TV	íʃ wà:r-è DEF clothing-TV 'the clothing'	nà wà:r-è DEM.PROX clothing-TV 'this clothing'
	HL1 Class	After H tone: ML	After L Tone: ML
	$\begin{bmatrix} - & & - \end{bmatrix}$	$\begin{bmatrix} - & - & - \end{bmatrix}$	$\begin{bmatrix} - & & - & - \end{bmatrix}$
(3.79)	ób-è brother-TV	íʃ ób-è DEF brother-TV 'the brother'	nà ób-è DEM.PROX brother-TV 'this brother'
	MH Class	After H tone: ML	After L Tone: ML
	$\begin{bmatrix} - & - \end{bmatrix}$	$\begin{bmatrix} - & - & - \end{bmatrix}$	$\begin{bmatrix} - & & - & - \end{bmatrix}$
(3.80)	kan-é dog-TV	íʃ kan-è DEF dog-TV 'the dog'	nà kan-è DEM.PROX dog-TV 'this dog'
	ML Class	After H tone: ML	After L Tone: ML
	$\begin{bmatrix} - & - \end{bmatrix}$	$\begin{bmatrix} - & - & - \end{bmatrix}$	$\begin{bmatrix} - & & - & - \end{bmatrix}$
(3.81)	es-è person-TV	íʃ es-è DEF person-TV 'the person'	nà es-è DEM.PROX person-TV 'this person'

Nouns of the H2, HL2 and LH classes have the LL construct noun melody.

	H2 Class	After H tone: LL	After L Tone: LL
	$\left[\begin{array}{c} - \\ - \end{array} \right]$	$\left[\begin{array}{c} - \\ - \quad - \end{array} \right]$	$\left[\begin{array}{c} - \\ - \quad - \quad - \end{array} \right]$
(3.82)	púw-é	íʃ pùw-è	nà pùw-è
	beer-TV	DEF beer-TV	DEM.PROX beer-TV
		‘the beer’	‘this beer’

	HL2 Class	After H tone: LL	After L Tone: LL
	$\left[\begin{array}{c} - \\ - \end{array} \right]$	$\left[\begin{array}{c} - \\ - \quad - \end{array} \right]$	$\left[\begin{array}{c} - \\ - \quad - \quad - \end{array} \right]$
(3.83)	múnts’-è	íʃ mùnts’-è	nà mùnts’-è
	woman-TV	DEF woman-TV	DEM.PROX woman-TV
		‘the woman’	‘this woman’

	LH Class	After H tone: LL	After L Tone: LL
	$\left[\begin{array}{c} - \\ - \end{array} \right]$	$\left[\begin{array}{c} - \\ - \quad - \end{array} \right]$	$\left[\begin{array}{c} - \\ - \quad - \quad - \end{array} \right]$
(3.84)	kàw-é	íʃ kàw-è	nà kàw-è
	arm-TV	DEF arm-TV	DEM.PROX arm-TV
		‘the arm’	‘this arm’

Hellenthal has noted a similar phenomenon involving nouns in citation form and nouns following a modifier in Sheko (a Dizoid language of the Omotic family--only distantly related to Northern Mao). There are six different surface melodies for nouns in isolation: 44, 41, 33, 31, 21, 13 (where 4 is the highest level) (2010:252). These melodies neutralize into three melodies (22, 21, and 11), when the noun is preceded by a modifier (2010:252). The neutralization includes the following changes: 44 > 22; 41 > 21; 33, 31, 21, and 13 > 11. While Hellenthal notes that downstep does not occur synchronically, it seems likely that downstep was involved in the development of these construct noun

melodies, just as appears to have been the case in Northern Mao.

3.3.2. M Tone Behavior in the ML Construct Noun Melody

While Northern Mao’s ML construct noun melodies in examples (3.77) to (3.81) appear to form a coherent class, the ML construct noun melodies bifurcate into two different classes in the associative construction (this is the same construction which figures into the discussion of contour tone formation, section 3.2.4). The associative construction features two nouns, phonologically bound one to another (cf. section 4.4.1). The first noun carries its citation tone on its first tone-bearing unit, but the tone of the second tone bearing unit of this first noun is stranded (and in some cases shows up as a contour, section 3.2.4) since a terminal vowel (TV) appears only on the second noun (the modified or *construct* noun). The second noun of the compound carries the construct noun melody associated with its noun tone class. For instance, a H1 class noun joined with a HL1 noun results in a HML melody on the resulting associative construction.

(3.85)	H1	+	HL1	(ML)	>	HML
	citation		citation	construct		associative construction
	melody		melody	noun melody		
	$\left[\begin{array}{cc} - & - \end{array} \right]$		$\left[\begin{array}{cc} - & - \end{array} \right]$	$\left[\begin{array}{cc} - & - \end{array} \right]$		$\left[\begin{array}{ccc} - & - & - \end{array} \right]$
	/hánd-é/	+	/ób-è/ M	(ob-è)	>	hánd-ob-è
	clan-TV		brother-TV			clan-brother-TV
						‘a male member of one’s clan’

Table 3.3 (adapted from Ahland and Pearce 2009) above provides the full matrix of tonal patterns of the associative construction involving two-syllable nouns. The matrix

is arranged with the left-most column indicating the tonal class of the first word in the compound and the top row indicating the tone class of the second word in the column. The construct noun melody for the second noun in the construction is provided in brackets ([]) under each of the noun tone class labels in this first row.

Table 3.3. Tonal Matrix for Associative Construction

<i>Second Noun's Class</i> and [<i>Construct Noun Melody</i>]		H1	M	L	HL1	MH	ML	H2	HL2	LH
		[MM]	[*ML]	[*ML]	[ML]	[*ML]	[*ML]	[LL]	[LL]	[LL]
<i>First Noun's Class</i>	H1	HMM	HHL	HHL	HML	HHL	HHL	HLL	HLL	HLL
	M	MMM	MHL	MHL	MML	MHL	MHL	MLL	MLL	MLL
	L	LMM	LML	LML	LML	LML	LML	LLL	LLL	LLL
	HL1	HMM	HML	HML	HML	HML	HML	HLL	HLL	HLL
	MH	MMM	MHL	MHL	M- HML	MHL	MHL	M- HLL	M- HLL	M- HLL
	ML	MMM	MML	MML	MML	MML	MML	MLL	MLL	MLL
	H2	HMM	HHL	HHL	HML	HHL	HHL	HLL	HLL	HLL
	HL2	HMM	HML	HML	HML	HML	HML	HLL	HLL	HLL
	LH	LMM	LHL	LHL	LML	LHL	LHL	L- MLL	LM- LL	LM- LL

* The asterisk before certain ML modified noun melodies indicates that the M tone in this melody alternates with a H tone, depending on the tone class of the first noun of the construction. Only the ML construct noun melody which corresponds to the HL1 noun tone class does not exhibit this alternation.

In the H1 [MM] column we see that the construct noun melody MM always occurs on the second noun, regardless of the tone class of the first noun. The first tone in these three-tone-bearing unit forms comes from the tone-bearing-unit of the first noun (corresponding to its citation tone melody).

The ML construct noun melodies in Table 3.3 are not internally consistent in their patterning in the associative construction. As can be seen in the HL1 column in Table 3.3, the HL1 class nouns always maintain their ML construct melody, regardless of the tone class of the first noun.

In contrast, the M, L, MH and ML noun classes also have a ML construct noun

melody, but in the associative construction, this ML construct noun melody does not behave identically to the ML construct noun melody of the HL1 class nouns. In Table 3.3, this construct noun melody is labeled [*ML]. In the columns labeled with the [*ML] construct noun melody, the M tone alternates with a H tone, depending on the tone class of the first noun in the construction.

The tone classes which appear to trigger this alternation from M to H in the [*ML] construct noun melody include two groups: 1) nouns tone classes which exhibit a final H tone on the second tone-bearing unit (the terminal vowel) in citation form (that is H1, MH, H2 and LH noun tone classes) and 2) the M noun tone class. In considering the first group, we could say the alternation from a M to a H tone could simply be tone spread. It is the fact that the M tone class triggers the alternation from M to H that is a surprise.

Examples (3.86)-(3.89) illustrate associative constructions where the initial noun is a member of the first group (a H1, MH, H2 or LH class noun) and where the second noun has a [*ML] construct noun melody which exhibits a H tone on the first tone-bearing unit (TBU).

(3.86)	H1	+	[*ML]	>	HHM
	citation melody		construct noun melody		associative construction
	[- -]		[- -]		[- - -]
	/kús-é/	+	/kas-è/	>	kús-kás-è
	hand-TV		hoe-TV		hand-hoe-TV
			M class (citation)		‘hand-hoe’

(3.87) MH + [*ML] > MHL
 citation construct associative construction
 melody noun melody
 $\begin{bmatrix} - & - \end{bmatrix}$ $\begin{bmatrix} - & - \end{bmatrix}$ $\begin{bmatrix} - & - & - \end{bmatrix}$
 /wap-é/ + /oʃk-è/ > wap-óʃk-è
 cheek-TV meat-TV cheek-meat-TV
 M class (citation) ‘cheek area (of face)’

(3.88) H2 + [*ML] > HHL
 citation construct associative construction
 melody noun melody
 $\begin{bmatrix} - & - \end{bmatrix}$ $\begin{bmatrix} - & - \end{bmatrix}$ $\begin{bmatrix} - & - & - \end{bmatrix}$
 /mé:ʃ-é/ + /kjat’-è/ > me:ʃ-kjat’-è
 shaman-TV house-TV shaman-house-TV
 ML class (citation) ‘home altar’
 (of traditional religion)

(3.89) LH + [*ML] > LHL
 citation construct associative construction
 melody noun melody
 $\begin{bmatrix} - & - \end{bmatrix}$ $\begin{bmatrix} - & - \end{bmatrix}$ $\begin{bmatrix} - & - & - \end{bmatrix}$
 /tòs-é/ + /a:ts’-è/ > tòs-á:ts-è
 speak:INF-TV tooth-TV speak:INF-tooth-TV
 L class (citation) ‘language’

Examples (3.90) and (3.91) illustrate the formation of associative constructions where the initial noun is a member of the M noun tone class. As in the examples immediately above, the second nouns in these constructions have [*ML] construct noun melodies which exhibit a H tone on the second noun’s first TBU. Unlike the examples

(3.86)-(3.89), however, the first noun does not carry a H tone at all (these are M class nouns).

(3.90) M citation melody $\left[\begin{array}{cc} - & - \end{array} \right]$ /p'ɪʃ-e/ + child-TV	+ [*ML] construct noun melody $\left[\begin{array}{cc} - & - \end{array} \right]$ /tɪl -è/ > abdomen-TV MH class (citation) 'womb; pregnancy'	> MHL associative construction $\left[\begin{array}{ccc} - & - & - \end{array} \right]$ p'ɪʃ-tɪl -è child-abdomen-TV
--	---	--

(3.91) M citation melody $\left[\begin{array}{cc} - & - \end{array} \right]$ /ent'-e/ + male-TV	+ [*ML] construct noun melody $\left[\begin{array}{cc} - & - \end{array} \right]$ /p'ɪʃ -è/ > child-TV M class (citation) 'boy'	> MHL associative construction $\left[\begin{array}{ccc} - & - & - \end{array} \right]$ ent'-p'ɪʃ-è male-child-TV
---	---	---

But after nouns with L tones on the final TBU, the [*ML] construct noun melody of these same nouns surfaces as a ML, not a HL. Compare (3.89) to (3.92); the first TBU of the second noun carries a H tone after a H tone (3.89), but a M tone after a L tone (3.92).

(3.92) L	+	[*ML]	>	LML
citation		construct		associative construction
melody		noun melody		
$\left[\begin{array}{cc} & \\ - & - \end{array} \right]$		$\left[\begin{array}{cc} & \\ - & - \end{array} \right]$		$\left[\begin{array}{ccc} & & \\ - & - & - \end{array} \right]$
/hò:r-è/	+	/arts'-è/	>	hò:r-arts-è
ethnic.group-TV		tooth-TV		ethnic.group-tooth-TV
		L class (citation)		‘ethnic group’s language’

These patterns are consistent for all nouns in the second position of the associative construction which carry the [*ML] construct noun melody.

In sum, the surface ML construct noun melodies split into two groups: those that behave like the [*ML] group and those that behave like the [ML] group. Given the discussion of two different M tone behaviors earlier in this chapter, this is not such a surprise. But what is unusual is that this bifurcation of ML construct noun melodies is limited to the associative construction itself. In section 3.3.1, above, it was clear that all nouns with ML construct melodies behaved the same regardless of the tone of the modifier. Thus, there must be something about the associative construction itself (or perhaps something in its history) which causes the ML modified melodies to split into two groups. In the discussion below, we will consider three different accounts of this phenomenon.

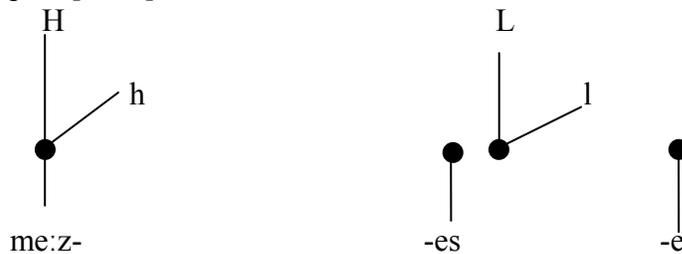
3.3.2.1. Account 1: H Spread and H Insertion

In the data (3.86)-(3.91), we can build off of what we have already seen in the discussion of M tones and downstep (section 3.2.1.1) and suggest that the HL1 noun tone class has a [ML] construct melody in which the M tone is actually a downstepped H tone. As I have argued elsewhere, the downstepped H is a M₁ tone composite, formed with a H

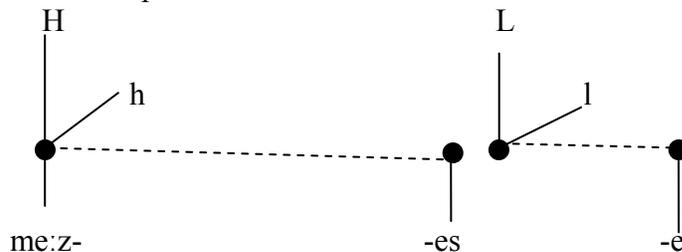
tone and a l register. Thus, we can hypothesize that the behavior of the HL1 class' [ML] construct melody is completely predictable.

In contrast, the M, L, MH and ML noun classes which carry the [*ML] construct noun melody could be lexically toneless and have a default M₂ tone composite inserted by the fill-in process. The H tone which surfaces on the second noun of the [*ML] construct noun melody could be the result of H spread from the first noun onto first the toneless TBU of the second noun.

(3.93) Underlying representation /mé:z-és-è/ wisdom-person-TV 'wise person' H plus [*ML] in Associative Construction



(3.94) Full tone spread to toneless TBUs on second noun



In addition to the H spread from the first noun to the first TBU of the second noun, the diagrams in (3.93) and (3.94) show the terminal vowel (TV) as toneless and receiving its tone from the left; this is my analysis for not only the terminal vowel but also the subject and object case markers, which are themselves toneless, as discussed in section 3.2.3. The result of the spread processes is illustrated in Fig. 3.15.

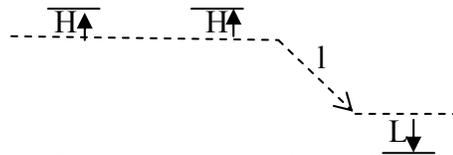
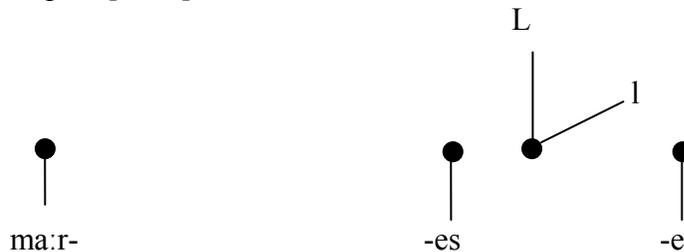


Figure 3.15. Tone Map for /mé:z-és-è/ wisdom-person-TV ‘wise person’

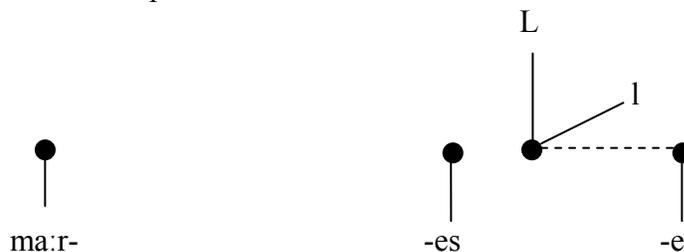
However, tone spread could only account for the data presented in (3.86)-(3.89), where H tones occur on the final TBU of the first noun (in their citation form). To account for the pattern in examples (3.90) and (3.91), where there is a M toned noun in first position, we would have to invoke a new process, e.g. H Insertion, which would only occur in these associative constructions. This H Insertion would have to be triggered by the M noun tone class when this is the first noun in the construction.

Perhaps we could say that default M₂ tone insertion is blocked after another M₂. Perhaps the Obligatory Contour Principle requires that a different tone be inserted in this environment. This is modeled as follows.

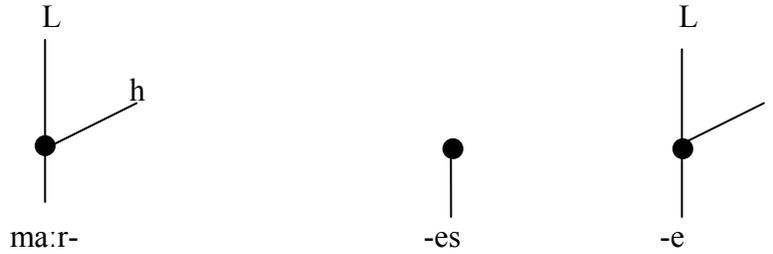
(3.95) Underlying representation /ma:r-és-è/ grass/bush-person-TV
 ‘country person’ (usually an insult)
 M plus [*ML] in Associative Construction



(3.96) Full tone spread to toneless TBU

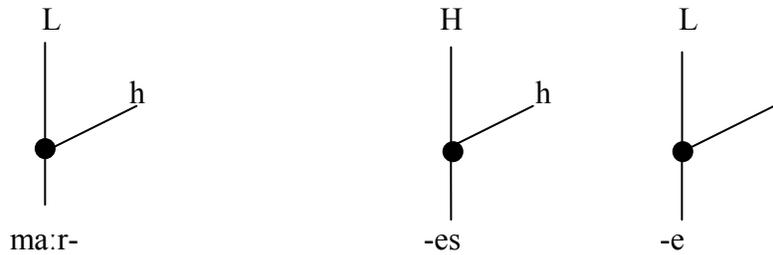


(3.97) Default fill-in applies on first TBU of construction (but is blocked from filling-in the toneless TBU on the adjacent TBU)

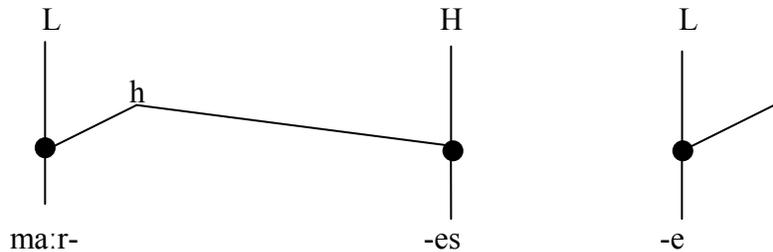


Here, the Default fill-in process is blocked from inserting two M₂ tones on adjacent tone-bearing units. This may be motivated by the OCP. The H Insertion, then fills-in this tone-bearing unit with a H composite.

(3.98) H Insertion onto toneless TBU



(3.99) Merger in response to OCP



In this case, the OCP requires the merging of the h registers and the result is provided in Fig. 3.16.

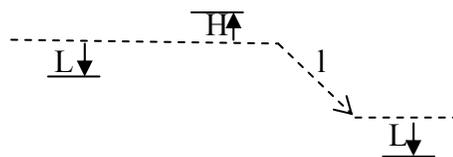
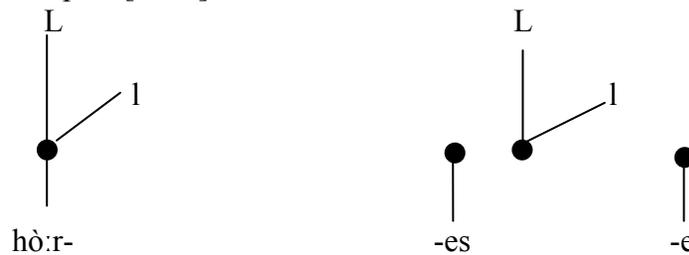


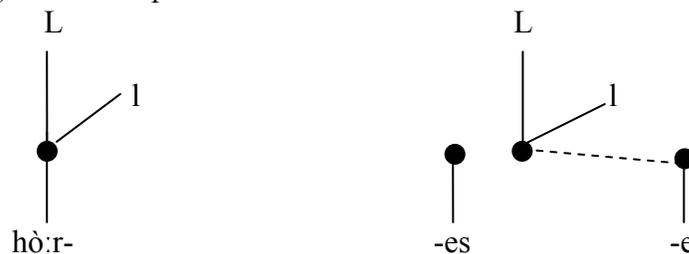
Figure 3.16. Tone Map for /ma:r-és-è/ grass/bush-person-TV ‘country person’

Finally, in the next diagram, we have a L toned noun /hò:r-è/ ethnic.group-TV ‘ethnic group’ in the first position, joined with the same [*ML] noun in the diagrams (3.93) and (3.95).

(3.100.) Underlying representation /hò:r-es-è/ ethnic.group-person-TV
 ‘a person who shares one’s ethnicity’ (tribe-person)
 L plus [l] in Associative Construction



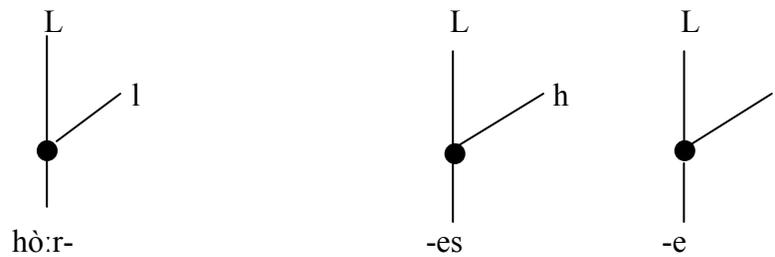
(3.101) Full tone spread to toneless TBU



It is not clear why the L tone composites (L tone and l register) never spread from the first noun to fill the first TBU on the second noun in the associative construction. In other constructions, the full L tone does spread to fill toneless TBUs (as occurs with the TBU of the terminal vowel (3.101), subject and object case markers (3.46)-(3.48) and the auxiliary verb in the irrealis construction (3.56)-(3.58).

In this instance, unlike the example in (3.94), there is no H tone to spread to the toneless TBU, and unlike the example in (3.97), no M₂ tone on the first noun to the default fill-in of the M₂ tone. As a result, the M₂ tone is inserted.

(3.102) Default fill-in with M₂ tone to toneless TBU



(3.103) Merger in response to OCP

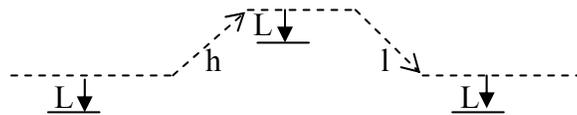
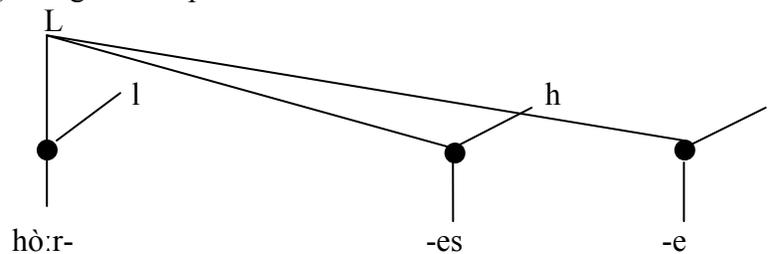


Figure 3.17. Tone Map for /hò:r-es-è/ ethnic.group-person-TV
‘a person who shares one’s ethnicity’

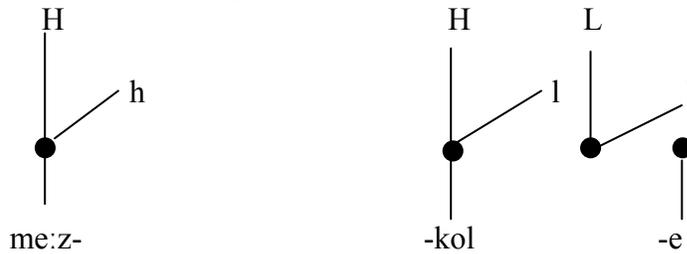
Thus far the diagrams in section 3.3.2.1 model the tonal behavior of the associative constructions involving the [*ML] construct noun melody according to Account 1; processes of H Spread and H Insertion together account for the presence of H tones on the first TBU of the second noun in the construction.

Let’s now turn to how the HL1 noun tone class and its [ML] construct noun melody (which consistently maintains its ML melody regardless of the tone class of the first noun in the construction) would be treated under Account 1. As noted in the first paragraph of section 3.3.2.1, we can hypothesize that the M tone in the construct noun melody is the result of downstep of a H tone (found in the citation form of these nouns). This non-productive historical downstep (Ahland and Pearce 2009) results in a M₁ tone

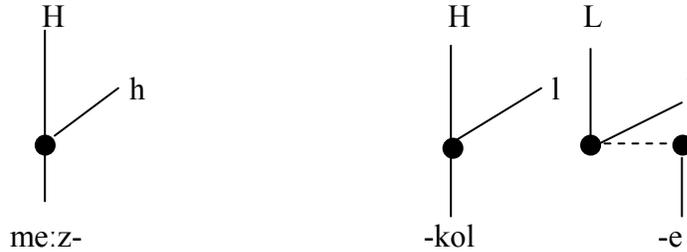
composite (i.e. where the first TBU of the second noun in the construction carries a H tone with a l register).

In (3.104)-(3.111), only the second noun differs from the diagrams in (3.93)-(3.103). There is a HL1 class noun /kól-è/ talk/news-TV ‘talk/news’ (with the [ML] construct noun melody) in the second position.

(3.104) Underlying representation /mé:z-kol-è/ wisdom-talk/news-TV ‘wise counsel’ H plus [ML] in Associative Construction



(3.105) Full tone spread to the toneless TBU



(3.105) Merger in response to OCP

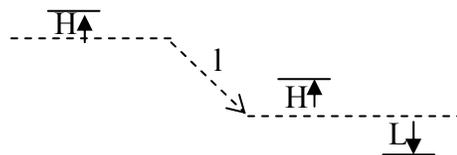
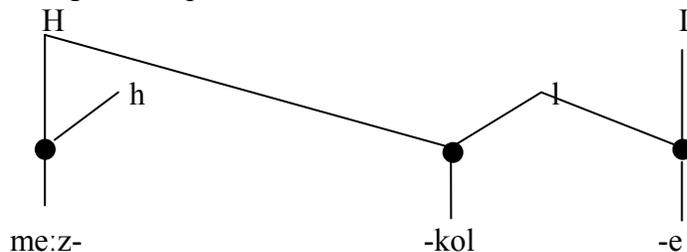
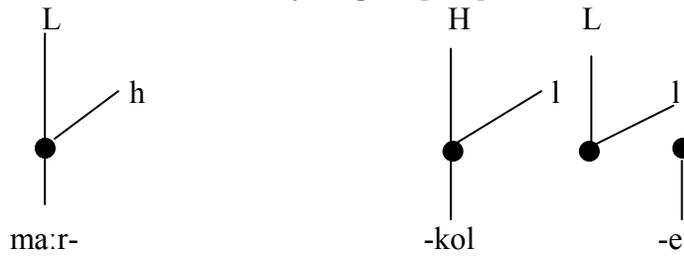


Figure 3.18. Tone Map for /mé:z-kol-è/ wisdom-talk/news-TV ‘wise counsel’

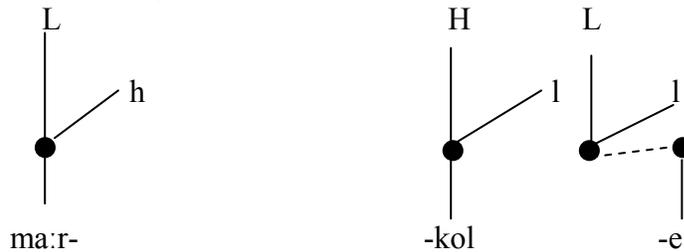
The result is that, regardless of the preceding register, this melody of the second noun of the construction remains ML, where the M tone is a M_1 (a downstepped H).

The diagrams below model the derivation of associative constructions with an initial noun of the M noun tone class (nouns of this class have an M_2 tone spread to both tone-bearing units in the citation form; of course, the terminal vowel is not present on the first noun in the construction).

(3.106) Underlying representation /ma:r-kol-è/ grass/bush-talk/news-TV
 ‘news from the country’ H plus [ML] in Associative Construction

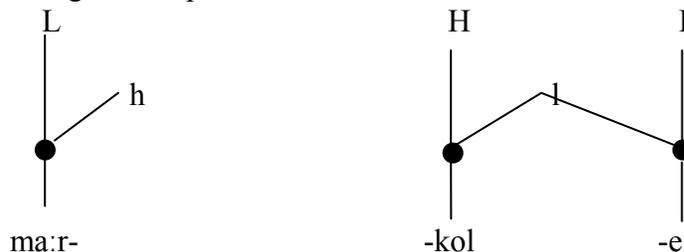


(3.107) Full tone spread to the toneless TBU



Here, we have a noun /ma:r-/ with a M_2 tone joining a noun /-kol/ which has a M_1 tone followed by a L tone. In response to the OCP, the two adjacent l registers merge.

(3.108) Merger in response to OCP



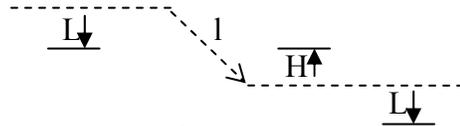
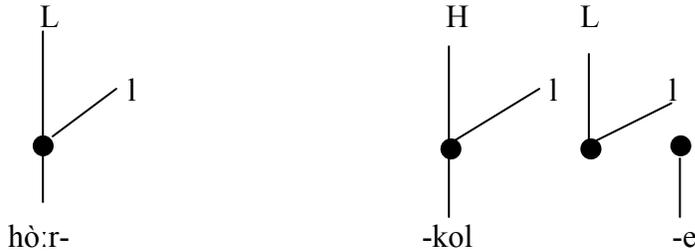


Figure 3.19. Tone Map for /ma:r-kol-è/ grass/bush-talk/news-TV
‘news from the country’

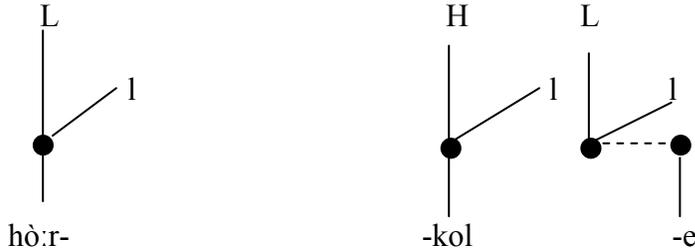
The following diagrams model associative constructions involving a L tone initial noun followed by a noun of the HL1 [ML] noun tone class.

(3.109) Underlying representation for /hò:r-kol-è/ ethnic.group-talk/news-TV ‘news of an ethnic group’

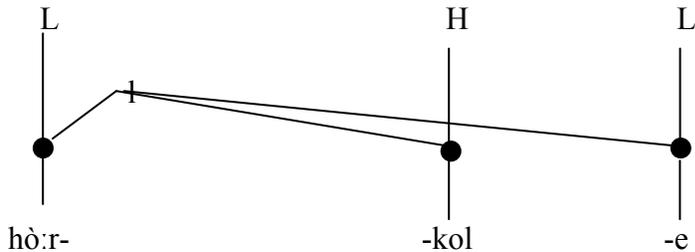
L plus [ML] in Associative Construction



(3.110) Full tone spread to the toneless TBU



(3.111) Merger in response to OCP



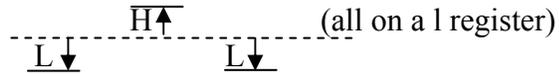


Figure 3.20. Tone Map for /hò:r-kol-è/ ethnic.group-talk/news-TV
‘news of an ethnic group’

This account of the H tones in associative constructions makes use of the distinction between the M_1 and M_2 tones. It assumes that the HL1 class noun’s construct melody is composed of a downstepped H tone (M_1) followed by a L tone; the M tone of the [*ML] construct noun melody corresponds to noun tone classes that do not carry a H tone on their first TBU (they are lexically toneless) and either receive a H tone via spread or insertion, or the default M_2 . This account utilizes H Spread, a phenomenon we have seen previously in section 3.2.3 above. But it also requires positing a new process: H Insertion, which, it is hypothesized, is motivated by a prohibition on inserting a M_2 default tone on a toneless TBU immediately after a M_2 on a preceding adjacent TBU. According to this account, the M tone of the [*ML] construct noun melody, just after a preceding L tone, is due to the default fill-in process.

Possible challenges to Account 1 involve the motivation for why only H tones spread. It is clear from other constructions that L tones spread onto toneless TBUs, but in the associative construction L tones do not spread from the first noun to fill the first TBU of the second noun (see also example (3.101) above and the discussion immediately below the example). Another potential problem is that this analysis requires H Insertion which is not independently supported in any other construction of the language.⁷⁶

Answers to these challenges have not yet been discovered.

⁷⁶ I have not yet been able to find another environment with a toneless TBU following a M_2 tone. If such an environment could be found, this would enable us to see if the H Insertion process is synchronically viable or if it is only a historical effect in the noun-noun compound.

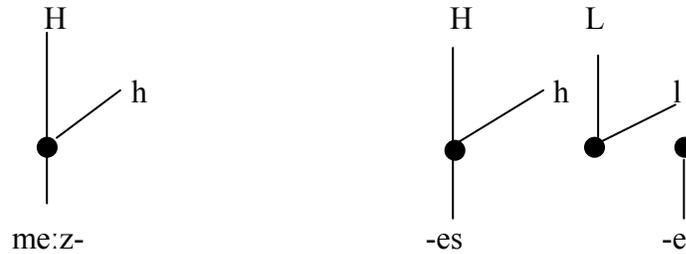
3.3.2.2. Account 2: A Historical Hypothesis

The second account for these same data bears some similarities to the first, though with important differences. Instead of assuming a toneless TBU underlyingly on the second noun, this second account suggests that the tone pattern surfacing on the second noun in some associative constructions (i.e. those with [*ML]) is a relic of a historical HL melody. The H tone undergoes partial assimilation to a previous L tone by means of l register spread, just as we've seen elsewhere in verbs (section 3.2.2, above). But the [ML] construct noun melody, which corresponds to the HL1 noun tone class, is treated exactly the same in Account 2 as in Account 1: that is, the first TBU of this construct noun melody is analyzed as a M₁, a downstepped H tone.

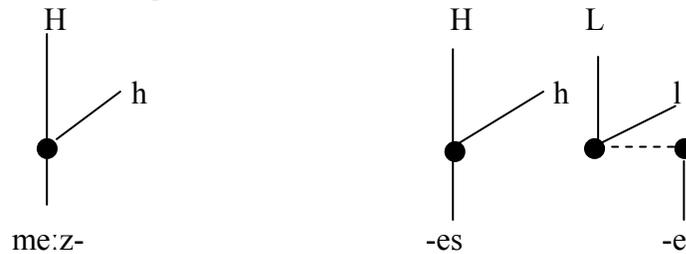
If we assume that the [*ML] construct noun melody was, at an earlier stage, a HL melody, which is preserved as a historical relic only in noun-noun compounds, we can account for the patterns which we have seen. Let's examine the same data again, but this time modeling this second account. We will deal here only with the [*ML] construct noun melody as the rest of Account 2 is exactly the same as Account 1.

In (3.112), we have an associative construction formed with the H toned noun (/mé:z-é/ wisdom-TV 'wisdom') in the first position and the [*ML] noun /es-è/ person-TV 'person' (the same compound as treated under Account 1 in example (3.93)).

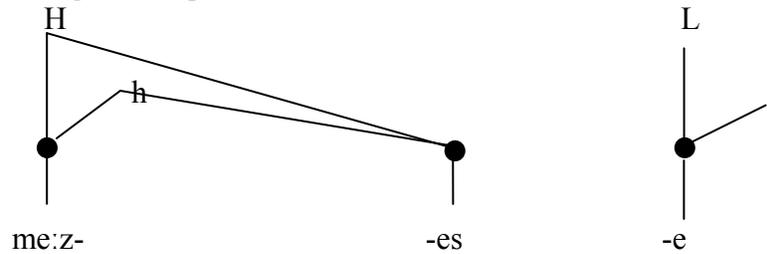
(3.112) Underlying representation for /mé:z-és-è/ wisdom-person-TV
 ‘wise person’ H plus [*ML] (historical HL) in Associative
 Construction



(3.113) Full tone spread to toneless TBU



(3.114) Merger in response to OCP



In this case, the H tones and h registers merge in response to the OCP; the result is provided in Fig. 3.21.

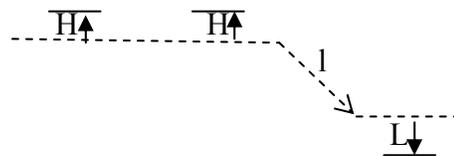
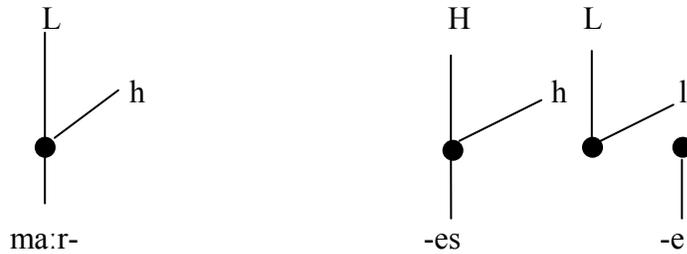


Figure 3.21. Tone Map for /mé:z-és-è/ wisdom-person-TV ‘wise person’

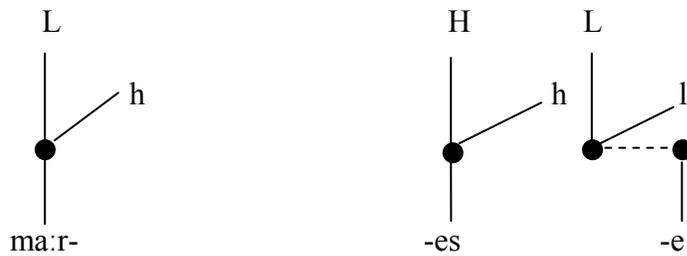
In (3.115), we have an associative construction formed with a M toned noun (/ma:r-e/ grass/bush-TV ‘grass/bush’) in the first position and the [*ML] noun /es-è/ person-TV ‘person’ (the same compound is treated under Account 1 in example (3.95)).

(3.115) Underlying representation /ma:r-és-è/ grass/bush-person-TV
 ‘country person’ (usually an insult)

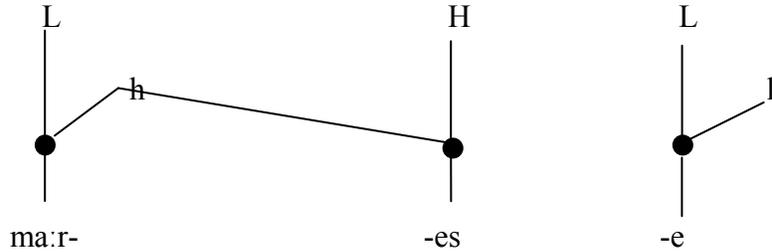
M plus [*ML] (historical HL) in Associative Construction



(3.116) Full tone spread to the toneless unit



(3.117.) Merger in response to OCP



In this case, the h registers merge in response to the OCP; the result is provided in Fig.

3.22.

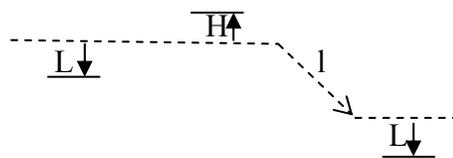


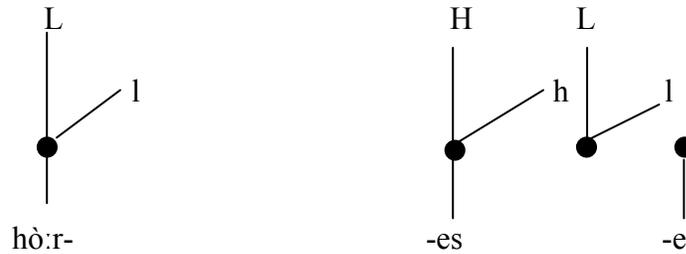
Figure 3.22. Tone Map for /ma:r-és-è/ grass/bush-person-TV
 ‘country person’

The final set of diagrams features the L toned noun /hò:r-è/ ethnic.group-TV

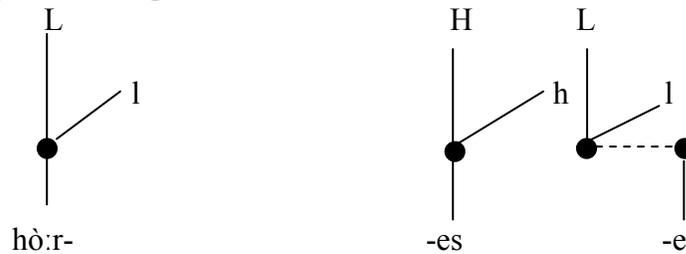
‘ethnic group’ in the first position, joined with the same [*ML] noun in (3.100). In this

instance, however, the l register spread process, which we have seen before (section 3.2.2), spreads the l register to the right, delinking the h register of the second noun's first TBU. The result of this process is that the first TBU of the second noun is realized as a M tone.

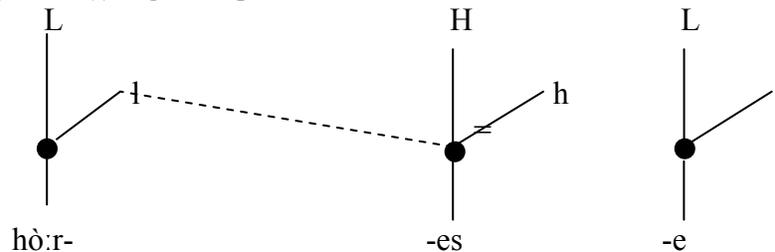
(3.118) Underlying representation for /hò:r-es-è/ ethnic.group-person-TV
 'a person who share's one's ethnicity' (tribe-person)
 L plus [*ML] (historical HL) in Associative Construction



(3.119) Full tone spread to the toneless TBU

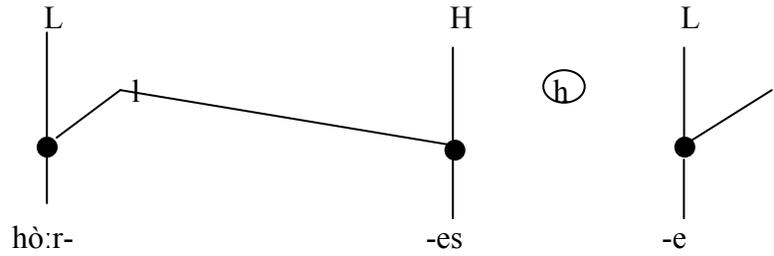


(3.120) Low (l) register spread

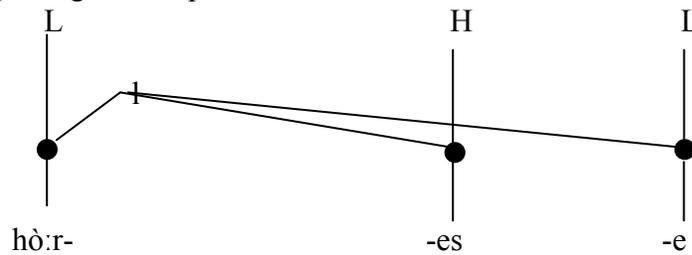


When the l register spreads right, it delinks the h register associated with second noun's first TBU. This h register is then erased as a stray.

(3.121) Erasure of stray h



(3.122) Merger in response to OCP



----- $\overline{H\uparrow}$ ----- (all on a l register)
 $\underline{L\downarrow}$ $\underline{L\downarrow}$

Figure 3.23. Tone Map for /hò:r-es-è/ ethnic.group-person-TV
'a person who shares one's ethnicity'

The benefit of this second account is that it does not require positing a new process which has no independent evidence elsewhere in the language (i.e. there is no need for positing H Insertion). But an important challenge, of course, is that this requires positing a historical relic of a H tone on the first TBU of the [*ML] construct noun melody. And we find no support for this H tone stage in the [*ML] construct noun melody elsewhere. Also note that Account 2 does not make use of the distinction between the two M tones *per se*. While M₁ is invoked to account for the [ML] pattern of HL1 class nouns, the [*ML] melody does not make use of the M₂ but rather assumes the existence of an earlier state where the first TBU carried a H tone, despite the lack of evidence for this elsewhere.

3.3.2.3. Account 3: A Construction Hypothesis

Thus far, in the two previous accounts for the distribution of H tones in the associative construction, we have attempted to account for the tonal phenomena through purely synchronic means (account one, section 3.3.2.1) and also through a historical hypothesis suggesting that the [*ML] construct noun melody was at one time a HL melody. There is another possibility, though, as hinted at in section 3.3.2, above: since the appearance of the H tone on the first tone-bearing unit of nouns which take the [*ML] construct noun melody is limited to the associative construction, the H tone itself may be an associative marker. It could be that there was once segmental material associated with the H tone or perhaps the associative marker has always been simply tonal.

Certainly, it is clear that in some languages, especially Niger-Congo languages, associative constructions may be marked by segmental and/or tonal morphology (Welmers 1974:277ff). Nouns in some languages, like Lonkundo, can function in a “qualificative” manner, like adjectives in other languages such as Swahili, when joined with other nouns in an associative construction (Welmers 1974:277). In some languages, like Igbo, tonal alternations in nouns which occur in these associative constructions can be explained by positing a H tone marking the associative construction (Welmers 1974:151).

The distribution of the H tone described above, throughout section 3.3.2, could be the result of a floating H tone (H tone with h register), perhaps a relic of an older morpheme which at one time included segmental material, which was a marker of this

construction, perhaps as a suffix on the first noun.⁷⁷

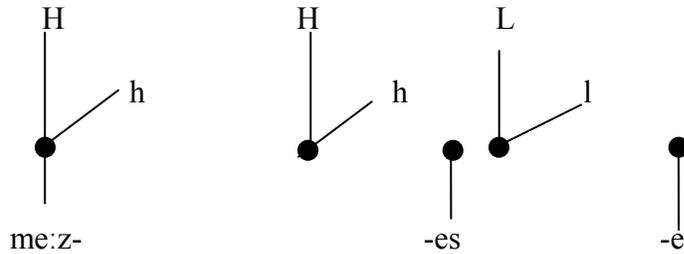
In this construction hypothesis (Account 3), there is no need for H Spread or H Insertion (as in Account 1, section 3.3.2.1, above). The H tone composite surfaces only on those second nouns (i.e. construct nouns) where the first tone-bearing unit is toneless (i.e. the [*ML] construct noun melody). That is, in addition to the H tone of the construction itself no other rule or process (not already attested elsewhere in the language, that is) is necessary to account for the tonal behavior--only tone spread onto a toneless tone-bearing unit is needed (section 3.2.3, above).

The construction hypothesis also eliminates the need for suggesting that the modifying noun melody was at one time HL (as in Account 2, section 3.3.2.2). As noted in the discussion of Account 2, the hypothesis that the [*ML] construct noun melody was at one time HL is suspect given that the only evidence to support such a claim is found in the associative construction itself.

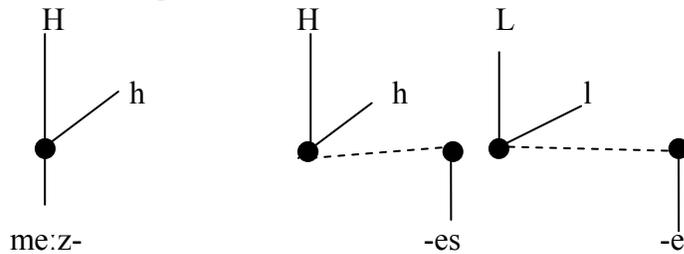
Let's now consider how the construction hypothesis works in accounting for the same associative constructions in 3.3.2.1 and 3.3.2.2, above. Derivational examples of the construction account (for the same data in section 3.3.2.1) are illustrated and discussed below.

⁷⁷ Throughout this grammar, the associative construction is shown as a phonologically bounded construction. If the H tone is an old associative marker, it could be that at one time, the construction involved two nouns which were not bound to one another phonologically. I have elected to represent the construction as bounded phonologically on the following grounds: 1) its syntactic distribution suggests that it is interpreted as a single noun today (cf. section 4.4.1), 2) the absence of downstep after HL nouns (contra the downstep found in the possessive construction (mentioned above in section 3.2.1) and 3) some associative constructions involving particular noun-noun collocations have clearly come to form new compound nouns with conventionalized semantics (cf. section 4.4.1).

(3.123) Underlying representation /mé:z-és-è/ wisdom-person-TV ‘wise person’
 H plus [*ML] in Associative Construction



(3.124) Full tone spread to toneless TBUs on second noun



The H tone composite (H tone and h register) spreads to the toneless tone-bearing unit to the left (the first tone-bearing unit of the second noun) and the second noun’s final L tone composite (L tone with l register) spreads to the terminal vowel. The resulting melody is represented in Fig. 3.24 (identical to Fig. 3.15, in section 3.3.2.1, above).

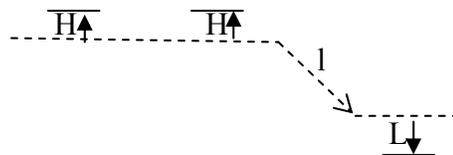
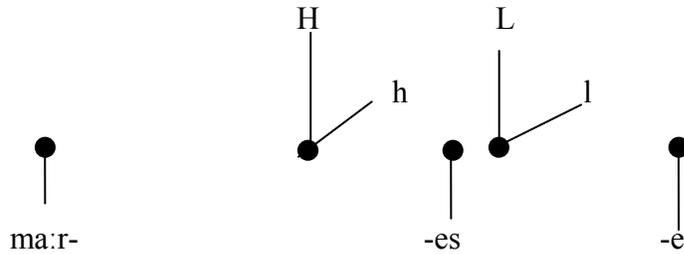


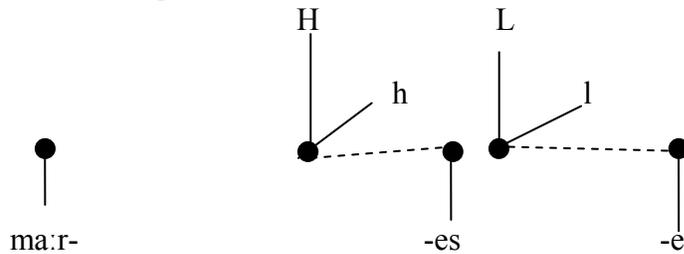
Figure 3.24. Tone Map for /mé:z-és-è/ wisdom-person-TV ‘wise person’

The construction hypothesis (Account 3) does not require any H Insertion as the H tone in question is provided by the construction itself. Thus examples (3.90) and (3.91), above, where a M toned noun is in first position, need no additional process to account for the presence of the H tone on the first tone-bearing unit of the second noun.

(3.125) Underlying representation /ma:r-és-è/ grass/bush-person-TV
 ‘country person’ (usually an insult)
 M plus [*ML] in Associative Construction

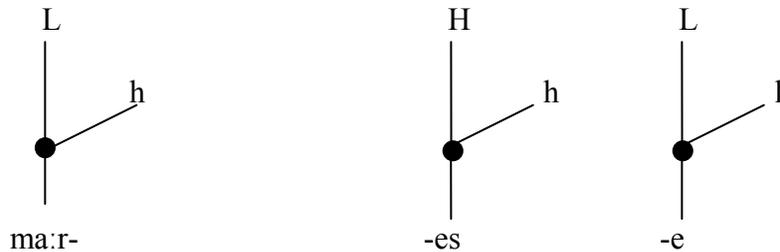


(3.126) Full tone spread to toneless TBUs on second noun

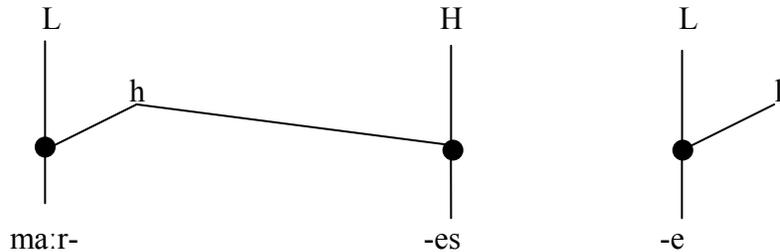


The construction hypothesis also does away with any need to block a M₂ tone from inserting after another M₂ tone (cf. the discussion preceding example (3.95) in section 3.3.2.1, above).

(3.127) Default fill-in applies on first TBU of the construction



(3.128) Merger in response to OCP



In this case, the OCP requires the merging of the h registers and the result is provided in

Fig. 3.25 (identical to the tone map for the same associative construction in Account 1, cf. Fig. 3.16).

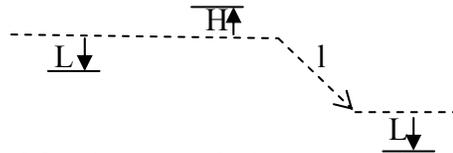
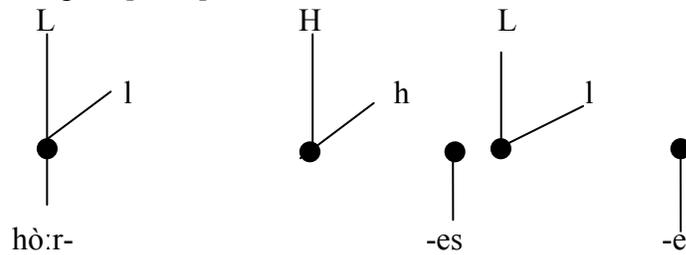


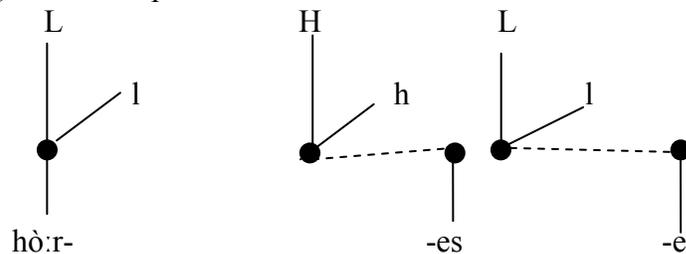
Figure 3.25. Tone Map for /ma:r-és-è/ grass/bush-person-TV ‘country person’

Let’s now turn to the example with a L toned noun, /hò:r-è/ ethnic.group-TV ‘ethnic group’, in the first position (compare with example 3.100, in section 3.3.2.1).

(3.129) Underlying representation /hò:r-es-è/ ethnic.group-person-TV
 ‘a person who shares one’s ethnicity’ (tribe-person)
 L plus [*ML] in Associative Construction



(3.130) Full tone spread to toneless TBUs

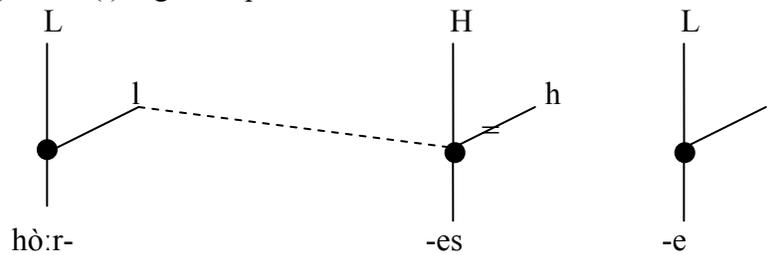


The construction hypothesis offers an explanation for why the L tone composite on the first noun does not spread to the first toneless tone-bearing unit on the second noun. In Account 1, the discussion immediately following example (3.101), above, points out this problem. In short, there are many other instances where L tone composites do spread to the right to satisfy toneless tone-bearing units. The construction hypothesis, however,

provides a solution to this. The presence of the floating H tone composite which marks the construction spreads to the toneless tone-bearing unit and prevents any L tone composite from spreading.

At this point in the derivation, the l register spread (which is also invoked in Account 2 (section 3.3.2.2, example 3.120) produces a partial assimilation where the H of the second noun is realized as M₁.

(3.131) Low (l) register spread



(3.132) Merger in response to OCP

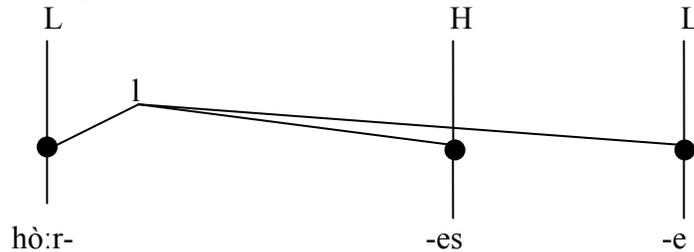


Figure 3.26 illustrates the tone map for this particular associate construction, showing all the tones on the same l register (identical to Account 2's Fig. 3.23, but distinct from Account 1's Fig. 3.17).

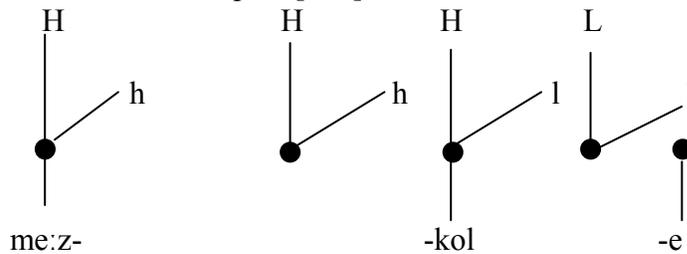
Figure 3.26. Tone Map for /hò:r-es-è/ ethnic.group-person-TV
'a person who shares one's ethnicity'

Let's now turn to how the HL1 noun tone class and its [ML] construct noun melody are treated in the construction account. The derivational illustrations below

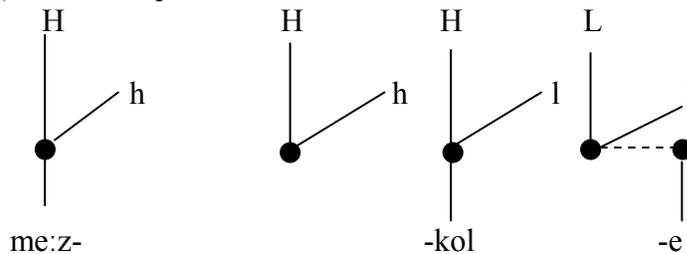
correspond to those beginning with (3.104) in Account 1 (section 3.3.2.1), above. In the illustrations below, I've posited the H tone of the associative construction between the two nouns, just as I've done above. But the presence of this H tone has no effect whatsoever in the derivation of the construction. It is not clear to me if the H tone of the associative construction is maintained only in constructions with the [*ML] construct nouns (i.e. as a relic) or if it is still present throughout all associative constructions. I've elected to show it as present throughout in order to illustrate that this at least could be the case.

The diagrams below correspond to (3.104-3.111) in section 3.3.2.1, above.

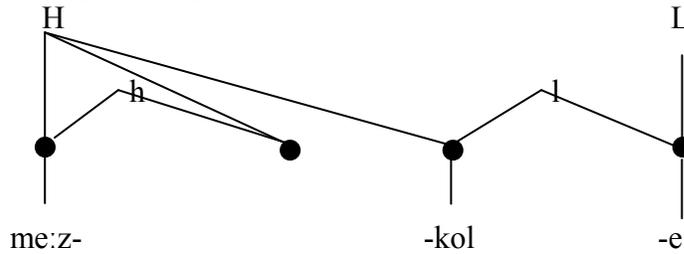
(3.133) Underlying representation /mé:z-kol-è/ wisdom-talk/news-TV
 'wise counsel' H plus [ML] in Associative Construction



(3.134) Full tone spread to the toneless TBU



(3.135) Merger in response to OCP



The floating H tone composite which marks the construction merges with the preceding H tone composite in response to the OCP and is not realized in the tonal melody as every tone-bearing unit is satisfied. There is no contour tone in this associative construction.

The tone map is provided in Fig. 3.27, below.

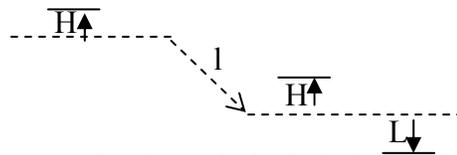
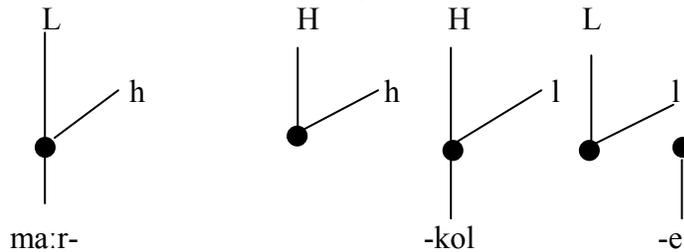


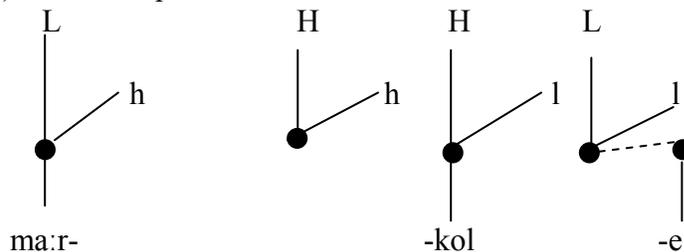
Figure 3.27. Tone Map for /mé:z-kol-è/ wisdom-talk/news-TV ‘wise counsel’

The diagrams below feature a noun of the M noun tone class in first position and a HL1 [ML] noun in the second position.

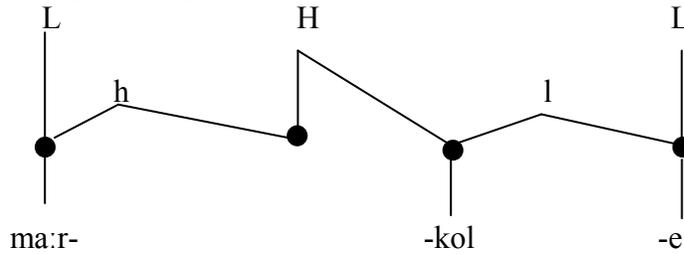
(3.136) Underlying representation /ma:r-kol-è/ grass/bush-talk/news-TV ‘news from the country’ H plus [ML] in Associative Construction



(3.137) Full tone spread to the toneless TBU



(3.138) Merger in response to OCP



Again, no contour tone develops from the H tone composite which is hypothesized to mark the associative construction in this account. The tone map is provided in Fig. 3.28.

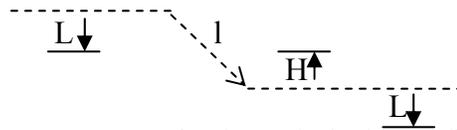
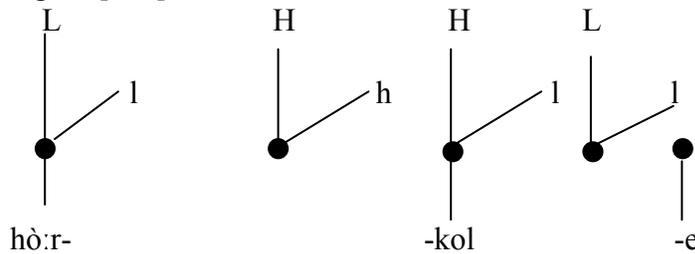


Figure 3.28. Tone Map for /ma:r-kol-è/ grass/bush-talk/news-TV
'news from the country'

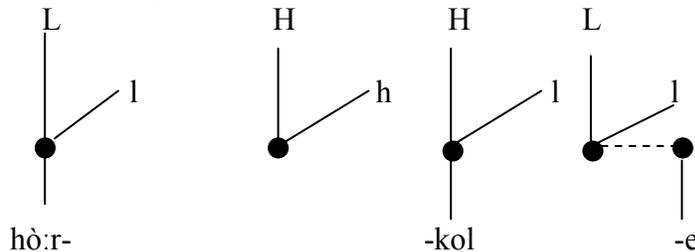
The following diagrams model associative constructions involving a L tone initial noun followed by a noun of the HL1 [ML] noun tone class.

(3.139) Underlying representation for /hò:r-kol-è/ ethnic.group-talk/news-TV 'news of an ethnic group'

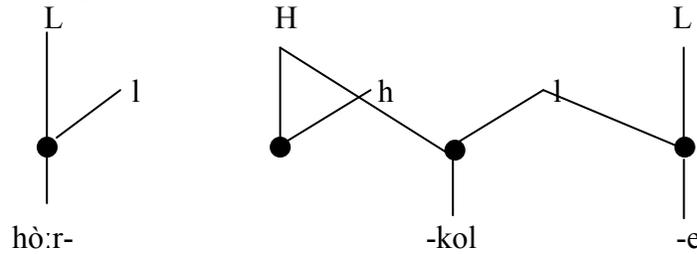
L plus [ML] in Associative Construction



(3.140) Full tone spread to the toneless TBU



(3.141) Merger in response to OCP



The tone map is provided in Fig. 3.29.

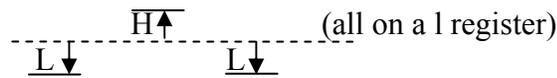


Figure 3.29. Tone Map for /hò:r-kol-è/ ethnic.group-talk/news-TV
‘news of an ethnic group’

As noted in the discussion of the derivations above, contour tones are not formed by the hypothesized H tone composites marking the associative construction. As noted in section 3.2.4, above, the contour tones which are formed in the associative construction are due to lexical H tone composites on the right edge of the first noun in the construction.

In short, this third account of H tone distribution in the associative construction argues that a H tone composite marks the construction itself. This requires positing a H tone composite (H tone with h register) between the two nouns of the construction. This construction hypothesis does not require H Insertion, which is not attested outside of Account 1. It also does not require any special historical melody (like the HL historical melody corresponding to the [*ML] construct noun melody of Account 2). The construction hypothesis also does away with the need to block the insertion of a M₂ tone after another M₂ tone, discussed above example (3.95) and applying in (3.97) above in Account 1, section 3.3.2.1. For a discussion of the non-tonal aspects of the associative construction, its semantic expressions and constituent structures, see section 4.4.1.

3.4. Summary of Processes and Ordering

The description of tone and tonal phenomena in Northern Mao has attempted not only to describe surface forms and various processes but also to offer a unified model using Register Tier Theory) with the hope that this visual model will have aided our discussion of tonal phenomena.

Each of the tonal processes discussed in section 3.2 may be ordered relative to one another in terms of this model. The order is as follows:

1. Lexical input (morphemes with their underlying tones)
2. Full tone spread (rightward) to toneless tone-bearing units
3. Default fill-in with the M_2 composite configuration onto remaining toneless tone-bearing units⁷⁸
4. The Obligatory Contour Principle serves as a constraint once all tone-bearing units have been assigned a tone
5. Low (l) register spread (rightward), which results in partial assimilations and/or downstep)
6. Erasure (of stray registers)

3.5. Evidence of a M_1 and M_2 Merger

There is clear indication that there are two distinct M tones in Northern Mao: M tones on verbal suffixes fall into two classes with respect to downstepping environments (Table 3.1) and the ML construct noun melody bifurcates into two classes in the

⁷⁸ I have not included H Insertion as a process in this list; this is because H Insertion, if it is a process at all, is limited to the noun-noun compound construction and is not attested elsewhere. H Insertion occurs only where the Default Fill-in process is prevented from inserting two M_2 tones on adjacent TBUs (section 3.3.2.1).

associative construction (section 3.3.2), where the M of this ML melody either remains M in all instances (the [ML] class) or alternates with H in some environments (the [*ML] class). I have used M₁ as the label for M tones which appear to come from downstepped H tones. These include the M tones which do not downstep in the verbal system and the [ML] construct noun melody which is associated with the HL1 class. I have used M₂ for M tones which appear to come from L tones. These include the M tones which downstep in the verbal system and the [*ML] construct noun melody, corresponding to M, MH, ML and L noun tone classes.

However, in some commonly used constructions the distinction between M tones is neutralized. In particular, in section 3.3.1, we saw that all the ML construct noun melodies (that is both [ML] and [*ML]) are consistently realized as ML when they are not part of the associative construction. Not only do they appear to be identical, they actually behave identically with respect to downstep.⁷⁹

The ML construct noun melodies in the noun-noun possessive construction also all behave the same. In this construction, the possessor carries its citation tone and precedes the possessum which carries its construct noun melody: /es-è/ person-TV (ML tone class) + /kús-é/ hand-TV (H1 tone class) > /es kus-e/⁸⁰ M MM person hand-TV ‘a

⁷⁹ Thus, even while Account 1 of the associative construction tone patterns makes use of the distinction between the M₁ and M₂ composite configurations, the tones respond identically to downstepping environments, suggesting a merger of the M₁ and M₂ tones to the M₂ tone. Only the M₂ tone can downstep (as it is composed of a L tone with a h register). The M₁ composite, if it has not merged with the M₂, should not downstep directly as it contains a l register already and this l register should merge with the l register that would otherwise cause a downstep.

⁸⁰ The lack of the final vowel on the first noun is not to be taken as evidence that these two nouns are compounded (as is the case in the noun-noun compound construction, where the phonological evidence for compounding involves the presences of H tones on the *ML modified noun melody in some environments as well as the formation of contours from stranded H tones--neither of which occurs in the possessive construction (cf. the discussion of the terminal vowel in section 8.2). Also, contra the associative

person's hand'. All ML construct noun melodies behave the same with respect to downstepping environments. In examples (3.142) and (3.143), the first noun (the possessor) is /ób-è/ and ends with a L tone. This L tone is stranded and results in a floating tone in the possessive construction since its segmental tone-bearing unit (the terminal vowel) does not occur. Downstep of the second noun's construct noun melody is the result.

$$\begin{array}{l}
 (3.142) \text{ HL1} \quad + \quad [*ML] \quad > \quad H \downarrow ML \\
 \text{citation} \quad \quad \quad \text{construct} \quad \quad \quad \text{possessive construction} \\
 \text{melody} \quad \quad \quad \text{noun melody} \\
 \left[\begin{array}{c} - \\ - \end{array} \right] \quad + \quad \left[\begin{array}{cc} - & - \end{array} \right] \quad > \quad \left[\begin{array}{cc} - & - - \end{array} \right] \\
 /ób-è/ \quad + \quad /es-è/ \quad > \quad ób \quad \downarrow es-è \\
 \text{brother-TV} \quad \quad \quad \text{person-TV} \quad \quad \quad \text{brother person-TV} \\
 \text{ML class (citation) 'brother's person'}
 \end{array}$$

$$\begin{array}{l}
 (3.143) \text{ HL1} \quad + \quad [ML] \quad > \quad H \downarrow ML \\
 \text{citation} \quad \quad \quad \text{construct} \quad \quad \quad \text{possessive construction} \\
 \text{melody} \quad \quad \quad \text{noun melody} \\
 \left[\begin{array}{c} - \\ - \end{array} \right] \quad + \quad \left[\begin{array}{cc} - & - \end{array} \right] \quad > \quad \left[\begin{array}{cc} - & - - \end{array} \right] \\
 /ób-è/ \quad + \quad /kol-è/ \quad > \quad ób \quad \downarrow kol-è \\
 \text{brother-TV} \quad \quad \quad \text{talk/news-TV} \quad \quad \quad \text{brother talk/news-TV} \\
 \text{HL1 class (citation) 'brother's news'}
 \end{array}$$

All the ML construct nouns undergo downstep in this construction, whether the melody is [ML] or [*ML]. This is interesting, given that in the noun-associative

construction, downstep following stranded and floating l registers (i.e. l registers at the right edge of the first noun, which would be carried by the final vowel if the noun were in citation form) does occur in the possessive construction).

construction, the M tone of the [ML] construct noun melody behaves like a downstepped H tone (i.e. a M₁ made up of a H tone with a l register). Yet, it is clear that the HL1 / [ML] noun /kól-è/ does downstep in (3.143).

Both types of ML construct noun melodies behave the same following H tones in the possessive construction as well:

(3.144) H1	+	[*ML]	>	H ML
citation		construct		possessive construction
melody		noun melody		
$\left[\begin{array}{c} \text{--} \\ \text{--} \end{array} \right]$		$\left[\begin{array}{cc} - & - \end{array} \right]$		$\left[\begin{array}{cc} - & - \\ - & - \end{array} \right]$
/té:ʃ-é/	+	/es-è/	>	té:ʃ es-è
sister.in.law-TV		person-TV		sister.in.law person-TV
		ML class (citation)		‘sister-in-law’s person’

(3.145) H1	+	[ML]	>	H ML
citation		construct		possessive construction
melody		noun melody		
$\left[\begin{array}{c} \text{--} \\ \text{--} \end{array} \right]$		$\left[\begin{array}{cc} - & - \end{array} \right]$		$\left[\begin{array}{cc} - & - \\ - & - \end{array} \right]$
/té:ʃ-é/	+	/kol-è/	>	té:ʃ kol-è
sister.in.law-TV		talk/news-TV		sister.in.law talk/news-TV
		HL1 class (citation)		‘sister-in-law’s talk/news’

In (3.144) and (3.145), there is no downstep, as there is no L tone (or l register at the right edge of the first noun).

Evidence of a M tone merger is also exhibited in the verbal system. Some speakers show signs of beginning to lose the distinction between downstepping and non-downstepping verb suffixes. For instance, the M₁ toned verb suffixes (the /-and/ PL and

the /-ti/ PF), which we saw in section 3.1, are optionally downstepped by some speakers. In fact, one speaker expressed confusion with the verb melody and produced two different whistles, adding that he could say the verb either way. The M₂ toned suffixes, however, are consistently produced with downsteps by all speakers consulted.

Thus, the M₁ of the [ML] construct noun melody undergoes downstep in the possessive construction and the M₁ toned suffixes in the verbal system are optionally downstepped by some speakers, as described in the preceding paragraph. These two facts suggest that the M₁ tone is being reanalyzed as a M₂. Of course, it is no surprise that two tones from different historical sources which are produced at the same level and thus identical to one another in many environments would begin to behave the same over time. It appears that Northern Mao is merging these two M tones into one, which may, eventually behave consistently across all environments.

3.6. Tone as a Marker of Stem Category

An important function of tone in Northern Mao is its role in noun and verb stem formation. In addition to morphology and syntactic function, tone is an important marker of a stem's category as a noun, infinitive verb or finite verb. The most basic building blocks for words in Northern Mao appear to be toneless roots (cf. sections 4.1 and 4.2 with relevance to nouns and section 9.2 with relevance to verbs).

Roots can be grouped into three categories, based on the stem types (identifiable by tonal melody) they can be used to form: 1) roots which are used to form only noun stems (Table 3.4); 2) roots which are used to form both finite and non-finite (infinitive) verb stems (Table 3.5); and 3) roots which are used to form distinct noun stem, finite

verb stem and infinitive verb stems (Table 3.6). Noun and infinitive verb stems take one of the noun tone class melodies (H1, M, L, HL1, MH, ML, H2, HL2, and LH)⁸¹ while finite verb stems take either H, M or L melodies.⁸²

The roots in Table 3.4 are only used to form noun stems. There are many roots in Northern Mao that fall into this category.

Table 3.4. Selected Roots Which Form Only Noun Stems

	Root	Nouns	Tone Class
1	√kus	kús-é hand-TV	H1
2	√akʰ	akʰ-e corn-TV	M
3	√kwag	kwàg-è water.pot-TV	L
4	√ob	ób-è brother-TV	HL1
5	√kan	kan-é dog-TV	MH
6	√aw	aw-è day/God-TV	ML
7	√puw	púw-é beer-TV	H2
8	√i:ns	i:ns-è tree-TV	HL2
9	√kaw	kàw-é arm-TV	LH

Table 3.5 lists a sampling of roots which can serve as finite and infinitive verb stems. There are many roots which belong to this category. Clearly, some of the infinitive verb stems in Table 3.5 can be used as nouns in addition to their use as infinitives (see

⁸¹ This is not to suggest that an infinitive verb stem is simply and always a noun. It can be used as a noun, as discussed in section 4.6.2; but the infinitive verb stem can also serve as the stem for otherwise quite finite final verbs (cf. the discussion of negatives, imperatives and jussives in sections 9.2, 10.4.3-10.4.6, and 10.5).

⁸² While more complex melodies are found on noun and verbal stems of multiple syllables, these are relatively few in number and are beyond the scope of this discussion.

examples below); and the meanings of these nouns are very frequently resultative. What is not clear, however, is whether the noun function of the infinitive stem is distinct from the infinitival function in the minds of speakers.

Table 3.5. Selected Roots Which Form Finite and Infinitive Verb Stems

	Root	Finite Verb Stem	Tone Class	Infinitive Verbs		Tone Class
				Used as Infinitive Verb	Used as Noun	
1	√kjat'	kját' build.house	H	kjat'-è build.house-TV	kjat'-è house-TV	ML
2	√kjal	kjál lay.egg	L	kjál-è lay.egg:INF-TV	kjál-è egg-TV	HL2
3	√go:m	gó:m think/plan	H	go:m-è think/plan:INF-TV	go:m-è thought/plan/idea-TV	ML
4	√int'	ínt' see	M	ínt'-é see:INF-TV	ínt'-é sight-TV	H1
5	√hez	héz hit	H	hez-é hit:INF-TV	hez-é hit-TV	MH
6	√humb	hùmb embrace	L	hùmb-è embrace:INF-TV	hùmb-è embrace-TV	HL2

In row 1, for instance, the root √kjat' can serve as the base for a finite verb stem or an infinitival (verbal noun) stem. In (3.146), both stems are illustrated. The finite verb stem functions as the base for the fully-finite final verb and the infinitive stem is used a noun 'house'. Example (3.147) illustrates the full nominal status of this noun 'house'. It can be possessed, marked with the PL number suffix and take case.

Infinitive Verb Stem (Used as Noun) and Finite Verb Stem

[- - - - -]

(3.146) kjat'-nà ha-tí-kját'-á
house-OBJ AFF-1SG-build.house-DECL
'I built a house.'

Infinitive Verb Stem (Used as Noun)

[- - - - - - -]

- (3.147) ham kjat'-wol-ij ha-bíʃ-and-á
1PL house-PL-SBJ AFF-EXIST-NSG-DECL
'There are our houses.'

Infinitive Verb Stem (Used as Subordinate Verb)

[- - - -]

- (3.148) kját'-gàʃ ha-tí-wó:l-á
build.house-PURP AFF-1SG-want-DECL
'I want to build a house.'
(Literally: 'I want to house.')

In row 2, the root \sqrt{kjal} behaves similarly. In (3.149) the root is used as the noun 'egg' and twice as a verb: once in a purposive complement, and once as the final verb. In (3.150), however, where there is no erstwhile object in the purposive complement, the infinitive stem is used with the purposive suffix. Presumably, in (3.149), the entire verb phrase has been nominalized as a complement, as opposed to structures like (3.150) where just the verb itself has been nominalized and appears in the infinitive form. In (3.149), the stem of the complement verb is finite and still licenses an object (assigning case) within the nominalized phrase. In (3.150), the complement is simpler: it is made up of a nominalized verb (i.e. the infinitive stem) and followed by the purposive subordinator. This complement is not a verb phrase (cf. section 4.6.2.1 and the discussion of finiteness in action nominalizations).

Infinitive Verb Stem (Used as Noun)

and Finite Verb Stem (Used as Subordinate Verb and Final Verb)

[- - - - -]

(3.149) wa:k-iʃ kjál-nà kjàl-gàʃ hí-in
chicken-SBJ egg-OBJ lay.egg-PURP go-SS:NF

[- - -]

ha-kjàl-á

AFF-lay.egg-DECL

‘A chicken went to lay an egg and (then) laid (an egg).’

Infinitive Verb Stem (Used as Subordinate Verb) and Finite Verb Stem

[- - - -]

(3.150) wa:k-iʃ kjál-gàʃ hí-in
chicken-SBJ lay.egg:INF-PURP go-SS:NF

[- - -]

ha-kjàl-á

AFF-lay.egg-DECL

‘A chicken went to lay (an egg) and then lay (an egg).’

Table 3.6 lists some roots of a third type which can be used to form finite verb, infinitive verb and noun stems--all marked distinctly by tonal melody. This category of root appears to have fewer members than those in Table 3.5, which can only form finite and infinitive verb stems. I do not have all roots marked as to their type (those which form only noun stems, those which form finite and infinitive verb stems, and those which form finite, infinitive and noun stems), so I cannot comment on possible relative

percentages of these types for my database yet.⁸³

Table 3.6. Selected Roots Which Form Finite, Infinitive and Noun Stems

	Root	Finite Verb Stem	Tone Class	Infinitive Verbs	Tone Class	Nouns	Tone Class
1	√to:k	tó:k head.carry	H	tò:k-è head.carry:INF-TV	L	to:k-è head-TV	ML
2	√p'íj	p'íj give.birth	H	p'íj-é give.birth:INF-TV	MH	p'íj-e child-TV	M
3	√but'	bùt' be.afraid	L	bùt'-é fear:INF-TV	LH	bùt'-è shame/fear-TV	HL2
4	√git	git cover	L	gít-è cover:INF-TV	HL2	gít-é mask/cover-TV	LH

The examples below illustrate the use of the √to:k root as a noun stem (3.151 and 3.152), infinitive verb stem (3.153) and finite verb stem (3.152 and 3.154).

Noun Stem

$$\left[\begin{array}{ccccccc} - & & & & & & - \\ & - & & - & - & & \\ & & - & & & - & \end{array} \right]$$

(3.151) íj ʰto:k-ìj ha-maŋk'-á
3SG head-SBJ AFF-hurt-DECL
'Her/his head hurts.' (e.g. a headache)

Noun Stem

$$\left[\begin{array}{ccccc} - & & - & - & - \\ & - & & & \\ & & - & & \end{array} \right]$$

(3.152) to:k-èt ha-tó:k-á
head-LOC AFF-head.carry-DECL
'S/he carried it on (her/his) head.'

⁸³ It may be that the roots in Table 3.6 were originally like those in Table 3.4 and able only to form nouns. It is not hard to imagine that words like 'child' and 'head' are more basic lexical elements than 'give birth' or 'carry on head'. Perhaps these nouns were then verbalized and as a result needed to have an infinitive stem which was independent from the older noun stem. This is only speculation. It could also be that the issue is one where frequency plays a role in leading some roots to belong to one type vs. another.

Infinitive Verb Stem (Used as a Subordinate Verb)

$$\left[\begin{array}{ccc} - & - & \end{array} \quad \begin{array}{ccc} - & - & - \end{array} \right]$$

- (3.153) tò:k-gàʃ ha-tí-wó:l-[↓]á
 head.carry:INF-PURP AFF-1SG-want-DECL
 ‘I want to carry it (by head).’

Finite Verb Stem (Used as a Subordinate Verb)

$$\left[\begin{array}{ccc} - & - & - \end{array} \quad \begin{array}{ccc} - & - & - \end{array} \right]$$

- (3.154) k'ò:p-ná tó:k-gàʃ ha-tí-wó:l-[↓]á
 basket-OBJ head.carry-PURP AFF-1SG-want-DECL
 ‘I want to carry a basket (by head).’

The root \sqrt{p} 'if' is illustrated below. In (3.155), the noun stem is used. This noun serves as the object of the verb ‘see’. In (3.156), the infinitive verb stem is used; here the infinitive is marked as an object-complement (specifically, a modality complement) of the verb ‘start’. The finite verb stem is illustrated in (3.157).

Noun Stem

$$\left[\begin{array}{ccc} - & - & - \end{array} \quad \begin{array}{ccc} - & - & - \end{array} \right]$$

- (3.155) p'ij-na ha-int'-á
 child-OBJ AFF-see-DECL
 ‘S/he saw a child.’

Infinitive Verb Stem (Used as a Subordinate Verb)

$$\left[\begin{array}{ccc} - & - & \end{array} \quad \begin{array}{ccc} - & - & - \end{array} \right]$$

- (3.156) p'ij-ná ha-nók-[↓]á
 give.birth:INF-OBJ AFF-start-DECL
 ‘She started to give birth.’

Finite Verb Stem

$$\left[\begin{array}{ccccc} - & - & - & - & - \end{array} \right]$$

(3.157) kwalla ha-píʃ-[↓]á
yesterday AFF-give.birth-DECL
‘She gave birth yesterday.’

Let’s turn now to considering the relationship between the different stem types which roots may form. I have been unable to posit tone rules to generate one stem’s tonal melody from another; the amount of neutralization involved has posed problems for positing tonal (i.e. phonological) processes to account for all the differences. Suffice it to say that the correspondences between the nominal and verbal forms are consistent, and the verbal forms are predictable--if one knows the nominal form.⁸⁴

While Tables 2.21 and 2.22 (section 2.5.3) illustrate the correspondences between finite verb and noun/infinitive stems in surface melodies, I will now summarize these in light of the noun tone classes: H tone verb stems correspond to noun tone classes M, L, MH and ML (i.e. the nouns which take the [*ML] construct noun melody--carrying M₂ tones); M tone verb stems correspond to noun tone classes H1 and HL1 (i.e. the nouns which take the MM or [ML] construct noun melody--both carrying M₁ tones); and L tone verb stems correspond to noun tone classes H2, HL2 and LH (i.e. nouns that take the LL

⁸⁴ For instance, in the case of ‘head’ (3.151-3.154), if one knows the noun stem’s melody is ML /tò:k-è/ ‘head’, one could predict that any corresponding finite verb stem would be H-toned (cf. the correspondence mapping in section 2.5.3). That is, all ML noun melodies correspond to H-tone finite verb stem melodies. But predicting a noun form from the finite stem melody is not possible: H-tone finite stem melodies correspond to M, L, MH and ML noun stem melodies (section 2.5.3). So, continuing with the ‘head’ example, if I am correct that the noun stem ‘head’ is older and that the finite and infinitive verb stems developed later, then the choice of a *new* nominal melody for the infinitive stem is interesting. It seems clear why the ML melody was not chosen for the new infinitive stem (that’s the melody of the noun stem). Ultimately, it is clear that the L tone was chosen: /tò:k-è/ head.carry:INF-TV, but why this and not the M or MH?

construct noun melody). Historically speaking, it is likely that there was a synchronic phonological relationship between these patterns at some time in the past. These tonal correspondences are repeated in various parts of the grammar and are noted as they are encountered. They may not, however, be considered the result of purely tonological processes today.

CHAPTER IV

NOUNS

This chapter explores the structural and distributional properties of Northern Mao nouns. The examination begins with a morphological definition of Northern Mao nouns, a discussion of the inflectional morphology and different noun classes and the construct noun form, and then continues by exploring the syntactic distribution and behavior of nouns. Next I describe derivational noun formation processes. I conclude with a brief discussion on the lack of adjectives.

4.1. Defining the Northern Mao Noun

In their simplest form, Northern Mao nouns are made up of a root plus the terminal vowel /-e/ (in citation form) and a surface tone melody which corresponds to one of the nine noun tone classes: H1, M, L, HL1, MH, ML, H2, HL2 and LH (cf. section 3.3.1). This definition includes infinitive verb forms and other deverbal nouns (e.g. action and participant nominalizations and relativizations of verbs). Prototypical nouns in Northern Mao carry the terminal vowel, can be marked for number (singular /-Ø/, dual /-kuw/ or plural /-(w)ol/), and can be possessed. Within this broad category of nouns, morphological and distributional behaviors serve to distinguish count, mass and relational noun classes.

4.2. Inflectional Morphology

There is remarkably little inflectional morphology on nouns in Northern Mao. The two most productive morphological forms are the terminal vowel and number markers.

4.2.1. The Terminal Vowel

Nouns and other nominals (such as pronouns, demonstratives, the definite article and relativized verbs),⁸⁵ carry a final /-e/ vowel in citation form. Native speakers appear to have a sense that all nominals ought to be cited with a terminal vowel in lexical form. This applies even to proper nouns as well as loanwords: /jàsínè/ ‘Yasin’ an Arabic boy’s name, /ìsilámé/ ‘Islam’, and /sù:k’é/ ‘store/shop’, from Amharic /suk’/. None of these loanwords include a final vowel in their source languages.

Example (4.1) provides three nouns in citation form, each with their terminal vowel and the tone which it receives from the noun stem (L, M or H).

Nouns in Citation Form			
(4.1)	es-è	p’iʃ-e	kan-é
	person-TV	child-TV	dog-TV
	‘person’	‘child’	‘dog’

The final /-e/ vowel is underlyingly toneless itself and receives its surface tone from the noun stem, as per the noun tone classes (cf. section 3.2.3). Example (4.2) includes three examples of nominals which are not prototypical nouns but which exhibit the terminal vowel.

⁸⁵ While demonstratives can be said to be nominal, due to their shared structural similarities with nouns (i.e. their ability to carry the terminal vowel, take number inflection and case markers in relevant functions), their distributional behavior and syntactic function warrant their distinct treatment in an independent chapter (Chapter VI).

Other Nominals in Citation Form

	Pronoun	Demonstrative	Relativized Verb
(4.2)	íʃ-è	jéʃ-é	mí-bi-t-è
	3SG-TV	DIST-TV	eat-NPST:AUX-REL-TV
	‘S/he’	‘that’	‘who is eating’

In Northern Mao, the terminal vowel is only rarely found in connected speech (section 2.3.2). For instance, the terminal vowel is not found on nominals or nouns when they modify other nouns (cf. section 4.4). In fact, apart from citation examples, the terminal vowel is generally found only on head nouns of noun phrases when they occur at the end of an utterance-final noun phrase or at the end of a main clause (cf. section 8.2). Thus, I analyze Northern Mao’s terminal vowel as a phrasal affix. As the citation context is essentially a short utterance, the terminal vowel is found there as well. Apart from the contexts identified here, the terminal vowel is not found (cf. the noun modification constructions in section 4.4).⁸⁶ The distribution of the terminal vowel is discussed as a phrasal affix in section 8.2. For readability purposes, I do not break the terminal vowel off when citing a noun or nominal within the English text, but do break it off when presenting interlinearized examples; the formative is glossed as TV.

4.2.2. Number Marking

Number marking on nouns includes: singular /-Ø/, dual /-kuw/ and plural /-(w)ol/.⁸⁷ Nouns tend to agree with the number (SG, DU or PL) of the numerals or

⁸⁶ There is one exception: the equative comparative construction. I discuss the occurrence of the terminal vowel in this construction in section 8.2.

⁸⁷ Incidentally, the tonal patterns of the dual and plural nominal suffixes suggests that each is derived from a H1 class noun; this is apparent since both suffixes are always MM when suffixed to a noun (a tonal pattern elsewhere observed only on modified H1 nouns). Perhaps these suffixes were grammaticalized through a historical noun-noun compound.

quantifiers which modify them (exs. 4.3-4.4, below). But, I have a few examples in texts where quantifiers which clearly reference more than one entity modify a noun which does not carry a dual or plural suffix (4.5 and 4.6).

- (4.3) numb-és-kuw-e
two-person-DU-TV
'two people'
- (4.4) gjá:-és-ol-e
many-person-PL-TV
'many people'
- (4.5) túŋkúl-és-ìʃ kà:l-là ha-mí-^lá
every-person-SBJ porridge-OBJ AFF-eat-DECL
'Everybody ate porridge.'
- (4.6) gjá:-màw-es-ìʃ biʃ-wá
many-Mao-person-SBJ EXIST:INF-NEG:NF
'There are not many Mao people...'

Grammatical agreement in number (but not semantic, see below) is obligatory between nouns and their predicate verbs (4.7-4.9); lack of agreement in number renders the utterance ungrammatical (4.10-4.12). Interestingly, verbs do not distinguish between dual and plural in the 3rd person; when a 3rd person subject is marked as dual or plural (e.g. on nouns or pronouns), the verb carries the non-singular (NSG) suffix /-and/ (compare 4.8 and 4.9).

- (4.7) es-ìʃ ha-bíʃ-^lá
person-SBJ AFF-EXIST-DECL
'There is a person.'

(4.8) es-kuw-ij ha-bíj-and-á
person-DU-SBJ AFF-EXIST-NSG-DECL
'There are two people.'

(4.9) es-ol-ij ha-bíj-and-á
person-PL-SBJ AFF-EXIST-NSG-DECL
'There are people.'

(4.10) *es-kuw-ij ha-bíj-[↓]á
person-DU-SBJ AFF-EXIST-DECL

(4.11) *es-ol-ij ha-bíj-[↓]á
person-PL-SBJ AFF-be.present-DECL

(4.12) *es-ij ha-bíj-and-á
person-SBJ AFF-EXIST-NSG-DECL

It is clear from examples (4.5) and (4.6), above, that the verb agrees grammatically with the marking on the noun and not the semantics indicated by the quantifier which modifies the noun. So, in (4.5), while the subject clearly involves multiple entities ('everybody'), the verb is marked as singular in agreement with the noun.

In Northern Mao, it is possible to use the singular (unmarked) noun in a general sense to reference entities which are clearly plural but in contexts where number is either obvious from context (4.13 and 4.14) or not particularly relevant (4.15). In these cases, as in the examples above, the noun and verb must be in agreement as to overt number marking.

(4.13) mùts'á mádò-t màw-kjat'-ij ha-bíj-[↓]á
Muts'a Mado-LOC Mao-house-SBJ AFF-EXIST-DECL
'There are Mao houses in Muts'a Mado.'

(4.14) màw-és-ìf nà-àt ha-kòw-á
 Mao-person-SBJ here-LOC AFF-live/sit-DECL
 ‘Mao people live here.’

(4.15) nogdów-nà tí-int’-ti-á
 lion-OBJ 1SG-see-PF-DECL
 ‘I have seen lions.’

In examples (4.13) and (4.14), the context itself showed the meaning to be clearly plural. Examples (4.13) and (4.14) were offered during a discussion of where the majority of the Mao people live, and, as mentioned in Chapter I, Muts’a Mado is an area with very likely the highest concentration of Northern Mao speakers. In (4.15), the speaker was reporting having seen lions (not a specific lion) before.

Corbett, in his typological examination of number marking systems, notes, “...there are many languages in which general meaning is widely expressed, but by means of a form used also for one of the more restricted number meanings” (2000:13). In the cases where the singular is used in a general (i.e. vague) sense, Corbett uses the term singular/general and illustrates the system with a tree diagram, encircling both general and singular. To this tree, the dual and plural can be added further below, off a non-singular (i.e. non-restricted) node (as in Fig. 4.1, below).

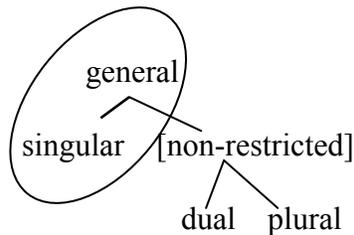


Figure 4.1. The Northern Mao Nominal Number System

The representation in Figure 4.1 captures the following generalizations: Northern Mao nominals can be marked singular, dual or plural; the singular marking can also be used as a ‘general number’ (using Corbett’s 2000 terminology) when number is either clearly established by context or not particularly relevant. Incidentally, a similar system (without dual) obtains for Amharic, where nominals without plural marking can be used to reference plural entities (Corbett 2000:15).

The vast majority of nouns in Northern Mao can take number marking and may thus be considered ‘count’ nouns. There are also a few mass nouns like /ki:me/ ‘money’, /ʃáwè/ ‘sand’, /ha:ts’è/ ‘water’ and /ma:re/ ‘grass/bush’;⁸⁸ these don’t take number marking in their prototypical usages. In some particular contexts, however, mass nouns can function like count nouns and make use of number marking. This is true for ‘water’, for instance (in a manner similar to English).

- (4.16) ha:ts’-ol-ij ha-bíʃ-and-á
 water-PL-SBJ AFF-EXIST-NSG-DECL
 ‘There are two waters.’
 (attested in reference to water partitioned in buckets or glasses)

In section 4.2, we examined the inflectional morphology which nouns may carry. These suffixes help define the class *noun* in Northern Mao. Nouns can also be defined by their behavior and syntactic distribution; this is addressed in sections 4.3 and 4.4.

4.3. The Noun Construct Form

As mentioned previously (in section 2.5.3) and illustrated in sections 3.3 and 3.3.1, nouns in Northern Mao exhibit different tonal melodies when they are preceded by

⁸⁸ This sense of ‘bush’ is undeveloped wild land, as in ‘wilderness’.

a modifier. When modified, a head noun's citation tonal melody (corresponding to one of the nine noun tone classes) reduces to one of three melodies: MM, ML and LL (cf. section 3.3.1), depending on its tone class. As illustrated in section 3.3.1, the changes in tonal melody are lexically determined (today) and are not the result of the tonal environment of the noun.⁸⁹

In (4.17), the two nouns /kase/ 'hoe' and /kúsé/ 'hand' serve as unmodified head nouns, as the subject and object noun phrases of the clause, respectively. Each noun exhibits its citation tone melody.

(4.17) kas-íʃ kús-ná ha-héz-á
 hoe-SBJ hand-OBJ AFF-hit-DECL
 'A hoe hit a hand.'

In (4.18), however, each of the head nouns is modified and exhibits a different tonal melody from the citation form: the M-toned /kase/ becomes ML and the H-toned /kúsé/ becomes M (cf. section 3.3.1). I call this special form, which head nouns take when they are modified, the construct form (keeping with Creissels 2009a, discussed below). I call the tonal melody, which marks these nouns as construct forms, the construct noun melody.

(4.18) íʃ kas-íʃ íʃ kus-na ha-héz-á
 DEF hoe-SBJ DEF hand-OBJ AFF-hit-DECL
 'The hoe hit the hand.'

The point here is two-fold: these head nouns take the construct form only when

⁸⁹ There is evidence, though, that downstep was one of the processes which led to the formation of these construct melodies (cf. section 3.3)

they are syntactically modified (as in 4.18 and not in 4.17) and the changes in tone are not the result of the modifier's tone, as both nouns are modified by a H tone. The construct form's melody for a particular noun tone class is constant, regardless of the tone of the modifier (section 3.3.1).

Creissels (2009a) notes that while the construct form (or 'construct state') has been discussed in reference to Semitic languages for many years, the phenomenon is found in other Afroasiatic (Chadic and Cushitic) language families as well as in Nilotic and various branches of Niger-Congo languages. He notes specifically that construct forms are "widely acknowledged" in East Africa (2009a:77). Creissels defines the construct form as follows,

My proposal is to use the term of construct form as a general label for noun forms that are obligatory in combination with certain types of noun dependents and cannot be analyzed as instances of cross-referencing in the genitive construction (2009a:74).

According to Creissel's definition, construct forms are not cases, though they are "conditioned by the syntactic status of nouns" (2009a:74). In Northern Mao, the syntactic environment which results in the construct form is modification. Creissels notes that while

...case encodes the role of NPs as elements of broader constructions, irrespective of their internal structure... construct forms encode information on the internal structure of NPs (2009a:74).

Of course, one can argue that genitive case also encodes a relationship between elements of a noun phrase (albeit a complex noun phrase); however, genitive case is a dependent marking phenomenon while construct forms are head marking.

In section 4.4, four different noun modification constructions are discussed.

Regardless of the nature of the modifier (another noun which is phonologically joined to its head, a full genitive or possessive NP, a demonstrative or definite article), the modified head noun is found in its construct form, though in some cases additional tonal changes do apply to the construct tonal melody, as in the associative construction (section 4.4.1) and the genitive construction (section 4.4.2.2).

4.4. The Noun Modification Constructions

While the structure of Northern Mao noun phrases is the subject of section 8.1, the syntactic structures by which nouns can be modified are relevant to this chapter as they provide insight into the syntactic distribution and behavior of nouns.

Nouns can be modified through one of four noun modification constructions. These noun modification constructions include the associative construction, the attributive construction, the genitive construction (a subset of the attributive construction), and the possessive construction. Only the simplest forms (i.e. minimal expressions of constituency) of these constructions are included in Table 4.1, for the purpose of providing tests for nounhood.⁹⁰

⁹⁰ In section 8.1, I demonstrate that the attributive construction may include multiple elements in a clearly specified order. When there are multiple modifiers in the attributive construction, the first position is reserved for demonstratives, the definite article or genitive NPs--these, we may call determiners. After the determiners, numerals and then relativized verbs are found. In the minimal expression of the attributive construction, any one of these modifiers may precede the head noun (Table 4.1). For our purposes here (section 4.4), however, where we look only at noun modification, the structure of noun phrases with more than two elements is not relevant.

Table 4.1. Simple Noun Modification Constructions as Tests for Nounhood

	Modifying Construction	Example	Minimal Expressions of the Constructions
Produces Noun Phrases	Associative	kús-kás-è hand-hoe-TV 'hand-hoe'	N-N Numeral-N Quantifier-N Numeral-Numeral
	Attributive	jéf kas-è that hoe-TV 'that hoe'	Definite Article + N Demonstrative + N Numeral + N Relative Clause + N NP _{GEN} + N Pronoun _{GEN} + N Numeral _{GEN} + N } Genitive Construction
Produces Nouns	Possessive	es kas-è person hoe-TV 'person's hoe'	NP [+ animate] + N Pronoun + N

All of the noun modification constructions in Table 4.1 involve an element (either a noun, noun phrase, infinitive (nominal) verb form, numeral, pronoun, determiner or relative clause) preceding a noun.⁹¹ The final (i.e. head) noun can be a prototypical noun, an infinitive (nominal) verb form or a relational noun (discussed in section 4.5).⁹² The minimal constituent structures of each of these constructions are provided in the rightmost column of Table 4.1. The modified head nouns (or in the case of the associative construction, nouns or numerals) take the expected construct noun form (cf. section 4.3).

As noted in the left-most column of Table 4.1, the associative construction produces nouns (or numerals), not noun phrases. I use a hyphen to show that the modifier is phonologically bound to its head in the associative. In the attributive and possessive constructions, however, the constructions produce noun phrases. In these cases, I use a plus (+) to indicate that the modifier is not bound to its head.

⁹¹ And in the case of the associative construction, numerals may serve as heads, as well (modified by other numerals) (cf. section 4.4.1).

⁹² I do not gloss relational nouns distinct from other nouns. They are not derived (as are infinitive forms and other deverbal nouns).

4.4.1. The Associative Construction

The associative construction joins two elements (e.g. noun-noun, numeral-noun, quantifier-noun and numeral-numeral)⁹³ together in a modifier-head relationship; as noted above, the two elements are phonologically bound. The tone of the modified element actually receives a H tone where the M₂ tone would otherwise be expected; cf. the lengthy discussion of the associative tone behavior in section 3.3.2. As noted in the three accounts of H tone in the associative construction, it is not clear if this should be treated as H Spread plus H Insertion (section 3.3.2.1), as a historical relic of an older construct noun melody (section 3.3.2.2), or as a H tone morpheme which marks the associative construction itself (section 3.3.2.3).

As noted in section 3.3.2.3, Northern Mao's associative construction is similar to what are called associative constructions in many Niger-Congo languages (Welmers 1974:277ff). One function of the Niger-Congo associative constructions is to allow a noun to function as a modifier of other nouns, especially in languages which do not have an adjective class, such as Lonkundo (Welmers 1974:277). Northern Mao's associative construction functions in this way; there is no grammatical category of adjectives (cf. section 4.7, below). It appears that essentially any two nominals⁹⁴ can be combined where

⁹³ As is clear from the rightmost column of Table 4.1, nouns, and numerals as well, may be modified using the associative constructions. This is not to say that numerals are exactly nouns, as they don't entirely fit the morphological definition of prototypical nouns given in section 4.1. First, numerals do not carry the terminal vowel /e/; rather the vowels /u/, /e/, /i/, or /o/ can be found finally on numerals, and these are lost only when a following noun begins with a vowel, and then, only when the numeral is found in the associative construction, not in the attributive construction (cf. Chapter VII). Numerals do, for the most part, exhibit tonal melodies that fit within the noun tone classes (cf. section 7.1). Also, when used pronominally, numerals can take number marking as well as case marking (cf. section 7.1.3.2).

⁹⁴ I use the term *nominal* here to include the various structures identified in row one of Table 4.1.

the first modifies the second, exhibiting a wide range of semantic relationships. These semantic modification types include, among others: age, dimension, value, color, quantity, function, place of use or place of origin. In some instances, particular instantiations of associative constructions have become lexicalized and exhibit conventionalized semantics (4.19).⁹⁵ In other cases, the associative construction adds little or nothing in the way of semantics to noun-noun collocation (4.20).

	Associative Construction	Genitive Construction
(4.19)	k'éts'-és-è	k'éts'-íη ↓es-è
	land-person-TV	land-GEN person-TV
	'landowner'	'person of the land/area'
		(i.e. a local person)

	Associative Construction	Genitive Construction
(4.20)	kús-kás-è	kús-íη ↓kas-è
	hand-hoe-TV	hand-GEN hoe-TV
	'hand-hoe'	'hoe of the hand'

For associative constructions with conventionalized meanings like 4.19, I reserve the term *compound* (cf. the discussion of compounding in section 4.6.1, below).

Regardless of whether a particular associative construction exhibits conventionalized meaning or not, all elements in the associative construction are phonologically bound to one another, as evidenced by the associative construction's syntactic distribution and

⁹⁵ Rapold notes that in Benchnon (Omotic-Gimira) the genitive construction serves to disambiguate those constructs which are lexicalized from those which are not (2006:211). This also obtains for Northern Mao. In (4.19) and (4.20) the associative constructions are restated with a genitive construction (to the right). It is clear that the associative construction in (4.19) is lexicalized while the construction in (4.20) is not more than the sum of its parts and may not be lexicalized.

behavior, the lack of number marking on the first element in the construction and the absence of downstep on the second element when the first element is a member of the HL noun tone class. Each of these properties is now discussed in turn.

First, as noted above, the associative construction forms a new noun which may or may not exhibit lexicalized semantics. These nouns are themselves syntactically substitutable with nouns in the noun-modification constructions, including larger associative constructions themselves. In the data below, the associative constructions are bracketed to highlight their structure and syntactic distribution.

In (4.21), the associative construction ‘hand-hoe’ (from row 1 of Table 4.1) joins the relational noun ‘way’ (bolded, below) in a larger associative construction. The entire resulting phrase is then marked with the marker of goal /-na/ OBJ.⁹⁶

Associative in Associative Construction (with relational noun)

(4.21) [[kús-kás]-**fál**]-nà ha-jé:ts’-’á
hand-hoe-way-OBJ AFF-run-DECL
‘S/he ran to the hand-hoe.’

In (4.22), the noun ‘sun’ is formed by an associative construction with ‘day/God’ and ‘head’. This noun can be joined with the infinitive verb stem /pòn/ ‘go out’ to form the noun ‘sunrise’ (4.23). In (4.24), the noun ‘sunrise’ joins the noun /falè/ ‘way’ (the source of the relational noun in 4.21, above) in an associative construction which means ‘East’. In this function, the noun /falè/ does not function as a relational noun.

⁹⁶ See section 8.3.4 for a discussion of the /-na/ object case marker and its role as a marker of semantic goals.

(4.22) [aw-to:k]-è
day/God-head-TV
'sun'

(4.23) [[aw-to:k]-pòn]-è
day/God-head-go.out:INF-TV
'sunrise'

(4.24) [[[aw-to:k]-pòn]-fal]-è
day/God-head-go.out:INF-way-TV
'east'

In (4.25-4.27) the noun formed in (4.21) occurs as the head noun in the genitive, possessive and (non-genitive) attributive constructions, respectively.

Associative within the Genitive Construction

(4.25) tí-ŋ ʰkus-kas-è
1SG-GEN hand-hoe-TV
'my hand-hoe'

Associative within the Possessive Construction

(4.26) es kus-kas-è
person hand-hoe-TV
'person's hand-hoe'

Associative within the Attributive Construction

(4.27) kè̃m-ít ʰkus-kas-è
be.big:INF-REL hand-hoe-TV
'big hand-hoe'

The syntactic distribution of the associative constructions above is identical to the distribution of simple nouns in all the noun-modification constructions (Table 4.1). That is, while the associative construction is highly productive and frequently does not

produce nouns with conventionalized meaning (i.e. nouns which must be in the lexicon themselves), the resulting constructions are themselves syntactically nouns. (We will see that the attributive and its genitive subset and the possessive constructions, on the other hand, do not form new nouns; these constructions are not substitutable with nouns.)

Additional evidence that the associative construction produces a syntactic noun is found in the distribution of morphology, namely, number marking and the terminal vowel. Inflectional noun morphology is relegated to the right edge of the constructions. That is, it is not possible to add number marking to the first noun element in an associative construction (4.28), but it is certainly possible to pluralize the resulting complex noun by suffixing number marking at the right edge of the construction (4.29).

(4.28) *k'êts'-ol-es-è
 land-PL-person-TV
 intended: 'owner of many lands'⁹⁷

(4.29) [k'êts'-és]-ol-e
 land-person-PL-TV
 'landowners'

As noted in section 3.2.1, nouns with a HL melody produce a downstep when they precede another noun in the possessive construction (cf. example 4.30, below). The downstep is not part of the possessive construction *per se*; it is predictable only by the melody of the first noun (cf. row 3 of Table 4.1, where no downstep follows the noun /es-è/ which carries a ML melody in the possessive construction). Within the associative

⁹⁷ The noun 'land' can certainly be pluralized in Northern Mao: /k'êts'-ol-e/ land-PL-TV, as in /gjà: k'êts'-ol-na tí-àld-á/ many land-PL-OBJ 1SG-know-DECL 'I've been lots of places' (literally: 'I know many lands.').

construction, however, downstep never occurs--even if the first noun element has a lexical HL melody (4.31).

(4.30) ób ↓es-e (/óbè/ ‘brother’ + /esè/ ‘person’)
brother person-TV
‘brother’s person’

(4.31) pák-es-è (/pákè/ ‘injera’ + /esè/ ‘person’)
injera-person-TV
‘person who makes or sells injera’

The absence of downstep within the associative construction may be due to a H tone left over from an old associative marker which may have been present between the two nouns and which today blocks downstep as well as serves as the source for the H tone which shows up on construct noun forms that normally begin with a M₂ tone (cf. section 3.3.2.3).

4.4.2. The Attributive Construction

While the associative construction (section 4.4.1) phonologically joins the modifier to the head, the attributive construction involves phonologically free modifiers which precede the head. There is no particular tonal pattern which marks the attributive construction (as there is with the associative construction). The head noun is in its construct form and modifying elements do downstep those which follow, when the triggering environments are met (cf. section 3.2.1).

In the attributive construction nouns may be modified by either a determiner (i.e. the definite marker, a demonstrative, or an NP_{GEN}, cf. section 8.1), a numeral or a relative clause. This construction provides one of the best syntactic tests for nounhood as essentially any noun, and only syntactic nouns, can be modified by at least one of these

elements. Only the simplest instantiations of the attributive construction are provided in Table 4.1; it is possible, although not frequently attested in my texts, to include multiple attributive modifiers in a noun phrase (cf. section 8.1). The order of these attributive modifiers is determiner + numeral + relative clause + noun, where the determiner may be either the demonstrative, definite article or a genitive NP (cf. section 8.1). The three modifiers in the attributive construction which take the genitive case marker form the genitive construction (section 4.4.2.2). I will first illustrate the (non-genitive) general attributive construction.

4.4.2.1. The General Attributive Construction

An example with a determiner (in this case, a demonstrative) modifier in the attributive construction is provided in row 2 of Table 4.1. Examples with the definite article can be found below (4.32-4.33) as well as in section 6.2. An example with a relative clause modifier in the attributive construction is provided in (4.27), above. Numerals in the attributive construction (as opposed to numerals in the associative construction) are discussed in section 7.1.3.1.

As noted for the associative construction above, it is possible to combine various constructions in a single noun phrase. The attributive construction (in Table 4.1) is commonly used in texts (especially with determiners) with the other noun modification constructions, where the determiner is the first element in the noun phrase. Northern Mao's determiners include the definite article /ɨ́é/ as well as the proximal /nàʔé/, distal /jé́f/ and extra distal /gjetf/ demonstratives in an adnominal function (cf. section 6.1.1.1, 6.1.2.1 and 6.2). While the definite article and the adnominal demonstratives pattern the

same, the definite article does not indicate a spatial relation between the speaker and the referent. While it may be possible, I have not yet encountered demonstratives exhibiting clear metaphoric extension where they do not refer to a spatial relationship.

Essentially, the definite article is used when a noun is readily identifiable through an earlier mention in discourse (as in 4.32) or when the speaker assumes something is identifiable to the hearer (4.33).

(4.32) **kas** wos-kí-in hí-tà-áʃ
 hoe take-come-SS:NF 3SG-give-DS:NF

íʃ **kas-àn** íʃ-ìŋ-ná húz-tà-tit-ín
 DEF hoe-INSTR 3SG-GEN-OBJ farm-APPL-PF-SS:NF

‘He (Al Hassan) brought a hoe and gave it (to them), and they farmed his (land) with the hoe (for him)...’

(The Story of Al Hassan, text 05.50-51)

The first mention of ‘hoe’ in the text is in the first line of (4.32). After it is mentioned, then it becomes identifiable (but with no spatial relation identified) and receives the definite marker. In (4.33), below, the first mention of /púwé/ ‘beer’ in the text is marked as definite. This is because those present, listening to the story were already aware that ‘beer’ is an important part of the mourning practice in Northern Mao. Interestingly, however, after ‘beer’ is introduced with the definite marker, the definite marker is absent on second mention of ‘beer’ which follows immediately.⁹⁸

⁹⁸ It is certainly clear that “spitting beer” is a well-known activity among the Northern Mao; perhaps the second usage of ‘beer’ is non-referential and is thus not marked as definite.

(4.33) mǎr-ki-in àlkàrám-nà go:l-ín
 grab-TOWARD-SS:NF sacrificial.animal-OBJ slaughter-SS:NF

íʃ pùw-nà máʃ-in púw-ná ts'ur-ín
 DEF beer-OBJ brew-SS:NF beer-OBJ spit-SS:NF

íʃ ʰto:k-èt ha-hów-and-á
 3SG head-LOC AFF-go-NSG-DECL

‘They bring a sacrificial animal, slaughter it, brew the beer, spit beer and then go to his (a recently deceased man) grave.’

(Funeral Practices, text 13.12)

4.4.2.2. The Genitive Construction

The genitive construction (a subset of the attributive construction)⁹⁹ is indicated by the /-(i)ŋ/ GEN case marker on the first element (a semantic possessor) of the construction.¹⁰⁰ This first element is a noun phrase which could include a noun or a numeral or simply be replaced by a pronoun. Unlike the possessive construction (row 3 of Table 4.1), the first element does not need to be animate in the genitive construction and does not need to be immediately adjacent to the head noun (4.34). When numerals are used in the genitive construction, the numeral is interpreted as an ordinal (4.35).

(4.34) kʃat'-ìŋ go:k-ìʃ nók-wé-jà
 house-GEN roof.frame-SBJ be.good:INF-NEG-N.FUT:AUX
 ‘The house’s roof-frame is not good (not well-made).’

⁹⁹ In section 8.1, where we examine constituency and ordering in Northern Mao noun phrases, I demonstrate why the genitive construction is best analyzed as a subset of the attributive construction. The genitive NP functions like a syntactic determiner and is positioned always as the first element of a noun phrase, in the same position as demonstratives and the definite article. But for our purposes, here, the fact that the genitive construction involves a phrasal determiner with a genitive case marker at the right edge warrants its treatment as an identifiable subset of the attributive.

¹⁰⁰ There is a floating L tone at the right edge of genitive case marker which produces downstep in the expected environments (cf. section 3.2.1).

(4.35) te:z-ìŋ es-ìf ha-kí-[↓]á
 three-GEN person-SBJ AFF-come-DECL
 ‘The third person came.’

Example (4.36) illustrates a more complex noun phrase (bracketed) in the genitive construction. Only the numeral examples, as in (4.35), are not clearly noun phrases. Apart from these ordinals, however, all instantiations of the genitive construction involve a noun phrase. Most typically, though, in Northern Mao discourse, the noun phrase is very simple, consisting of only one to two words. Examples like (4.36) are rarer but entirely grammatical.

(4.36) [nà kè̃m-ìt es]-ìŋ p’ìf-ìf
 this be.big:INF-REL person-GEN child-SBJ

 àsós-fàl hów-j-[↓]á
 Asosa-way go-AWAY-DECL
 ‘This elder’s (literally, ‘big person’) child went to Asosa.’

4.4.3. The Possessive Construction

The possessive construction (row 3 of Table 4.1) appears to be similar in structure to the attributive construction (row 2 of Table 4.1). As we will see in section 8.1, however, this is not the case. Important distinctions include 1) the possessive construction requires either an animate noun in the first noun phrase (as in row 3 of Table 4.1) or a pronoun (as in 4.37, below) in the first position; and 2) the semantic relationship between the elements is possessor-possessum. And perhaps most importantly, the noun phrase which serves as the possessor must be immediately adjacent to the head noun (possessum). This is not the case for the attributive construction (section 8.1).

While the genitive construction (section 4.4.2.2, above) can take a wide variety of

noun phrases (including nouns, pronouns or numerals) in the first position, the possessive construction exhibits a much stronger selectional restriction requiring animacy and most typically humanness, presumably because there is no additional marking in the possessive construction which could be used to disambiguate it from the attributive construction.

Possessive Construction	Genitive Construction
(4.37) tí kas-è	tí -ŋ ʰkas-è
1SG hoe-TV	1SG-GEN hoe-TV
‘my hoe’	‘my hoe’

4.5. The Relational Noun Class

Relational nouns are nouns which add locational specificity to adpositional constructions (Starosta 1985:116) and which are in a syntactico-semantic process of change toward more grammaticalization. Northern Mao has a small set of nouns which function in this way, though the structure in which they occur appears to be somewhat unusual, typologically.

Cross-linguistically, relational nouns tend to serve as a link between a noun phrase and an adposition (Lehmann 1985:304). In Northern Mao, however, relational nouns attach to nouns as part of an associative construction. They are not linked to a noun phrase through the language’s genitive or possessive construction (Table 4.1). Relational nouns are simply compounded as the N₂ in an associative construction. The resulting associative construct noun (made up of a [noun + relational noun]) then serves as the head noun of a noun phrase; a postposition may attach to this noun phrase. Thus, rather than a structure like ‘on [top [of [the big house]]]’ where ‘top’ specifies a location on ‘the big house’, the Northern Mao structure is more like ‘[the big [house-top]] on’. It appears

that modifiers for ‘house’ in such an example must modify the associative construction (the noun + relational noun) as a whole, just as occurs with other associative constructions (section 4.4.1).

In (4.38), the relational noun /-sis/ ‘inside’ is joined to the noun /kjat’è/ ‘house’ and followed by the locative postposition. The associative construction is bracketed.

- (4.38) p’iʃ-iʃ [kjat’-sis]-et ha-mí-[↓]á
 child-SBJ house-**inside**-LOC AFF-eat-DECL
 ‘A child ate inside a house.’

In Baye Yimam’s analysis, the form /sis/ is treated as an independent (phonologically free) postpositional element (2006:187-188).

When more complicated noun phrases are involved, this same associative construction is found, though embedded in and serving as the head noun of larger constructions as in (4.39), for instance. Together, the determiner and the noun (i.e. the associative construction) form a noun phrase which is then followed by the locative postposition.

- (4.39) máʃ-iʃ hambèl-là púw-ét hí-já:ʃ-iʃ
 be.drunk:INF-SBJ 1PL-OBJ beer-LOC 3SG-trap-DS:NF

[iʃ [ja:ʃ-sis]]-et ha-k’ùt’-ín
 DEF trap-**inside**-LOC AFF-enter-SS:NF

ha-hék’-gà-m-ná
 AFF-die-FUT-3-NPST:AUX

‘Drunkenness traps us in beer; he (a drinker) enters the inside of the trap and dies.’ (text 22.15)

In (4.40), the associative construction, formed with the noun ‘abdomen’ and relational noun ‘inside’, serves as the N₂ of a possessive construction which is, in turn, embedded in a larger possessive construction. The postposition follows this larger possessive construction, as shown by the brackets.

(4.40) [íʃ [ʰnok [til-sis]]]-et àld-ín
 3SG mother abdomen-**inside**-LOC know-SS:NF

pón-kí-wé-jà
 go.out:INF-TOWARD-NEG-NFUT:AUX
 ‘He didn’t come out from inside his mother’s abdomen knowing anything.’
 (literally: ‘from his mother’s abdomen-inside’)
 (text 22.06)

In each of these instances, the associative construction, in which the relational noun is found, exhibits the syntactic distribution of Northern Mao nouns.

Common relational nouns are provided in Table 4.2.

Table 4.2. Northern Mao Relational Nouns

Relational Nouns	Gloss
ʃalè	‘way’
ʃupè	‘bottom’
kezè	‘top’
ga:bè	‘place’
sísé	‘inside’
pólé	‘outside’

Of these, only /ga:bè/ ‘place’ has been found pluralized in natural speech. But given the semantics of the other relational nouns, this is not much of a surprise.

These relational nouns are analyzed as a distinct subset of nouns on the grounds

that 1) each can occur as a noun in a non-relational function (see exs. 4.41-4.43, below); 2) when they occur in a relational function, they are limited just to the N₂ slot of the associative construction and may be followed immediately by a postposition; and 3) they are frequently found within larger locative and movement predications.

Examples (4.41-4.44) illustrate three of these nouns in a non-relational, prototypically nominal function. In (4.41), the noun /ga:bè/ ‘place’ occurs in the attributive construction (not the associative construction) and carries the object case marker.

- (4.41) íʃ ga:b-nà ha-tí-àld-á
 DEF place-OBJ AFF-1SG-know-DECL
 ‘I know the place/area.’

In (4.42), the noun /ʃalè/ ‘way’ serves as the head noun of the genitive construction and carries the subject case marker; and in (4.43), the noun /pólé/ ‘outside’ carries the goal (object case) marker /-na/ (cf. section 8.3.4 for a discussion on the marking of goals).

- (4.42) múts’-ìŋ ʃal-ìʃ ha-pá:l-á
 Muts’a-GEN way-SBJ AFF-be.difficult-DECL
 ‘The way to Muts’a (Mado) is difficult.’

- (4.43) ʃó:ʃ-ná int’-ín pól-ná jé:ts’-á
 snake-OBJ see-SS:NF outside-OBJ run-DECL
 ‘S/he saw a snake and ran outside.’

In (4.44), the noun /kezè/ ‘top’, which can function as a relational noun (cf. Table 4.1 and example 4.46, below), serves as the N₁ of an associative construction. In this case, /kezè/ serves as a noun which joins a relational noun /ʃalè/ ‘way’ in this postposition

construction. In (4.44), /kezè/ is not a relational noun.

- (4.44) íʃ es-wol-ìʃ kez-ʃal-nà ha-hów-j-and-á
DEF person-PL-SBJ top-way-OBJ AFF-go-away-NSG-DECL
‘The people went to the top.’

Not all postpositional constructions include relational nouns. In (4.45), for instance, only the locative/source postposition /-et(a)/¹⁰¹ is used; there is no relational noun. As a result, the location communicated is only very general.

- (4.45) ʃów-ìʃ kʃat'-èta
stone-SBJ house-LOC
‘A stone is at the house.’

When greater locational specificity is called for, relational nouns are used. The locative predication (in 4.45) and those below (4.46-4.49) are formed with the copular construction and does not include a copular verb when the temporal meaning is present time (section 11.1.2.2).

- (4.46) ʃów-ìʃ kʃat'-kez-èta
stone-SBJ house-top-LOC
‘A stone is on the house.’
(literally: ‘at house-top’)

¹⁰¹ The final [a] vowel on /-et(a)/ appears only when the locative postposition is utterance-final (see example 4.33), as is the case with the terminal vowel on nominals (section 8.2). While the terminal vowel on nominals is normally [e] with optional assimilation to [a] following stems with [a] vowels, the vowel which follows the locative marker is always [a] and is thus not parsed off as the final vowel but left as part of the locative suffix itself.

(4.47) ʃów-ìʃ kjat'-ga:b-ètà
stone-SBJ house-place-LOC
'A stone is next to the house.'
(literally: 'at house-place')

(4.48) ʃów-ìʃ kjat'-sis-età
stone-SBJ house-inside-LOC
'A stone is inside the house.'
(literally: 'at house-inside')

Postpositional constructions involving location (4.49-4.55) or movement (4.50 and 4.51) almost always include relational nouns. These examples illustrate the greater locational specificity achieved through the use of the relational nouns.

(4.49) ʃów-ìʃ kjat'-ʃup-ètà
stone-SBJ house-bottom-LOC
'A stone is under the house.'
(literally: 'at house-bottom')

In cases of movement, the relational noun 'way' is used, followed often by either the /-et(a)/ postposition for identifying a source, or the /-na/ marker for identifying goal.

(4.50) es-ìʃ kjat'-ʃal-èt ha-kí-^lá
person-SBJ house-way-LOC AFF-come-DECL
'A man came from the house.'

(4.51) es-ìʃ kjat'-ʃal-nà ha-hów-j-^lá
person-SBJ house-way-OBJ AFF-go-away-DECL
'A man went to the house.'

Sometimes, however, speakers leave off the final postpositions and keep just the relational nouns in movement constructions (compare 4.52 and 4.53 with 4.54 and 4.55). It may be that examples like (4.52) and (4.53) show the beginning of a reanalysis of

relational nouns as postpositions themselves. It has been established that relational nouns are one of the sources for adpositional elements (Starosta 1985; DeLancey 2005:190).

(4.52) bàmbàs-ǰál ha-tí-kí-^lá
Bambassi-way AFF-1SG-come-DECL
'I came from Bambassi.'

(4.53) àsós-ǰàl ha-hów-j-^lá
Asosa-way AFF-go-away-DECL
'S/he went to Asosa.'

(4.54) bàmbàs-ǰál-et ha-tí-kí-^lá
Bambassi-way-LOC AFF-1SG-come-DECL
'I came from Bambassi.'

(4.55) àsós-ǰàl-nà ha-hów-j-^lá
Asosa-way-OBJ AFF-go-away-DECL
'S/he went to Asosa.'

4.6. Noun Stem Formation

At this point, we will leave the discussion of relator nouns and turn to the various ways in which nouns can be formed. New noun stems may be formed through a variety of processes including compounding and deverbal nominalizations; the latter include action nominalizations, relativization and participant nominalizations (e.g. agent, patient, instrumental and locative nominalizations).

4.6.1. Compounding

As noted in the discussion of the associative construction in section 4.4.1, I reserve the term *compound* for those associative constructions which exhibit a degree of conventionalized meaning (in particular, those associative constructions which cannot be

paraphrased with the genitive construction). In that previous discussion, we saw that the syntactic distribution and morphological behavior of the associative constructions show that these units are nouns themselves. All inflectional morphology is relegated to the right edge of the constructions (cf. examples 4.28 and 4.29, above).

The difference in meaning between the associative (4.56), the possessive (4.57) and the genitive (4.58) construction, where the same two noun stems are involved, shows that some associative constructions actually form new lexicalized nouns (i.e. are not merely compositional in meaning but which need to be stored in the lexicon, hence, unlike noun + relational noun associative constructions, for instance).

Associative Construction (which in this case has become a lexicalized compound)

- (4.56) p'iʃ-tíl-è
child-abdomen-TV
'pregnancy/womb'

Possessive Construction

- (4.57) p'iʃ til-è
child abdomen-TV
'child's abdomen'

Genitive Construction

- (4.58) p'iʃ-ìŋ til-è
child-GEN abdomen-TV
abdomen of a child'

The meaning of (4.56), the compound, is clearly conventionalized. The meaning of the same two nouns in the possessive and genitive constructions is merely a predictable function of the semantics of the nouns and the constructions in which they

occur. Other examples of frequently attested compounds are provided below.

(4.59) kwí:nt'-mìs-è
hair-thing-TV
'any domesticated animal (except chicken)'

(4.60) mé:ʃ-kját'-è
traditional.healer-house-TV
'home altar (traditional religion)'

(4.61) umbot'-jáp-è
rain-be.angry:INF-TV
'thunder'

4.6.2. Deverbal Nominalizations

New noun stems can also be formed through deverbalization derivational processes. As noted at the end of Chapter III (section 3.6), infinitive verb stems take one of the nine noun tone class melodies (while finite verb stems have either H, M or L tones). This phenomenon is utilized in various nominalizations, illustrated below. For instance, action nominalizations and simple headless relativized verbs (section 4.6.2.2) are frequently isomorphic to nominal infinitive verb stems and are able to take nominal morphology. Other participant nominalizations (section 4.6.2.3 for agent, patient, instrumental and locative) add 'suffixes'; in actuality, these suffixes are historically nouns themselves, which have been grammaticalized as derivational markers. All of the source nouns for these 'suffixes' are still functional nouns as well.

4.6.2.1. Action Nominalizations

Action nominalizations¹⁰² are nouns that refer to an action associated with a verb.

¹⁰² My analysis differs from Baye (2006:205); his "action nominals" which end with the vowel /-i/

Northern Mao action nominalizations may be formed with the infinitive verb stem or with the finite verb stem; in each case, the new noun stem can take nominal inflectional morphology, attesting to its new grammatical category.

In (4.62), we see the finite verb ‘run’; in (4.63) this verb is nominalized through the use of the infinitive verb stem.

(4.62) kwalla ha-tí-jé:ts’-^lá
yesterday AFF-1SG-run-DECL
‘I ran yesterday.’

(4.63) jè:ts’-nà ha-tí-ka:m-á
run:INF-OBJ AFF-1SG-love-DECL
‘I love running.’

In (4.63), the action noun serves as the object of the matrix clause. Action nominalizations can also serve as subjects of clauses (4.64).

(4.64) jè:ts’-iŋ ha-nok-á
run:INF-SBJ AFF-be.good-DECL
‘Running is good.’

Action nominalizations simply use the infinitive verb stem as a means of nominalization. It is possible, however, to use the finite verb stem with its verbal tone (i.e. what I’ve called the finite verb melody (section 3.6)). In (4.65), we have the finite matrix verb ‘hit’. In (4.66), the infinitive form serves as the action nominalization with subject case marking. These examples fit with what we have seen throughout this section.

are analyzed as imperatives in this grammar (section 10.4.3.1).

(4.65) tí-ʃ kan-ná ha-tí-héz-^lá finite matrix verb
 1SG-SBJ dog-OBJ AFF-1SG-hit-DECL
 ‘I hit a dog.’

(4.66) hez-íʃ nók-wé-jà infinitive verb stem
 hit:INF-SBJ be.good:INF-NEG-COP
 ‘Hitting is not good.’

In (4.67), however, the finite verb stem occurs with subject case marking. This construction *appears* to be very similar to the construction in (4.68).

(4.67) héz-íʃ nók-wé-jà finite verb stem
 hit-SBJ be.good:INF-NEG-COP
 ‘Hitting is not good.’

However, it may be that while there is no clear difference in meaning between (4.66) and (4.67), the underlying structures are distinct. Perhaps examples like (4.65), where the finite tone is found, are really nominalizations of a verb phrase (albeit a simple VP consisting only of a verb). Certainly, when there is an erstwhile object inside the nominalized phrase, the finite verb form is used exclusively (4.68). That is, the infinitive stem is not acceptable when the nominalization involves an entire verb phrase.

Subject Complement (nominalized verb phrase in brackets)

(4.68) [kan-ná héz]-íʃ nók-wé-jà
 dog-OBJ hit-SBJ be.good:INF-NEG-COP
 ‘Hitting a dog is not good.’

Nominalizations of phrases which can serve as complements of larger constructions are discussed in section 13.3.

Action nominalizations may be possessed, just like other nouns. In (4.69), the erstwhile verb (/ha-tàg-á/ AFF-argue-DECL, in citation form) is possessed by ‘brother’ in

the possessive construction (see section 4.4.3).

- (4.69) ób tàg-ìʃ ha-pá:l-↓á
brother argue:INF-SBJ AFF-be.difficult-DECL
'Brother's arguing is difficult.'

When an action nominalization is possessed, as in the genitive construction in (4.70), only the infinitive form is used.

- (4.70) ób-ìŋ tàg-nà ká:m-á-t-é:z-↓á
brother-GEN argue:INF-OBJ love:INF-NEG-1SG-AUX-DECL
'I don't like brother's arguing.'

I have no examples of number marking on action nominalizations. This is likely the result of the semantic nature of actions themselves, which may be more likely to serve as mass, rather than count nouns.

4.6.2.2. Relativization

Relativization is another nominalization process in Northern Mao. Relativization is discussed in detail in section 13.2; only a brief introduction to its use as a nominalization process is presented here.

As with action nominalizations (section 4.6.2.1), relativization can make use of both infinitive and finite verb stems, depending on the degree of finiteness of the nominalized verb phrase.¹⁰³ In those cases where the relativized verb includes subject markers or where the relativized element is more than the verb (i.e. the relativization of a clause), the finite verb stem is required. Whether finite or infinitive, the verb stem is

¹⁰³ Baye considers what I call a headless relativized clause (or headless relative) to be an adjective and what I call a relativizer to be a denominal suffix (2006:207). His analysis appears to be based on the fact that the suffix /-(i)t/ attaches to already-nominal stems.

followed by the relativizer /-(i)t/.

The simplest relative clause is headless (cf. section 13.2.1); this form is subjectless and essentially a noun. It can be marked for number and can carry case in relevant syntactic environments. Example (4.71) illustrates the fully finite matrix verb ‘come’; it is relativized in (4.72) and (4.73), and even carries the plural marker in the latter.

(4.71) íʃ-kol-té ha-kí-wand-á
3-PL-SBJ AFF-come-NSG-DECL
‘They came.’

(4.72) ki-t-ìʃ oʃk-nà ha-ak-á
come:INF-REL-SBJ meat-OBJ AFF-eat.meat-DECL
‘The one who came ate meat.’
(or perhaps more literally: ‘The comer ate meat.’)

(4.73) ki-t-wol-iʃ oʃk-nà ha-ak-and-á
come-INF-PL-SBJ meat-OBJ AFF-eat.meat-NSG-DECL
‘The ones who came ate meat.’
(literally: ‘The comers ate meat.’)

Just as the relativized (i.e. nominalized) verb can serve as the subject of a clause, it can also serve as the object (4.74-4.75).

(4.74) ki-t-nà ha-tí-ínt’-á
come:INF-REL-OBJ AFF-1SG-see-DECL
‘I saw who came.’

(4.75) íʃ jè:r-ìʃ ki-bi-t-nà ha-kam-á
DEF baby-SBJ come:INF-NPST:AUX-REL-OBJ AFF-love-DECL
‘The baby loves who is coming.’

When relativization is on the subject, there is a gap in the place of subject

nominalizations, respectively. As discussed in section 4.4.1, the associative construction results in new nouns. In participant nominalizations the nouns ‘person’, ‘land’ and ‘thing’ occur only in the N₂ position in the associative construction.

Agent nominalizations refer to the agent of the nominalized verb. Baye Yimam was first to note the formation of these forms in Northern Mao (2006:205). These are derived through the use of the infinitive verb stem plus the noun for ‘person’. This derivational process is widely productive in Northern Mao. Four examples are illustrated in Table 4.3.

Table 4.3. Agent Nominalization

	Verb Stem	Gloss	Agent Nominalization	Gloss
1	jéts’	‘run’	jèts’-es-è run:INF-person-TV	‘runner’
2	kjamb	‘hunt’	kjamb-es-è hunt:INF-person-TV	‘hunter’
3	húz	‘plow’	huz-és-è plow:INF-person-TV	‘farmer’
4	pàk	‘cook injera’	pàk-és-è cook.injera:INF-person-TV	‘injera cooker’

These agent nouns are genderless. That is interesting because as a noun /esè/ is frequently used only for males, though it technically means ‘person’. However, in the agent noun associative nominalization, the form /-es/ does not appear to exhibit this same semantic narrowing (4.80 and 4.81, below).

- (4.80) tí-ŋ mùnts’-ìj kjamb-es-è
 1SG-GEN woman-SBJ hunt:INF-person-TV
 ‘My wife is a hunter.’

Relativization of a passive transitive verb (4.86) or of an unaccusative verb (4.87) is perhaps the most common means of achieving such a function.

(4.86) hez-ek'-it-ìj ha-kí-[↓]á
hit:INF-PASS-REL-SBJ AFF-come-DECL
'The one who was hit came.'

(4.87) hek'-ít-ìj ha-up'-ek'-á
die:INF-REL-SBJ AFF-bury-PASS-DECL
'The one who died was buried.'

Obviously, these are headless relative clauses and are not indicative of any grammatical allocation to the patient nominalization function.

Interestingly, the unaccusative verb 'die', which takes only a patient argument, can be compounded with the noun /-es/ in a manner similar to agent nominalization in section 4.6.2.3.¹⁰⁴

(4.88) hek'-és-è
die:INF-person-TV
'dier'

Given the argument structure of the verb 'die', one could argue that this is an example of patient nominalization. However, I've found no additional examples like this.

It is also possible to compound the passive form of a transitive verb with /-es/ (4.89).

¹⁰⁴ I know of no way to express intent with the verb 'die' in Northern Mao. That is, my consultants could not think of a way to express 'He died on purpose.' This verb appears only to take patient subjects in Northern Mao.

- (4.89) hez-ek'-es-è
 hit:INF-PASS-person-TV
 'a person who should be hit' (one who needs hitting)

Locative nominalizations are formed by an infinitive verb stem joined to /k'ets'é/
 'land'. The result is a locative noun, identifying a place where the event occurs.

- (4.90) hádèm-k'ets'-e
 work:INF-land-TV
 'workplace'

- (4.91) bàmbàs-ét hádèm-k'ets'-jal-nà tí-hów-j-á
 Bambassi-LOC work:INF-land-way-OBJ 1SG-go-away-DECL
 'I went to (my) workplace in Bambassi town.'

Example (4.91) illustrates that some degree of semantic bleaching has taken place with the the form /-k'ets'/ as the speaker uses it to refer to the place where his office is in Bambassi town. In other examples such as (4.92), the meaning is less extended metaphorically.

- (4.92) kjamb-k'ets'-e
 hunt:INF-land-TV
 'hunting land/place'

In a similar fashion, instrumental nouns and other nouns which refer to things associated with actions can be formed through the addition of /mìsè/ 'thing' to the infinitive verb stem. We will consider the instrumental nouns first.

- (4.93) íʃ bà:b-ìʃ hez-mìs-nà ha-wól:l-á
 DEF father-SBJ hit:INF-thing-OBJ AFF-want-DECL
 'The father wants a switch' (i.e. a thing for spanking [a child]).

(4.95) huz-és-ol-ij huz-mìs-ol-la
 plow:INF-PL-SBJ plow:INF-thing-PL-OBJ

 ha-kòt'-and-á
 AFF-have-NSG-DECL
 ‘Farmers have farming tools.’

This associative construction with ‘thing’ also serves as a productive means of circumlocution when one cannot think of a word or when one encounters something for which there is no other way of expressing the concept in Northern Mao, such as /pans-mis-è/ fly:INF-thing-TV ‘airplane’. Other common nouns formed in this fashion include, /winz-mis-è/ write:INF-thing-TV ‘pen/pencil’ and /wè:ngk'-mìs-è/ open:INF-thing-TV ‘opener’ (e.g. a can or bottle opener).

Nouns which are not actual instruments but which are associated with a verb may also be formed with this construction. The most common example is the general noun ‘food’.¹⁰⁵

(4.95) mì-mìs-nà ham-mi-á
 eat:INF-thing-OBJ 1PL-eat-DECL
 ‘We ate food.’

4.7. A Note on the Lack of Adjectives

I have not yet identified a class of adjectives for Northern Mao. Rather, various nominalizations are used as nominal modifiers. Dixon argues that even small classes of adjectives are typically associated with the following “semantic types”: age, dimension, value and color (2004:3-4). We will briefly examine how each of these semantic types is

¹⁰⁵ This form /mì-mìs-è/ is the most basic general noun for ‘food’.

expressed in Northern Mao.

The notion of age is expressed either verbally (4.96) or through deverbal nouns in one of the noun-modification constructions, most frequently the associative (4.97).

(4.96) ham bà:b-ìʃ ha-k'ó:m-^ʋá
1PL father-SBJ AFF-be.old-DECL
'Our father is old.'

(4.97) íʃ p'íʃ-ìʃ ewèt-ét k'o:m-és-ìʃ
DEF child-SBJ listen-TI:NF¹⁰⁶ be.old:INF-person-SBJ
ha-tòs-á
AFF-speak-DECL
'While the child listened, an old man spoke.'

In (4.97), the noun 'old man' is formed through the infinitive of the verb 'be.old' joined to 'person' in the associative construction. It is also possible to express age via relativization (4.98). Or, as in (4.99), this meaning can also be expressed through an associative construction.

(4.98) k'o:m-ít ^ʋkan-ìʃ ha-hék'-^ʋá
be.old:INF-REL dog-SBJ AFF-die-DECL
'The old dog died.'

(4.99) k'o:m-kán-ìʃ ha-hék'-^ʋá
be.old:INF-dog-SBJ AFF-die-DECL
'The old dog died.'
(literally: 'the dog that is old died.')

¹⁰⁶ The /-et/ (grammaticalized from the locative marker /-et(a)/) here serves as a marker for temporally-integrated clauses in a clause chain. The three non-final verb markers are discussed in sections 12.2 and 12.5.

Nominalizations involving the semantic notion ‘age’ can be marked for number.

- (4.100) tí-ŋ wa:r-kuw-iʃ k'o:m-kuw-e
1SG-GEN clothing-DU-SBJ be.old:INF-DU-TV
‘My two pieces of clothing are old ones.’

Words of dimension (‘big’, ‘small’, etc.) are normally expressed as verbs (4.101) but may serve as nominal modifiers through either relativization (4.102) or through an associative construction involving infinitive verb stems (4.103).

- (4.101) íʃ p'iʃ-iʃ ha-am-á
DEF child-SBJ AFF-be.small-DECL
‘The child is small.’

- (4.102) ám-t ʰka:l-iʃ ha-bíʃ-ʰá
be.small:INF-REL porridge-SBJ AFF-EXIST-DECL
‘There is a bit of porridge.’

- (4.103) tí-ŋ mùnts'-iʃ tí-ŋ kèm-kas-nà
1SG-GEN woman-SBJ 1SG-GEN be.big:INF-hoe-OBJ

ha-tà-j-á màléj
AFF-give-AWAY-DECL exclamation
‘My wife gave away my big hoe!’

Similarly, words of value such as ‘good’ or ‘bad’ are verbs (4.104 and 4.105). They must be nominalized (relativized or joined as part of an associative construction) to serve as modifiers of nouns (4.106 and 4.107).

- (4.104) tí-ŋ pa:lt'-nà ha-nok-á
1SG-GEN girl-OBJ AFF-be.good-DECL
‘My girl (daughter) is good.’

(4.105) nà es-ìʃ ha-ts'èg-á
 that person-SBJ AFF-be.bad-DECL
 'That man is bad.'

(4.106) nók-t ʔpa:lt-ìʃ àld-kját'-nà
 be.good:INF-REL girl-SBJ know:INF-house-OBJ

ha-how-how-gà-m-bìʃ-á
 AFF-go-go-FUT-3-NPST:AUX-DECL
 'A good girl goes to school.'

(4.107) íʃ pòlis-ìʃ nà ts'eg-es-nà ha-wó:l-á
 DEF police-SBJ that be.bad:INF-person-OBJ AFF-want-DECL
 'The police want that bad man.'

There are four basic color terms in Northern Mao (Table 4.4), and they are expressed as verbs, most basically. The lexicalization of basic color terms as verbs is quite common and widespread in Africa (Payne, forthcoming).

Table 4.4. The Derivation of Northern Mao Cardinal Colors

Relativized Verb (Derived)	< Verb (Basic)
t'íʃín-t-è be.black-REL-TV	ha-t'íʃín-á AFF-be.black-DECL
ká:w-ít-è be.white-REL-TV	ha-ka:w-á AFF-be.white-DECL
zàŋk-ít-è be.red-REL-TV	ha-zàŋk-á AFF-be.red-DECL
twákìim-t-è be.blue-REL-TV	ha-twakìim-á AFF-be.blue-DECL

When they modify a noun, they must be relativized (4.108), or the infinitive verb stem must be joined in a noun-noun associative construction (4.109).

(4.108) ká:w-ít pàk-ìf ha-nok-á
be.white:INF-REL injera-SBJ AFF-be.good-DECL
'White injera is good.'

(4.109) ká:w-pàk-ìf ha-nok-á
be.white:INF-injera-SBJ AFF-be.good-DECL
'White injera is good.'

Other colors may be expressed through metaphorically extended nominal constructions, such as (4.110); 'ade ababa' (an Amharic name) is a yellow flower common in many parts of Ethiopia.

(4.110) fàf-k'é:ts-jé:s-è
ade.ababa-flower-be.like:INF-TV
'yellow'

CHAPTER V

PRONOUNS AND THEIR HISTORICAL DEVELOPMENT

Chapter V explores Northern Mao's personal, possessive and interrogative free pronouns. Given that the Mao languages have been noted for their highly innovative personal pronouns (relative to other Omotic languages) (Bender 2000:199), this examination includes both an analysis of the synchronic inventory as well as some discussion on the historical development of the personal pronouns.

The personal pronouns (section 5.1) include singular, dual and plural number oppositions for each of the three persons. The personal pronouns which reference the subject of a clause are normally used only in instances of emphasis or other pragmatically marked contexts. Verbs have subject prefixes which can fulfill the function of pronouns (i.e. the subject prefixes need not, but may, co-occur with free pronouns). Personal pronouns which reference any non-subject argument (e.g. an object or predicate nominal) of a clause, on the other hand, must be used if the particular referent is to be clearly indicated, as verbs do not reference non-subject participants.

Possessive pronouns (section 5.2) are formed by the addition of the genitive case marker /-(i)ŋ/ to a personal pronoun. The interrogative pronouns and other question words (section 5.4) may be divided into two groups: 1) those which indicate humanness through the use of /kí-/ human or /kó-/ non-human interrogative pronouns (section 5.4.1), and 2) those which do not make any differentiation regarding humanness (section 5.4.2).

The discussion begins with a description of the personal pronouns. The pronouns of the Mao languages show great divergence from pronouns in other Omotic languages;

as a result, the discussion of the personal pronouns includes a comparative examination of the pronouns of all the Mao languages as well as a historical analysis of the Northern Mao paradigm. This discussion involves morpho-phonological developments as well as the development of a new dual opposition. The dual pronouns have not yet been reported for other Mao languages¹⁰⁷ and have not been reported for other Omotic languages, save Dizin (Beachy 2006:53). Section 5.2 describes Northern Mao's possessive pronouns and illustrates their use in the genitive and possessive constructions as well as their use as complete noun phrases. Section 5.3 discusses the expression of reflexivity and the lack of true reflexive pronouns in Northern Mao. Finally, section 5.4 offers an examination of interrogative pronouns. In Northern Mao, there are no honorific or logophoric pronouns.

5.1. Personal Pronouns

Northern Mao's personal pronouns are listed in Table 5.1, in their citation forms as well as their subject and object case forms.

In the citation forms, each pronoun ends with the terminal vowel [e], or [je] if immediately following [i] (i.e. 1SG and 2SG forms). The subject and object case markers follow the pronoun stems. The subject case marker is /-ij/ and the object case marker is /-na/. Both are toneless and receive their tone from the left (cf. section 3.2.3). Alternative case forms may be used on the 1st, 2nd and 3rd plural pronouns: /-té/ for subject and /-tá/ for object. Shorter forms of the 1PL and 2PL pronoun forms are used when the /-té/ and /-tá/ case markers are present (/hambèl-/ > /ham̀-/ 1PL and /hàwèl-/ > /hàw-/ 2PL).

¹⁰⁷ Girma Mengistu was the first to report the existence of dual in a Mao language, noting it for Diddessa Mao (2007). As Girma is now conducting research on Seze, we will soon know how widespread dual marking is for the Mao family. There is clear evidence that it is not found in Ganza (cf. section 9.6.5).

Subject case can also be marked with /-té/ on the 3SG pronoun; when the /-té/ suffix is used, the pronoun is shortened to /i-/ from /iʃ-/.¹⁰⁸

Table 5.1. Personal Pronouns in Citation and Case Forms

Gloss	Pronoun in Citation Form with Terminal vowel	Pronoun with Subject Case	Pronoun with Object Case
1SG	tí-jé	tí-ʃ	tí-ná
1DU	han-é	han-iʃ	hán-ná
1PL	hamb-èl-è	hamb-èl-iʃ ham-té	hamb-èl-là ham-tá
2SG	hì-jè	hì-ʃ	hì-nà
2DU	háv-é	háv-iʃ	háv-ná
2PL	hàw-èl-è	hàw-èl-iʃ hàw-té	hàw-èl-là hàw-tá
3SG	iʃ-è	iʃ-iʃ í-té	iʃ-nà
3DU	iʃ-kuw-e	iʃ-kuw-iʃ	iʃ-kuw-na
3PL	iʃ-kol-è	iʃ-kol-iʃ iʃ-kol-té	iʃ-kol-là iʃ-kol-tá

Each of the plural pronouns includes either the /-el/ PL suffix (on 1PL and 2PL) or /-kol/ PL suffix (on 3PL). The /-el/ PL suffix is not found elsewhere in Northern Mao but the /-kol/ PL marker appears to be related to the /-(w)ol/ PL suffix found on nominals today (cf. section 4.2.2). The only nominals which take the full /-kol/ suffix with the [k] are the 3PL pronoun¹⁰⁹ and kinship terms, such as ‘father’ /bà:b-é/ > /bà:b-kol-è/ father-

¹⁰⁸ The same morphophemic alternation is found on the existential verb /biʃ/ when it is followed by the /-(i)t/ relativizer: /biʃ/ + /-(i)t/ > /bí-t/.

¹⁰⁹ Baye suggests that the 3PL pronoun in Northern Mao is from the numeral ‘one’ /ʔiʃk/ followed by the plural marker (2006:181). This may be the case. But my data show the numeral ‘one’ as /hiʃkè/, with a M tone on the first vowel and an initial [h] and not the H tone attested on all 3rd person forms in Northern Mao.

PL-TV. The tone pattern of this, presumably older, plural suffix imposes a L tone on the final nominal vowel /e/ or case markers. The plural suffix /-(w)ol/ found on most nominals today imposes a final M tone on tone-bearing units which follow (cf. section 4.2.2).

The 1st and 2nd person dual and plural pronouns begin with a sequence [ha] of various different tones. I will postpone discussion of the [ha] sequence for now as it is discussed in-depth in section 5.1.2. Suffice it to say for now that the [ha] is not reconstructable as part of the pronouns themselves.

The 3rd person dual pronoun has been constructed from a demonstrative /ífé/ with the dual marker /-kuw/ (cf. sections 5.1.2.3 and 6.3). Unlike the /-kol/ PL suffix on the 3PL pronoun, the /-kuw/ marker is productive today as the form on nominals (sections 4.2.2).

5.1.1. The Mystery of Mao Pronouns

Bender notes that the pronouns of the Mao languages show “much innovation” when compared with other Omotic languages (2000:199). I will begin by illustrating the divergence Northern Mao exhibits relative to the other Mao languages, in terms of the pronominal paradigm.¹¹⁰ Table 5.2 illustrates the pronoun forms for the Mao languages as well as Bender’s reconstructions for the Mao subgroup and for Proto-Omotic.¹¹¹

¹¹⁰ Bender did not note the existence of dual forms in any of the Mao languages, including Northern Mao, where they certainly exist, so it may be that they do exist in at least some of the other Mao languages. I have recently seen unpublished data on Ganza collected by Loriann Hofmeister, who worked with the Ganza in Sudan and wrote a substantial manuscript, “Ganza Language Learning Manual,” in which no dual forms are noted.

¹¹¹ The data in Table 5.2 are from various sources. In the Hozo and Sezo data, the top form in each cell is from Siebert et al. 1994. The bottom form is from Bender(2000:183-4). Where Siebert et al. and Bender are in agreement, only the one form appears in the cell. The Ganza data are originally from Reidhead (1947:15-16) and reported by Bender (2000:183-4); the Northern Mao data are my own. Girma

Table 5.2. Pronominal Correspondences
for the Mao Languages

	Northern Mao	Sezo	Hozo	Ganza	Proto-Mao	Proto-Omoti
1SG	tí-jé	ha:-	dɛŋ nəŋ	ti	*ti-	*ta
2SG	hì-jè	hin-	hɪ:ŋ hi:ŋ	je	*hi-ja	*n / j-
3SG	íʃ-è	nam ha(a)n ~ hijan	aŋ za-aŋ	kjenä (m) /ki (f)	--	*is / b-
1DU	han-é	--	--	--	--	--
2DU	hâw-é	--	--	--	--	--
3DU	íʃ-kuw-e	--	--	--	--	--
1PL	hamb-èl-è	dɔl da:	nuŋ	mu	--	*nu
2PL	hâw-èl-è	uk:ɛ nam-	dɔŋ dɔŋ	näm	*nam	*int-
3PL	íʃ-kol-è	nam ~ hijasene hel	mɛtʰa (i)nɛŋ	ku	--	*ist- / b-

The Northern Mao final (terminal) vowels, separated by a hyphen in Table 5.2, should not be included in any comparison of pronouns forms. I have included the terminal vowels for Northern Mao forms as this is the most straightforward way to indicate the full tonal melody of the pronouns. The Sezo and Hozo forms are also followed by /ʃe/ and /ga/, respectively in Bender's presentation (2000:183-4). I have removed these as they appear to be case markers and are not relevant to a comparison of the pronominal paradigms. No such endings are included in Ganza data, according to Bender's discussion

Mengistu is the only researcher (apart from myself in this work) who has so-far reported dual forms for a Mao language (2007); it could be that dual forms were simply not elicited by Bender, Reidhead or Siebert et al, and they do exist; or that dual marking developed only in Northern Mao after its split from other Mao languages. Additionally, in Bender's paradigm (2000:183), each of the Sezo pronoun forms is followed by /-ʃe/, what is assumed here to be the subject case marker, corresponding to Northern Mao's /-iʃ/. Likewise, each of the Hozo pronoun forms is followed by /-ga/, also assumed to either be a subject case marker or other form relevant to case. The reconstructed forms for the proto-languages are taken from Bender: Proto-Mao (2000:196) and Proto-Omoti (2000:223).

of Reidhead's data (2000:183). Ganza also exhibits gender in the 3SG pronoun and subject marking, where the other Mao languages do not. Bender does not include tone marking for his pronominal data (2000:183).

Among the Mao languages, Northern Mao is the most innovative, with only the 1SG and 2SG pronouns clearly corresponding to the other Mao languages. The 3SG pronoun could be a retention of an older form, given Bender's reconstruction of the */*is/* isomorph, which is attested in multiple, but not all, branches (2000:223), but this similarity may be accidental as the Northern Mao 3SG pronoun is very similar to a demonstrative */ifé/* and may be a more recent grammaticalization within Northern Mao (cf. section 6.3). Perhaps the other forms which prompted Bender's */*is/* reconstruction are independent grammaticalizations from this same demonstrative.

As noted in section 5.1, the 3rd person dual and plural forms, */if-kuw-e/* 3DU and */if-kol-è/* 3PL, are historically formed from the 3SG plus the */-kuw/* dual marker and the */-kol/* plural suffix. The fact that the rather lengthy 3rd dual and plural pronouns are made up of an erstwhile determiner as well as forms transparently similar to the dual and plural nominal suffixes found on nominals today suggests that these may be a relatively recent development.

The real puzzle is that the 1st person and 2nd person dual and plural Northern Mao pronouns appear to be internal developments. Each of these forms begins with the sequence [ha] and the plural forms contain */-el/* which I have analyzed as a plural suffix, as noted above. Northern Mao's 1PL pronoun also includes an innovative [b] consonant after the nasal [m]. It is clear from Table 5.2, that a nasal is reconstructable for 1PL in

the Mao languages, cf. the Northern Mao, Hozo, and Ganza forms as well as Bender's reconstruction for Proto Omotic). I will discuss the innovation of [b] and the related nasal assimilation, where [n] > [m] before [b] in section 5.1.2.3). We now turn to a discussion of developments in Northern Mao's pronominal inventory which sheds light on these two forms as well as the development of the dual opposition.

5.1.2. The Intrusion of [ha] into the Pronominal Inventory and the Development of Dual

The appearance of an unreconstructable [ha] on the 1st and 2nd person non-singular pronouns as well as the /-el/ plural suffix on the 1st and 2nd plural pronouns, and the development of the dual opposition itself, attest to large-scale innovation in Northern Mao's pronominal inventory. But how did these forms intrude into the pronominal inventory? This surely begs for an explanation, but what could be the reason for such a development? The discussion which follows illustrates a historical development which I believe took place in Northern Mao's pronominal paradigm.

In short, I believe a verbal prefix, the affirmative /ha-/, which precedes subject markers on realis verb forms, fused with the 1PL and 2PL subject prefixes for phonotactic reasons. These new subject prefixes then resulted in new pronoun forms for the 1PL and 2PL pronouns, each including the [ha] sequence (cf. section 5.1.2.3). The new 1PL and 2PL pronouns then split, creating a set of four pronouns with a dual and plural opposition, with H tone differentiating the new dual forms from the plural pronoun source. The new plural pronouns took on a plural suffix /-el/, further differentiating them from the new dual forms. As I discuss below, the morphological evidence suggests the dual opposition spread to 3rd person at a later time.

In the discussion below, I first discuss the source of the [ha] sequence: the related verbal affirmative prefix /ha-/ and discuss correspondences of this form in other languages. I then demonstrate how this affirmative /ha-/ could have intruded into the pronoun inventory. Next, I discuss how the innovated pronouns split into four pronouns, creating a dual opposition, and how new subject prefixes formed from the new pronouns. Finally, I demonstrate that the dual opposition spread to 3rd person more recently.

5.1.2.1. The Source of [ha]: Northern Mao's /ha-/ Affirmative Prefix

Before we look at the intrusion of the [ha] form into the pronoun inventory, we must first consider its source. As discussed and illustrated in section 9.6, there is a verbal affirmative prefix /ha-/ (AFF) which is found in the first position on verbs in the declarative and hearsay utterances (optionally), and in the first position on verbs in polar interrogative utterances (obligatorily). The /ha-/ AFF is not found in content interrogative, imperative, jussive and negative utterances, though a possibly related form /há-/ , with H tone, is found in first position on impersonal jussives and polite (hortative) imperatives (cf. sections 10.4.5 and 10.4.6). On irrealis affirmative declarative verbs, the /ha-/ is found optionally across all person subjects (cf. section 9.6.1). On the realis declarative and hearsay verbs, this same /ha-/ prefix immediately precedes the subject prefixes and is limited in its distribution (cf. section 9.6.2). The /ha-/ is attested optionally before the 1SG and 3rd person verbs. The /ha-/ has fused with the 1DU, 1PL, 2DU and 2PL subject markers, becoming obligatory. It is prohibited before the 2SG subject prefix. It is worth noting that the /ha-/ prefix is nearly always included when speakers cite a verbal form extra-syntactically.

Comparative evidence suggests that the /ha-/ verbal prefix is not simply a development in Northern Mao or the result of contact.¹¹² The Northern Mao form appears to be cognate with a /ha/ form in Ganza (a member of the Omotic-Mao subgroup) (cf. section 9.6.5). Ganza's /ha/ form does not appear to be a prefix but a free form which may serve as a host for subject marking enclitics (cf. the discussion in section 9.6.5). It remains to be seen if a corresponding /ha/ form in a similar function will be found in the other Mao languages (i.e. Hozo and Sezo). No such form has been reported yet. The 1SG and 3SG pronouns in Sezo (cf. Table 5.2, above) include a sequence [ha], as do their subject prefixes /ha(a)-/ 1SG and /han-/ 3SG (Bender 2000:184-5). It is not clear, however, that this [ha] sequence on the Sezo pronouns and subject prefixes is related to the /ha-/ prefix and /ha/ form found in Northern Mao and Ganza, respectively.

Outside of the Mao subgroup, Sheko (an Omotic Dizoid language, Hayward 2000; Bender 2003) exhibits 2SG and 3SG subjects which are marked with the proclitics /ha=/ and /há=/, respectively (Hellenthal 2010:323). In Dizin (also a Dizoid language), possessive markers and person-number-gender verbal proclitics include the forms /á=/ and /à-/ for 3SG (masculine) and 2SG, respectively (Beachy 2005:53).

Apart from the pronoun systems, it is clear that the form /ha/ is quite widely found throughout Omotic as the proximal demonstrative 'this' and as the locative noun/deictic

¹¹² Bender suggests that the [ha] sequence on Northern Mao 1st and 2nd plural pronouns could be the result of contact with Bertha (a geographically adjacent Nilo-Saharan language). Bertha's 1PL and 2PL pronouns each begin with a [ha] sequence: /haθaŋ/ 1PL and /haθu/ 2PL (Bender 2000:184). But, as noted above (section 5.1.1), Bender appears not to have been aware of Northern Mao's dual forms which also include [ha].

‘here’, likely sources for pronouns: in Macro-Ometo (NW Ometo and SE Ometo) (Bender 2000:79); in the Gimira-Yem-Kefoid languages (Bender 2000:138); and in the Dizoid languages (Bender 2000:145). Bender, in fact, reconstructs /*ha/ (or the very similar variants /*har-/ in C’ara and /*han-/ in Kefoid) as the form for the proximal demonstrative and as ‘here’ for all of Omotic, save the Mao and DA (Dizoid and Aroid) groups¹¹³ (2000:206).

It is clear that an Omotic source for the /ha-/ prefix and [ha] forms is likely, given the many correspondences of /ha/ as a demonstrative and 3rd person forms. And clearly, within the Mao languages, the similar /ha-/ prefix and /ha/ forms in Northern Mao and Ganza attest to its syntactic placement preceding verbal subject marking.

5.1.2.2. The Fusion of /ha-/ AFF with the 1PL and 2PL Pronouns

The only way the [ha] sequence could have entered the 1st and 2nd non-singular pronouns in Northern Mao was via prior fusion of the older affirmative /ha-/ verbal prefix with the 1st and 2nd non-singular subject prefix. The fusion with the 2nd non-singular subject prefix was likely motivated by phonotactic necessity.

We must begin by considering what the 1PL and 2PL subject prefixes in Northern Mao would have been before the intrusion of the /ha-/ and the development of dual (where the plural /-el/ was added to the plural forms). Certainly the [ha] sequence and the [el] sequences cannot be reconstructed by comparison with other Mao pronouns. The comparative evidence shows there is no doubt that these sequences, which I believe are morphemes themselves, are innovations which developed only in Northern Mao (cf.

¹¹³ That is /*ha/ is reconstructed for Bender’s TN group (2000:206).

Table 5.2, above).

Bender only attempts reconstruction of three independent pronouns for the Mao languages: /*ti-/ 1SG, /*hi+ya/ 2SG, and /*nam/ 2PL (Bender 2000:196). The 1PL pronoun reconstructions outside the Mao subgroup include the consonant [n] for all but the Aroid and Mao subgroups (Bender 2000:196). Bender does not offer a 1PL reconstruction for the Mao subgroup.

The verbal subject markers are even more problematic. Table 5.3 lists the bound pronominal subject markers for the Mao languages.¹¹⁴

Table 5.3. Subject Markers in the Mao Languages

	Northern Mao	Sezo	Hozo	Ganza
1SG	tí-	ha(a)-	na-	di-
2SG	hì-	hin-	hi-	nä-
3SG	Ø-	han-	a:/ε-	gã-/gi-
1DU	han-	--	--	--
2DU	háv-	--	--	--
3DU	Ø-	--	--	--
1PL	ham-	dol-	nu-	mu-
2PL	háv-	nam-	do-	näm-
3PL	Ø-	hɛl-/jɛl-	ɛne-	gu-

While Bender notes several forms for the Mao subgroups subject markers as constituting ‘basic patterns’, he designates none of these as reconstructions (2000:203).

¹¹⁴ The Northern Mao data in Table 5.3 are my own. The Sezo and Hozo data are Bender’s (2000:184-5). The Ganza data are reported by Bender (2000:184-5) but originally from Reidhead (147:21-2). As noted in section 9.6.4, new data on Ganza (Hofmeister 2010) suggests that the forms in Table 5.3 may not be prefixes, but could be enclitics. I have left the hyphen in place, however, as it appears in Bender’s work (2000:184-5). The Northern Mao forms in Table 5.3 do not include the 3rd person forms which mark subjects on dependent (i.e. non-final and subordinate) verbs: /hí-/ 3SG, /if-kuw-/ 3-DU and /if-kol-/ 3-PL (cf. Table 9.4, section 9.4.2).

Bender suggests /m(u)/ as a basic pattern for 1PL subject marker in the Mao languages and /nam/ and /d / or / to/ for the 2PL subject marker (2000:203).

The 1PL /m(u)/ form appears to have been chosen on the basis of Ganza and Northern Mao, where 1PL subject markers (and pronouns, cf. Table 5.2) include an [m] consonant (Table 5.3). But the Sezo and Hozo 1PL subject markers do not; these languages exhibit the alveolars [d] and [n] in markers for 1PL. Outside the Mao subgroup, all of Bender's reconstructions of 1PL subject markers, for the various Omotic subgroups involve only alveolar consonants and nearly always [n] (2000:202). None exhibit the bilabial nasal.

I believe that /*nu/ is a likely reconstruction for both the 1PL pronoun and subject markers in the Mao languages. The /n(u)/ form is already attested for 1PL pronouns and subject markers in most Omotic subgroups and is clearly attested within the Mao subgroup: in Hozo's 1PL /nu-/ pronoun (the [ŋ] on the Hozo pronouns is likely either a genitive or object case marker, cf. Table 5.2, above) as well as its /nu-/ 1PL subject marker (Table 5.3). I believe the [m] nasals in Ganza and Northern Mao are from the [n] in this older /*nu/ as well. The change from n > m in Ganza and Northern Mao is clearly motivatable by context: n > m before [u] in Ganza, and before an intrusive [b] in Northern Mao (cf. section 5.1.2.3). Thus, I argue the [m] in Ganza's /mu/ 1PL pronoun and subject marker is an independent labialization (from Northern Mao).¹¹⁵ But what is the source of the [b] in Northern Mao? I will defer the discussion of the development of

¹¹⁵It is unlikely that the [b] in Northern Mao is older and was a predecessor to the [u] / [o] found in the other Mao languages (Table 5.2), as the [u] is attested in all but the Aroid branches of Omotic (Bender 2000:223). See the discussion in section 5.1.2.3.

the [b] to section 5.1.2.3.

The historical form for the 2PL pronoun and subject marker in Northern Mao is also difficult to determine. As noted above, Bender offers /*nam/ for the Mao family's 2PL pronoun and variations of the form /*int-/ are reconstructed for as many as seven of the other ten subgroups of Omotic (2000:196). The 2PL subject marker is not reconstructed for the Mao languages. Bender does offer the 'basic patterns' of /nam/ and /d/ or /to/ for 2PL subject marking, noting divergence for Northern Mao, though (2000:203).

My hypothesis is that whatever segmental material was inherited by Northern Mao, only the form /-w̃/ was present at the time the current 2PL subject marker fused with the affirmative /ha-/ prefix. Evidence from the subject markers found on Northern Mao's irrealis verbs shows the /-w̃/ 2PL: in the irrealis negative (non-future) verbs, the suffix /-w̃/ marks 2PL (and /-w̃/ marks 2DU) (cf. section 9.4.1). But in the irrealis future verbs (cf. section 9.4.1) only the L and H tones mark 2PL and 2DU. The [w] was lost, following the future tense suffix; the compensatory lengthening of the future tense suffixal vowel supports this analysis (cf. the discussion below Table 9.6, section 9.4.1).

Despite clear comparative correspondences with other Mao languages, the 2PL subject prefix clearly became /w̃-/ in Northern Mao. The 1PL may very well have remained /nù-/ (this hypothesis is based on developments which appear to have taken place after a split in the 1PL to new 1DU and 1PL forms). The 2PL subject prefix /w̃-/ would have become very difficult to pronounce before the vast majority of consonant-initial verb stems. The affirmative prefix /ha-/ (cf. section 9.6), which optionally

precedes the subject prefixes in realis declarative and hearsay utterances and which is obligatory in polar interrogative utterances, very likely became obligatory before the 2PL /w/ as it reduced phonologically from whatever form preceded it. Over time, then, the /ha-/ became permanently fused to and unanalyzable from the 2PL subject marker due to its constant presence.

The 1PL subject prefix, which was presumably /nù-/, also fused with the /ha-/ affirmative prefix, perhaps by analogy with the 2PL subject prefix where its fusion was initially motivated by phonotactics. The /ha-/ remained optional, however, before the 1SG and 3rd person forms.

The new 2PL and 1PL subject markers, which are much more frequently attested in natural discourse than the free pronouns (bound pronominals are required subject marking on the verb, regardless of the presence of free pronouns) sparked new free pronoun forms as well, by the addition of the terminal vowel /e/ to the subject markers. And thus, the [ha] sequence, which began as a verbal prefix in Northern Mao, entered into the pronominal paradigm through the development of new 2PL and 1PL pronouns from the bound pronominal subject prefixes (Table 5.4).

	Verbal Prefixes	New Subject Marker	New Pronouns
(1)	ha- + w-	> haw-	> haw-e
	AFF 2PL	2PL	2PL-TV
(2)	ha- + nù-	> hanù-	> hanù-e
	AFF 1PL	1PL	1PL-TV

Instances of free pronouns developing from subject-marking affixes or reduced (clitic) forms have been attested in other languages (Harvey 2003, Mushin and Simpson

2008 and Norde 2009:204). In Northern Mao's case, the development was very likely motivated by frequency, where the more frequent obligatory subject prefix replaced the older pronouns, taking the terminal vowel /e/ to become a free pronoun itself.

5.1.2.3. The Development of Dual in the Pronoun Inventory

The morpho-phonological makeup of the 2DU/PL and 1DU/PL pronouns today suggests that the dual opposition developed in the pronoun inventory, not on the subject markers themselves.

The split into dual and plural involved the new 2PL and 1PL pronouns, with their [ha] sequences. As new dual forms developed from these plural pronouns, they underwent tone changes from L tone on the plural pronoun to new H tones in each case, perhaps a means of clarifying the new dual distinction from the plural form (Table 5.5). Certainly, in the subject prefixes, only the tone distinguishes 2DU from the 2PL. The plural pronouns also received the /-el/ plural suffix, further differentiating the plural pronouns from their otherwise dual tone pairs (Table 5.5).

Table 5.5. The Formation of Dual in 2nd and 1st Person

(1)	ha ^w -e	↘	2DU	ha ^w + -e
	2PL	↘	2PL	ha ^w + -el + -e
(2)	han ^u -e	↘	1DU	han ^u + -e
	1PL	↘	1PL	han ^u + -el + -e

If the [u] vowel was maintained on the new 1PL pronoun, it was apparently lost as the new 1DU form developed. There is no trace of it left today. If the 1DU and 1PL pronouns developed from a single form, as apparently occurred with the 2nd person forms (Table 5.5), the [u] in the 1PL pronoun may be the source for the non-etymological [b] which appears in the 1PL pronoun today (Table 5.2, above). The development of the [b]

is my primary reason for assuming that the [u] vowel was maintained, even as the /ha-/ joined 1PL. As noted in section 5.1.2.2, there is no comparative evidence to suggest that the [b] is older and weakened to become the 1PL's [u] vowel in other Omotic languages.

I suggest that the [u] vowel underwent strengthening to become [b] between the [n] and the /-el/ plural suffix in the new 1PL pronoun. Then, the presence of the [b] triggered nasal assimilation, where the [n] became [m] before the [b]. Admittedly, this is a complicated analysis, but the comparative evidence suggests that both the [m] and the [b] are innovations.

Perhaps contact played a role in this development as well. Other languages in the area show [b] innovations following intervocalic [m] nasals as well. For instance, it is clear that the word for 'camel' in Amharic and Arabic involves an intervocalic bilabial nasal [m]: /gimɛl/ in Amharic and /dʒəməl/ in Arabic. In Gumuz, Bertha (both Nilo-Saharan) and Northern Mao, however, there is an [mb] sequence in the loans for 'camel': /kambəla/ in Gumuz (Colleen Ahland, personal communication), /hambel/ in Bertha (2007:112), and /hàmbèlè/ in Northern Mao. Bertha also exhibits 10 pronominal forms (some demonstrative pronouns and others possessive pronouns) which begin with the sequence /mbá/, presumably itself from a demonstrative. The Northern Mao have lived next to the Bertha for hundreds of years and many have learned to speak the Bertha language (cf. sections 1.1, 1.5.1, 1.8 and 1.9). Some Mao men marry Bertha women, as well. Perhaps the intrusion of the 1PL's [b] in Northern Mao was partly motivated by areal influence.

Another possible source for the intrusive [b] could be the plural suffix /-el/.

Perhaps there was at one time a [b] as an onset to this suffix. The [b] could have weakened in the 2PL form and been lost between the [w] and the following [e]. Unfortunately, the comparative evidence does not support the /-el/ PL as a source for the [b]. Bender does note what he calls “fragments” marking plurals in Omotic languages: the /-el/ in Dizoid and /-ol/ in Northern Mao (2000:213). That said, the [b] is clearly an intrusion on the 1PL pronoun (it is not found elsewhere on Omotic 1PL forms) and the /-el/ form does clearly appear to correspond to an old plural suffix, without any [b].

As the dual and plural pronouns developed, verbal subject prefixes were updated to match them. Today, the prefixes clearly correspond to the free pronouns and show the tone and phonological changes which took place during pronoun development (Table 5.6).

Table 5.6. The Historical Composition and Synchronic Form
of Today’s 2DU/PL and 1DU/PL Pronouns and Subject Prefixes

			Free Pronouns	Subject Prefixes
2DU	haw+-e	>	hawé	haw-
2PL	haw + -el-e	>	hawèlè	haw-
1DU	hanu + -e	>	hané	han-
1PL	hanu + -el-e	>	hambèlè	ham̀-

Interestingly, the intrusive [b] on the 1PL pronoun was not included in the new 1PL subject prefix. The tone distinctions in the 1st person don’t surface directly on the subject prefix vowel but are still relevant, as the L tone on the /ham̀-/ 1PL prefix triggers changes in the tone of following verb stems (cf. section 3.2.2). The tone distinctions for 2DU and 2PL are clearly evident on the subject prefix’s vowel. The L tone of the 2PL also triggers the same sort of partial assimilation of following verb stem tones as the 1PL does (cf. section 3.2.2).

The development of dual in 3rd person appears to be more recent as evidenced by

the relatively long forms and their morphological transparency which corresponds to other nominals, including demonstrative pronouns (cf. sections 6.1.1.2 and 6.3). As mentioned briefly in section 5.1 and discussed in-depth in section 6.3, the 3rd person pronouns are grammaticalizations from a demonstrative /iǰé/. The dual form of the 3rd person pronoun is morphologically transparent. It involves the addition of the dual suffix found on nominals /-kuw/ (cf. section 4.2.2) to the /iǰ/ base.

5.1.2.4. An Alternative Account of the [ha] Sequence

Girma Mengistu, in his analysis of the Diddessa Mao (a dialect of Northern Mao) pronominal paradigm offers a different account for the Northern Mao pronouns. Girma analyzes the [ha] sequence on the 1DU/PL and 2DU/PL pronouns as a marker of 1/2 person (2007:30) and suggests that this /ha/ is followed then by a variety of what he calls number markers.¹¹⁶ In his account, the form /n/, a 1DU marker, joins with the 1/2 person marker /ha-/ to form /hanä/ (/hané/ in Table 5.2). The form /mb/ 1PL, followed by the plural marker /-äl/, joins the /ha-/ to yield /hambälä/ (/hambèlè/ in Table 5.2). The form /u/ marking 2/3 person dual, joins the form /ha-/ to yield /hawä/ 2DU (/hàwé/ in Table 5.2), and combined with the plural /-äl/, forms /hawälä/ 2PL (/hàwèlè/ in Table 5.2). The third person forms /iǰkuwä/ 3DU (/iǰkuwe/ in Table 5.2) /iǰkolä/ 3PL (/iǰkolè/ in Table 5.2) are analyzed as /iǰk-/ 3rd person (the [k] is interpreted as part of the 3rd person pronoun) plus the /u/ 2/3 dual marker or the /-ol/ as the plural marker (Girma 2007:30).

The comparative evidence offered in Table 5.2 (or elsewhere in OmotiC,

¹¹⁶ Girma's glosses for these 'number' markers show that he does analyze the forms as indicating person as well as number. That is, the /ha-/ is not analyzed as the only indication of number in these pronouns (2007:30).

according to Bender 2000) does not appear to support this analysis, however. Other Mao languages do not consistently show a form /ha/ associated with both 1st and 2nd person. Also, the base form for the 3rd person pronoun does not include the [k]--the [k] belongs to the number suffixes. It is clear that the dual suffix /-kuw/ includes the [k] consonant (cf. section 4.2.2.). As noted in section 5.1, above, the /-kol/ plural suffix maintains the [k] on kinship terms as well. The [k] is reduced on most nominals, however, as the form has become /-(w)ol/ (cf. section 4.2.2).

5.2. Possessive Pronouns

Possessive pronouns are constructed with the same forms used as verbal subject prefixes today. For 3rd person forms, the full pronouns (without the terminal vowel) are used; these are also the subject prefixes found on affirmative, non-future dependent verbs (cf. section 9.4.2). As possessives, these forms take the genitive case marker /-(i)ŋ/ and occur in the so-called genitive construction (section 4.4.2.2) or as a complete noun phrase, itself. Examples (5.1) and (5.2) illustrate the possessive pronouns as part of the genitive construction.

(5.1) íŋ-ìŋ kjat'-ìŋ kəm-ít bitè
 3SG-GEN house-SBJ be.big:INF-REL be.PST
 'Her/his house was big.'

(5.2) hàw-ìŋ hadəm-ìŋ ha-nók-^lá
 2PL-GEN work-SBJ AFF-be.good-DECL
 'Your (PL) work is good.'

Examples (5.3-5.5) illustrate possessive pronouns as complete noun phrases. In (5.3), the 1SG possessive pronoun serves as the predicate nominal and due to its distribution at the

end of the utterance, the terminal vowel follows the genitive case marker. In (5.4), the 3SG possessive pronoun serves as the subject of the clause and is marked with the subject case marker to the right of the genitive case marker. In (5.5), the 2PL possessive pronoun serves as the object of the clause and the object case marker follows the genitive case marker.

(5.3) yéʃ-íʃ tí-ŋ-è
 that-SBJ 1SG-GEN-TV
 ‘That is mine.’

(5.4) íʃ-ìŋ-ìʃ nà-àt ha-bíʃ-ʼá
 3SG-GEN-SBJ here-LOC AFF-EXIST-DECL
 ‘Her/his is here.’

(5.5) hàw-ìŋ-nà ha-tí-wos-kj-á
 2PL-GEN-OBJ AFF-1SG-take-TOWARD-DECL
 ‘I brought yours.’

A possessive function can also be achieved through use of the possessive construction (section 4.4.3), where the pronominal stem (minus the terminal vowel) precedes the possessum (5.6-5.8). No genitive case marker is used in the possessive construction.¹¹⁷ No difference in meaning between the genitive and possessive constructions has been identified.

¹¹⁷ The pronoun forms in examples (5.6-5.8) are not cliticized forms. They are free forms. The tone patterns of the possessive construction show that the constituents are not phonologically bound but free, unlike the associative construction where they are bound and exhibit different tonal phenomena (cf. sections 3.3.2 for tonal phenomena, 4.4.1 for the associative construction and 4.4.3 for the possessive construction).

(5.6) íʃ ʔkʲatʔ-ìʃ kəm-ít bitè
 3SG house-SBJ be.big:INF-REL be.PST
 ‘Her/his house was big.’

(5.7) tí kan-íʃ ha-hékʔ-ʔá
 1SG dog-SBJ AFF-die-DECL
 ‘My dog died.’

(5.8) han hadèm-ìʃ ha-pá:l-ʔá
 2DU work:INF-SBJ AFF-be.heavy-DECL
 ‘Your (DU) work is difficult.’

If the possessive pronoun were bound, a H tone (from the 1DU pronoun) would appear on the first tone-bearing unit in /hadèm/ ‘work’ in (5.8).

5.3. On the Expression of Reflexivity

Northern Mao does not have special reflexive pronominal forms. Rather, reflexivity is handled by a verb suffix /-iŋk/ (cf. section 9.7.1). Baye Yimam (2006:182), noted forms which he termed reflexive pronouns in Northern Mao. These forms involve a personal pronoun + the genitive marker and the noun ‘head’ (5.9).¹¹⁸

(5.9) tí-ŋ ʔto:k-è
 1SG-GEN head-TV
 ‘my head’ (glossed as ‘myself’ in Baye Yimam 2006:183)

I have found only one clear example in my textual data of a structure like (5.9). The example below (5.10) includes the noun phrase ‘our head’ in an emphatic usage which is indeed best translated into English as (an emphatic) ‘ourselves’. However, in the

¹¹⁸Example (5.9) is not represented here exactly as Baye represents the same structure in his discussion (2006:183). I include the tone marking, the form /-ŋ/ (as opposed to Baye’s /-n/) for the genitive case marker and a long vowel on the noun ‘head’.

syntactic context, this is not a true reflexive as the noun phrase itself is not an object of the verb ‘know’.

(5.10) ham-ìŋ a:ts-ìʃ àld-kját’-èt
1PL-GEN language-SBJ know:INF-house-LOC

winz-ek’-ín ham to:k ham-àld-gàʃ-nà
write-PASS-SS:NF 1PL head 1PL-know-PURP-OBJ
‘Our language will be written in schools, in order for us ourselves to
learn.’
(text 20.20)

There is a similar emphatic construction which is quite frequent in my texts. In this construction, a pronoun and the noun ‘head’ are joined in a possessive construction, and the entire noun phrase is followed by the instrumental marker /-an/: [pronoun + /to:k/ ‘head’]-an INS (instrumental). Examples (5.11) and (5.12) illustrate this emphatic construction.

(5.11) íʃ ʔa:ts’-an íʃ ʔto:k-àn tòs-mùnd-á
3SG language-INS 3SG head-INS talk-RECP-DECL
‘They talked to one another, themselves, by their language.’
(text 21.20)

(5.12) ham-por-ín ha-bad-gà-m-bìʃ-á
1PL-forget-SS:NF AFF-disappear-FUT-3-NPST:AUX-DECL

nà-shín-mó ham to:k-àn ham tug-an
this-even-FOC 1PL head-INS 1PL foot-INS

‘We will forget (our language) and it will disappear and all this by our own doing.’

(literally, ‘by our own head, by our own feet’)

(text 21.20)

Again, as is the case with (5.10), the constructions involving these pronouns are not true syntactic reflexives. In (5.11), the reciprocal marking on the verb shows clearly that each speaker is not speaking to herself or himself. In (5.12), the tragedy of language loss is said to be the result of the speakers’ own doing, through the use of ‘by our head’ and ‘by our feet’. Hellenthal notes that in Sheko (Dizoid-Omoti), the noun ‘head’, following a possessive prefix, can occur in reflexive constructions but is not required as a reflexive pronoun, and that more widely, the form serves as an intensifier occurring in various contexts like (5.10) and (5.12) as well as in reciprocal constructions (like 5.11) (2010:194-5).

5.4. Interrogative Pronouns and Other Question Words

Northern Mao has a set of interrogative pronouns which can take case suffixes and which distinguish human elements from non-human (section 5.4.1). There is also a set of question words which are not clearly pronouns and which do not mark any humanness distinction. For ease of reference, I have chosen to include the discussion of these question words with the discussion of the interrogative pronouns. The question words are discussed in section 5.4.2.

5.4.1. Interrogative Pronouns

Northern Mao has a special set of interrogative pronouns formed with the base pronominal forms /kí-/ ‘human’ or /kó-/ ‘non-human’ (Table 5.7).

Table 5.7. Northern Mao Interrogative Pronouns

	Form	Gloss
Citation Form with Terminal vowel	kí-jé	‘who?’
	kó-jé	‘what?’
Subject Case Form	kí-ʃ	‘who?’
	kó-ʃ	‘what?’
Object Case Form	kí-ná	‘whom?’
	kó-ná	‘what?’
Genitive Case Form	kí-ŋ	‘whose?’
	kó-ŋ	‘what’s?’
Comitative / Instrumental	kí-ján	‘with whom?’
	kó-wán	‘with what?’

While the /kí-/ interrogative pronoun is normally used only for humans, when animals act as humans (e.g. in folktales), the /kí-/ pronoun can be used for one animal to question another (5.13). In the example below, a mouse is asking other animals who ate his corn; it is clear from the story that one of other animal characters did (a baboon, in fact).

- (5.13) kí-ʃ mí-à: nà ak'-kup-nà
 who-SBJ eat-INTR this corn-granary-OBJ
 ‘Who ate it, this corn granary?’
 (text 02.30)

Apart from folktales, the humanness distinction appears to hold; see example (5.14) below, where an addressee has been bitten. The answer follows the question.

(5.14) kó-ʃ hì-nà k'ots'-à:
what-SBJ 2SG-OBJ bite-INTR
'What bit you?'

mí:m-íʃ tí-ná ha-k'ots'-á
mosquito-SBJ 1SG-OBJ AFF-bite-DECL
'A mosquito bit me.'

Additional examples below illustrate a selection of the /kí-/ and /kó-/ forms from Table 5.7. As with examples (5.13) and (5.14), each of the utterances ends with the /-à:/ interrogative utterance type marker (cf. section 10.4.2). An example answer is included below each question. For more on question formation, see sections 10.4.2 and 10.5.2.

Human Subject

(5.15) kí-ʃ kí-à:
who-SBJ come-INTR
'Who came?'

tí-ŋ bà:b-ìʃ kí-á
1SG-GEN father-SBJ come-DECL
'My father came.'

Example (5.14), above, illustrates a non-human subject.

Human Object

(5.16) íʃ es-ìʃ kí-ná bà:s-à:
DEF person-SBJ who-OBJ love-INTR
'Whom did the guy love?'

tí-ŋ áad-nà ha-bà:s-á
1SG-GEN sister-OBJ AFF-love-DECL
'He loved my sister.'

Non-Human Object

- (5.17) kó-ná hì-mi-à:
what-OBJ 2SG-eat-INTR
'What did you eat?'

pák-nà ha-tí-mí-[↓]á
injera-OBJ AFF-1SG-eat-DECL
'I ate injera.'

Human Predicate Nominal (in Cleft)¹¹⁹

- (5.18) kí-jé hì-int'-t-ìf-à:
who-TV 2SG-saw-REL-SBJ-INTR
'Who is it that you saw?'

tí-ŋ [↓]ob-è tí-int'-t-ìf-á
1SG-GEN brother-TV 1SG-saw-REL-SBJ-DECL
'It is my brother that I saw.'

Human Genitive

- (5.19) kí-ŋ kjat'-ìf nà-àt bíf-à:
who-GEN house-SBJ here-LOC EXIST-INTR
'Whose house is here?'

ʃéjk-ìŋ kjat'-ìf nà-àt ha-bíf-[↓]á
sheikh-GEN house-SBJ here-LOC AFF-EXIST-DECL
'The Sheikh's house is here.'

Unlike the other endings which follow the /kí-/ and /kó-/ forms above, the comitative / instrumental ending /-an/ may be better viewed as a postposition than a case

¹¹⁹ For a discussion of the cleft construction, its relationship to non-verbal predication constructions, and the use of the citation form in clefts, see section 11.1.3.

marker. The postposition vs. case marker distinction is discussed in section 8.3.3. In terms of humanness, comitative or accompaniment expressions prototypically involve a human participant (5.20), while instrumental expressions typically involve a non-human element (5.21).

Human Comitative

- (5.20) kǐ-ján bàm̀bàs-ǰál-nà hì-ki-à:
 who-COM Bambassi-way-OBJ 2SG-come-INTR
 ‘With whom did you come to Bambassi?’

tí-ŋ ma:gèw-àn tí-kí-^lá
 1SG-GEN friend-COM 1SG-come-DECL
 ‘I came with my friend.’

Non-Human Instrumental

- (5.21) jeníʃ dur-èt kó-wán kénz-and-òw-à:
 ancient year-LOC what-INS farm-NSG-PST:HAB-INTR
 ‘Back in the old days, what did they used to farm with?’

jeníʃ dur-èt àlùkás-án ha-kénz-and-òw-á
 ancient year-LOC stick-INS AFF-farm-NSG-PST:HAB-DECL
 ‘Back in the old days, they used to farm by stick.’

Unlike the personal pronouns, interrogative pronouns cannot occur in the possessive construction (compare 5.22 to 5.23).

- (5.22)*kǐ kǰat'-ìʃ nà-àt bíʃ-à:
 who house-SBJ here-LOC EXIST-INTR
 intended: ‘Whose house is here?’

(5.23) íʃ ʔkʲatʔ-ìʃ nà-àt ha-bíʃ-ʔá
 3SG house-SBJ here-LOC AFF-EXIST-INTR
 ‘Her/house house is here.’

There is an alternative to the /kó-/ inanimate form mentioned in Table 5.6 and the data above. It is possible to join /kó-/ with /mìsè/ ‘thing’ in an associative construction and use the resulting form as an interrogative pronoun. Baye Yimam notes this form rather than the simpler /kó-/ (2006:184). This form is especially common in the simple question ‘What is it?’ (5.24), but can also be used in any context where the /kó-/ form is used (5.25).

(5.24) kó-mís jà
 what-thing COP
 ‘What is it?’

ʃik jà
 knife COP
 ‘It’s a knife.’

(5.25) íʃ pʔiʃ-ìʃ kó-mís-nà mí-à:
 DEF child-SBJ what-thing-OBJ eat-INTR
 ‘What did the child eat?’ (meaning ‘food’, not ‘thing’ literally)

kà:l-là ha-mí-ʔá
 porridge-OBJ AFF-eat-DECL
 ‘S/he ate porridge.’

5.4.2. Other Question Words

The set of question words in Table 5.8, not all of which are clearly pronominal, do not mark a humanness distinction.

Table 5.8. Other Question Words

	Form	Gloss
Time	ná:t	‘when?’
Location / Source	hind-ét	‘where?’ / ‘from where?’
Goal	hind-fál	‘to where?’
Attribution	hindíʃ	‘which?’
Manner	nú:n	‘how?’
Reason	nú:níʃ	‘why?’
Amount	nú:	‘how much?’

Based solely on recurring partials in Table 5.8, it appears that three forms, /ná:/, /hind-/ and /nú:/, may have at one time formed the bases of these words. I have not been able to determine exactly how these developed, however.

It seems likely that the [t] on /ná:t/ is the locative /-et/, as is more clearly the case with /hind-ét/; though I know of no /ná/ form (including the object case marker /-na/ and the proximal demonstrative /nà/) in Northern Mao--only the ‘when’ form which always includes the [t]. It seems likely that /ná/ may be related to the /nà/ demonstrative pronominal as the presence of a locative marker suggests the /ná/ would have been syntactically substitutable with a noun phrase. The /ná/ form never occurs without the /-t/ today.

The relator noun /fal/ ‘way’ joins to /hind-/ in an associative construction to question a goal. The [iʃ] on /hind-/ and /nú:n-/ may be related to the determiner /íʃé/ or could be cognate with the /-iʃ/ subject case marker, though these forms cannot be used to question elements which are candidates for the subject case suffix today. Finally, the final [n] which distinguishes the ‘how?’ form from the ‘how much/many?’ form is a mystery to me. As with the [t] and the [iʃ], I do not parse it separately as I cannot gloss it--though it seems clear that it was once a suffix. Examples of all these question words are illustrated

below, with answers following.

Time

- (5.26) ná:t dù:l-ol-íʃ kí-wand-gà-m-bìʃ-à:
when hyena-PL-SBJ come-NSG-FUT-3-NPST:AUX-INTR
‘When do hyenas come?’

sá:p-èt ha-kí-wand-gà-m-bìʃ-á
night-LOC AFF-come-NSG-FUT-3-NPST:AUX-DECL
‘They come at night.’

Both (5.27) and (5.28) are examples of the location interrogative.

Location

- (5.27) ʃó:ʃ-íʃ hind-ét já
snake-SBJ where-LOC COP
‘Where’s the snake?’

ʃó:ʃ-íʃ ma:r-et bitè
snake-SBJ grass-LOC be.PST
‘The snake was in the grass.’

- (5.28) hind-ét hì-int’-à:
where-LOC 2SG-see-INTR
‘Where did you see it?’

ʃó:ʃ-ná ma:r-et tí-int’-á
snake-OBJ grass-LOC 1SG-see-DECL
‘I saw the snake in the grass.’

Source

- (5.29) hind-ét hì-ki-à:
where-LOC 2SG-come-INTR
‘Where did you come from?’

àsós-èt tí-kí-^lá
Asosa-LOC 1SG-come-DECL
‘I came from Asosa.’

Goal

- (5.30) háts’à hind-ǰál hów-gè-m-n-à:
tomorrow where-way go-FUT-2SG-NPST:AUX-INTR
‘Where will you go tomorrow?’

àdís-ǰàl hów-gà-t-n-á
Addis-way go-FUT-1SG-NPST:AUX-DECL
‘I will go to Addis.’

- (5.31) kí-ján bàmbàs-ǰál-nà hì-ki-à:
who-COM Bambassi-way-OBJ 2SG-come-INTR
‘With whom did you come to Bambassi?’

tí-ŋ ma:gèw-àn tí-kí-^lá
1SG-GEN friend-COM 1SG-come-DECL
‘I came with my friend.’

The attribution interrogative appears to be used for questioning within a set (5.32).

Attribution

- (5.32) *hindíʃ shak'-ìʃ hì-ŋ ak'-nà mí-à:*
which goat-SBJ 2SG-GEN grain-OBJ eat-INTR
'Which goat ate your grain?'

jéʃ shak'-ìʃ tí-ŋ ʔak'-nà ha-mí-ʔá
that goat-SBJ 1SG-GEN grain-OBJ AFF-eat-DECL
'That goat ate my grain.'

Adverbials of reason and manner may be expressed through a variety of constructions (cf. sections 13.4.1). But while the adverbial forms can be expressed multiple ways, the question words are always /nú:n/ for manner and /nú:níʃ/ for reason.

Manner

- (5.33) *ìʃ mùnts'-ìʃ nú:n jó:ʃ-ná pí-gà-m-n-à:*
DEF woman-SBJ how snake-OBJ kill-FUT-3-NPST:AUX-INTR
'How will the woman kill the snake?'

àlùkás-àn héz-in ha-pí-gà-m-n-á
stick-INS hit-SS:NF AFF-kill-FUT-3-NPST:AUX-DECL
'She'll kill it by hitting it with a stick.'

Reason

- (5.34) *nú:níʃ hì-jé:ts'-à:*
why 2SG-run-INTR
'Why did you run?'

nogdów tí-int' àr-èt tí-jé:ts'-ʔá
lion 1SG-see reason-LOC 1SG-run-DECL
'I ran because I saw a lion.'

The form /nú:/ serves to question amount. The question word can be used in an attributive construction (5.35) or it can occur alone as an argument (5.36). In all the

instances where I have found /nú:/ as a single element in an argument, it is used to question the monetary cost of something.

Amount

(5.35) nú: es-ìʃ bíʃ-à:
how.many person-SBJ EXIST-INTR
‘How many people are there?’

gjá es-ol-iʃ ha-bíʃ-and-á
many person-PL-SBJ AFF-EXIST-NSG-DECL
‘There are many people.’

(5.36) í-té nú: jà
3SG-SBJ how.much COP
‘How much is it?’ (i.e. ‘cost’)

numbu bɨrr jà
two bɨrr COP
‘It’s two bɨrr (Ethiopian currency).’

CHAPTER VI

DEMONSTRATIVES AND THE DEFINITE ARTICLE

In Northern Mao, demonstratives and the definite article modify nouns through the use of the attributive construction (section 4.4.2.1). Demonstratives and the definite article are mutually exclusive categories and when present, are always in first position in the noun phrase (cf. section 8.1). As a result, they may be considered as members of a class of syntactic determiners in Northern Mao. There is strong evidence to suggest that the definite article developed from one of the demonstratives (see section 6.3).

Chapter VI begins with a discussion of the demonstrative class and focuses on Northern Mao's four demonstrative forms as well as two distinct functions: those which can be used to indicate referents in the physical world and those which are used anaphorically in discourse. After the discussion of demonstratives, I examine Northern Mao's definite article (section 6.2) and discuss its historical relationship to a demonstrative (section 6.3).

6.1. Demonstratives

There are four demonstratives in Northern Mao. I divide these into two groups, based on their functions. The first group is comprised of those demonstratives which can be used exophorically: to focus attention on elements positioned in the physical world (Diessel 1999:94). There are three demonstratives in this group: the proximal /nàʔé/, the distal /jéʃé/ and the extra-distal /gjétʃé ~ gjéʃé/. These demonstratives are discussed in section 6.1.1.

The second group of demonstratives can be used anaphorically in discourse. One

of the demonstratives from the first group, the proximal /nàʔé/, also belongs to the second group. The other member of this second group is the distal demonstrative /jéfé/, which is only attested in an anaphoric function.

In the discussion which follows, I will describe the demonstratives which function exophorically first (section 6.1.1). We will examine these in adnominal, pronominal and locational uses. Then, I will describe those demonstratives which function anaphorically (section 6.1.2).¹²⁰ We will consider these demonstratives in adnominal, pronominal and locational uses as well, focusing on how they work in discourse to establish anaphoric reference.

6.1.1. Demonstratives in the Exophoric Function

The three demonstratives which can function exophorically are provided in Table 6.1. Baye Yimam reports only two demonstratives for Northern Mao: forms matching my proximal and extra-distal (2006:183).

Table 6.1. Demonstratives Which Function Exophorically

	Proximal (PROX)	Distal (DIST)	Extra-Distal (EDIST)
Demonstrative Stems	nàʔé	jéfé	gjétjé ~ gjéjé

The demonstratives in Table 6.1 are organized by a three-way distinction on a distance scale from the deictic center, glossed as proximal (PROX), distal (DIST) and extra-distal (EDIST). While it would be possible to represent a tripartite distance distinction as

¹²⁰ In the literature, the term *exophoric* is sometimes juxtaposed with *endophoric* (Diessel 1999:93). In Diessel 1999, *endophoric* is used broadly to include anaphoric reference as well as “discourse deictic” functions where previously-mentioned propositions are referred to as well as “recognitional” uses where demonstratives are used to refer to elements not previously mentioned but which are interpreted as identifiable to speakers on the grounds that the referent is part of generally shared knowledge (1999:93). I have elected to divide demonstratives by exophoric and anaphoric functions on the grounds that in Northern Mao, I have not found examples of “recognitional” uses. Rather, all the non-exophoric functions which I have been able to identify fit within the general domain of anaphora.

proximal, medial and distal, I prefer to use distal for the middle position and extra-distal for the position furthest from the deictic center. I believe this better characterizes the Northern Mao system: the distinction furthest from the deictic center is only very rarely used. Additionally, I've not been able to determine any clear distance distinction which would precipitate the use of the distal over the medial form. The distinctions between these distances do not appear to be relevant to the range of sight, as even the most distal form can include elements which are visible to the speaker; see example (6.3) below.

There are no elevational deictics used to distinguish 'up there' or 'down there'. The only locational distinctions in these demonstratives are distance-oriented, relative to a deictic center. Northern Mao demonstratives do not specify whether an element is near the speaker vs. near the addressee, as demonstratives in some languages do (Diessel 1999:38).

6.1.1.1. Adnominal Usage

When used adnominally, the terminal vowel of these demonstratives is not present. No tonal perturbations are found on the element following the demonstrative.

(6.1) nà kʃat'-ɨʃ tí-ŋ-è
 PROX house-SBJ 1SG-GEN-TV
 'This house is mine.'

(6.2) jéʃ ʃak'-nà ha-tí-wó:l-^lá
 DIST goat-OBJ AFF-1SG-want-DECL
 'I want that goat.'

- (6.3) gjétʃ dù:l-là ha-tí-intʰ-biʃ-á
 EDIST hyena-OBJ AFF-1SG-watch-NPST:AUX-DECL
 ‘I’m watching that hyena (way over there).’

6.1.1.2. Pronominal Usage

In the pronominal function, exophoric demonstratives can take nominal inflectional morphology: the /-kuw/ dual or /-(w)ol/ plural number suffixes and/or subject, object and genitive case marker. As the genitive case marker is not a marker of core arguments, when a genitive form occurs as a syntactic subject or object, it also carries the relevant subject or object case marker at the right edge (cf. the final two case categories in Table 6.2).¹²¹ The pronominal forms of the exophoric demonstratives are listed in Table 6.2.

Table 6.2. Exophoric Demonstrative Pronouns Marked for Number and Case

Case	Number	Proximal	Distal	Extra-Distal
Subject	Singular	nà-ʃ	jéʃ-iʃ	gjétʃ-iʃ
	Dual	nà-kuw-iʃ	jéʃ-kuw-iʃ	gjétʃ-kuw-iʃ
	Plural	nà-wol-iʃ	jéʃ-wol-iʃ	gjétʃ-wol-iʃ
Object	Singular	nà-nà	jéʃ-ná	gjétʃ-ná
	Dual	nà-kuw-na	jéʃ-kuw-na	gjétʃ-kuw-na
	Plural	nà-wol-la	jéʃ-wol-la	gjétʃ-wol-la
Genitive	Singular	nà-iŋ	jéʃ-iŋ	gjétʃ-iŋ
	Dual	nà-kuw-iŋ	jéʃ-kuw-iŋ	gjétʃ-kuw-iŋ
	Plural	nà-wol-iŋ	jéʃ-wol-iŋ	gjétʃ-wol-iŋ
Genitive with Subject Case	Singular	nà-iŋ-iʃ	jéʃ-iŋ-iʃ	gjétʃ-iŋ-iʃ
	Dual	nà-kuw-iŋ-iʃ	jéʃ-kuw-iŋ-iʃ	gjétʃ-kuw-iŋ-iʃ
	Plural	nà-wol-iŋ-iʃ	jéʃ-wol-iŋ-iʃ	gjétʃ-wol-iŋ-iʃ
Genitive with Object Case	Singular	nà-iŋ-nà	jéʃ-iŋ-nà	gjétʃ-iŋ-nà
	Dual	nà-kuw-iŋ-nà	jéʃ-kuw-iŋ-nà	gjétʃ-kuw-iŋ-nà
	Plural	nà-wol-iŋ-nà	jéʃ-wol-iŋ-nà	gjétʃ-wol-iŋ-nà

¹²¹ Demonstrative pronouns, like other nominals, can also take the terminal vowel /e/ at the far right edge, after all other inflectional suffixes (cf. the discussion of the terminal vowel’s distribution in section 8.2).

Pronominal forms of the exophoric demonstratives can also take the locative postpositional suffixes when they serve as locational deictics (cf. section 6.1.1.3).

Select examples of the exophoric demonstrative pronouns are illustrated below.

(6.4) nà-kuw-ìʃ kí-wand-á
PROX-DU-SBJ come-NSG-DECL
‘These (DU) came.’
(referring to two men)

(6.5) kjamb-es-ìʃ gjétʃ-ná ma:r-èt
hunt:INF-person-SBJ EDIST-OBJ grass/bush-LOC

ha-pí-¹á
AFF-kill-DECL
‘A hunter killed that one (way over there) in the bush.’
(referring to a small antelope)

Those demonstratives which are marked with the genitive case generally refer to an element which is in some way associated with the topic at hand (6.6). In my corpus, these are not animate. These associated elements are thus referenced in spatial relationship to the deictic center, most typically the speaker.

(6.6) nà-ìŋ-ìʃ kè̃m-ít-è
PROX-GEN-SBJ be.big:INF-REL-TV
‘This one’s is big.’
(referring to the shaft of a spear)

6.1.1.3. Locational Usage

Each of these three demonstrative forms can also be used as a locational deictic in an exophoric function. Locational deictics are often called *demonstrative adverbs* in other

literature (cf. Diessel 1999:74), based on the fact that such expressions function “adverbially” in a clause, indicating a location of an event or a situation. This obtains for Northern Mao as well.

When they serve as locational deictics, the exophoric demonstrative pronouns and are followed by the /-et(a)/ locative or source postposition (6.7 and 6.8) or the /-na/ goal (object case) marker (6.9).

(6.7) jeníʃ dur-èt màw-és-ol-iʃ nà-àt
 ancient year-LOC Mao-person-PL-SBJ PROX-LOC

ha-kòw-and-á
 AFF-live/sit-NSG DECL
 ‘In the old days, Mao people lived here.’

(6.8) jawìʃ-iʃ gjétʃ-ét ha-kòw-á
 Bertha-SBJ EDIST-LOC AFF-live/sit-DECL
 ‘Bertha (people) lived over there.’

(6.9) jàsín-iʃ nà-nà jétsʰ-á
 Yasin-SBJ PROX-OBJ run-DECL
 ‘Yasin ran (to) here.’

6.1.2. Demonstratives in the Anaphoric Function

While section 6.1.1 illustrates demonstratives which point to physical referents in the surrounding speech situation, section 6.1.2 is concerned with demonstratives used anaphorically in discourse. As noted in section 6.1, the proximal demonstrative /nàʔé/ can serve exophorically as well as anaphorically, in situations where there is special focus.¹²²

¹²² The other demonstratives which can function exophorically, /jéʃé/ and /gjétʃé ~ gjéʃé/ (Table 6.1), have not been found functioning anaphorically.

The anaphoric function of /nà/ includes both adnominal (6.10 and 6.11) and pronominal (6.12 and 6.13) usages.

The distal demonstrative /íjé/, on the other hand, functions only anaphorically. When I have tried to use it pronominally, in reference to a physical reality (i.e. in an exophoric function), speakers have rejected this and substituted the distal demonstrative /jéjé/ (in Table 6.1).¹²³ Any attempt to use the /íjé/ demonstrative adnominally in an exophoric function is problematic. It is clear that this form used to be used in an adnominal function as well, but it has been reanalyzed as the definite article today (cf. section 6.2). The distal demonstrative /íjé/ can be used pronominally (6.14) as well as a locational deictic (6.15 and 6.16), but only anaphorically.

6.1.2.1. Adnominal Usage

The proximal demonstrative /nà/ is used as an anaphoric adnominal when there is special focus on a previously mentioned noun phrase. For instance, in example (6.10), the narrator breaks from the storyline and addresses his audience with a question, using the proximal demonstrative to refer back to one of the characters ('this maiden') in the narrative.

In (6.10), after the 'maiden' has been originally introduced as an indefinite noun phrase with no demonstrative or article, it is then consistently marked with definite article until the narrator drops the storyline to address the audience, referring back to the maiden in the story through the use of the proximal demonstrative.¹²⁴ The noun phrase 'this

¹²³ It is not clear to me if there is any historical relationship between the distal demonstrative /jéjé/ which functions exophorically and the distal demonstrative /íjé/ which functions anaphorically.

¹²⁴ The question in (6.10) is not rhetorical. A member of the audience is expected to try to answer this question. The narrator then finishes the story, announcing that no one will marry the maiden.

maiden' is also fronted out of the canonical SOV order; both the use of the proximal demonstrative as well as the word-order show this participant to be in focus.

(6.10) ha:ts' pa:ŋ àld-ìt es-ìʃ-ín íʃ pa:lt'-nà
water swim know-REL person-SBJ-CONJ DEF maiden-OBJ

hí-wos-kj-á
3SG-take-TOWARD-DECL

hàwèl-là tí-wò:ts'-biʃ-á nà pa:lt'-nà
2PL-OBJ 1SG-ask-NPST:AUX-DECL PROX maiden-OBJ

kít es-ìʃ wos-gà-m-n-á
which person-SBJ take-FUT-3-NPST:AUX-DECL

'And the person who knew how to swim brought the woman out.

[now, the narrator turns to the audience] I am asking you (PL), "This maiden, which person will marry her?"

(text 25.08-09)

In (6.11), the speaker is lamenting the fact that many Northern Mao are no longer speaking their heritage language. In the third line of (6.11), the behavior described in the first two lines is referred to with 'this road/path'. Diessel calls this type of anaphoric reference a "discourse deictic" function in that the anaphor is not simply a noun-phrase but an entire proposition (1999:93). The anaphor is in fact the preceding two clauses.

(6.11) ham a:ts' ham-por-ùṅgùl-biṣ-á
1PL language 1PL-forget-throw.away-NPST:AUX-DECL

ham a:ts' ham-ṣòw-biṣ-á
1PL language 1PL-lose/forget-NPST:AUX-DECL

nà pòm̄b-ìṣ ha-ts'èg-á
PROX road-SBJ AFF-be.bad-DECL

‘We are throwing away our language. We are losing our language. This path is bad.’

(text 21.13)

6.1.2.2. Pronominal Usage

While only the /nà/ (or /nàʔé/ in citation form) demonstrative can serve adnominally in the anaphoric function, both the /nàʔé/ and /íṣé/ demonstratives can be used pronominally.¹²⁵ In every instance where I have checked, these demonstrative pronouns can take the various number and case markings reported for demonstratives in the exophoric function (Table 6.2, above). The Anaphoric demonstrative pronouns are listed in Table 6.3.

¹²⁵ My consultants nearly always translate the /íṣé/ demonstrative pronoun with the Amharic distal demonstrative /ja/, while they use the Amharic proximal demonstrative /jih/ for Northern Mao's /nàʔé/ demonstrative. Given the additional exophoric function of Northern Mao's /nàʔé/, its proximal meaning is clear but there are no uses of the /íṣé/ where it clearly points to any element in physical space. Perhaps the /íṣé/ was once an exophorically functioning distal demonstrative at an earlier time. Certainly, demonstratives which function anaphorically tend to develop from exophoric forms (Diessel 1999:155).

Table 6.3. Anaphoric Demonstrative Pronouns Marked for Number and Case

Case	Number	Proximal	Distal
Subject	Singular	nà-ʃ	íʃ-íʃ
	Dual	nà-kuw-íʃ	íʃ-kuw-íʃ
	Plural	nà-wol-íʃ	íʃ-wol-íʃ
Object	Singular	nà-nà	íʃ-ná
	Dual	nà-kuw-na	íʃ-kuw-na
	Plural	nà-wol-la	íʃ-wol-la
Genitive	Singular	nà-iŋ	íʃ-iŋ
	Dual	nà-kuw-iŋ	íʃ-kuw-iŋ
	Plural	nà-wol-iŋ	íʃ-wol-iŋ
Genitive with Subject	Singular	nà-iŋ-íʃ	íʃ-iŋ-íʃ
	Dual	nà-kuw-iŋ-íʃ	íʃ-kuw-iŋ-íʃ
	Plural	nà-wol-iŋ-íʃ	íʃ-wol-iŋ-íʃ
Genitive with Object	Singular	nà-iŋ-nà	íʃ-iŋ-nà
	Dual	nà-kuw-iŋ-nà	íʃ-kuw-iŋ-nà
	Plural	nà-wol-iŋ-nà	íʃ-wol-iŋ-nà

In (6.12), the proximal /nà/ is used as a discourse deictic, referring to the earlier proposition ‘we are forgetting our language’.

- (6.12) ham a:ts-nà ham-por-biʃ-á
 1PL language-OBJ 1PL-forget-NPST:AUX-DECL
- nà-ʃ** kó-ms-iŋ jà ha-ts`èg-á
 PROX-SBJ what-thing-GEN be.PRES AFF-be.bad-DECL
- ‘We are forgetting our language. This is what sort of thing? It is bad.’
 (text 21.10)

This use in (6.12) exhibits special emphasis through the use of a rhetorical question meant to express disdain for the behavior of forgetting the language.

In (6.13), from the same text, the speaker continues lamenting the loss of his language and concludes that its loss is really the result of the Northern Mao speakers’ own behavior. The proximal /nà/ here suggests an element of surprise (contra expectation): ‘And THIS is by our own doing’.

(6.13) ham-por-ín ha-bad-gà-m-bìʃ-á
 1PL-forget-SS:NF AFF-disappear-FUT-3-NPST:AUX-DECL

nà-ʃ-ín-mó ham to:k-àn ham tug-an
 PROX-SBJ-CONJ-FOC 1PL head-INS 1PL foot-INS

‘We will forget (our language) and it will disappear and all this is by our own doing.’

(literally, ‘by our own head, by our own feet’)

(text 21.20)

The demonstrative /íʃé/ is used anaphorically in (6.14). Here, the wordform /íʃ-ná/ DIST-OBJ receives special emphasis, marked with an increase in volume and a higher register for the tone. In (6.14), the demonstrative is referring to a ‘road’ (a way or means to keep their language alive) in the previous clause but with special emphasis because, while his audience has indeed heard about a way to keep the language alive, they are not putting it into practice.

(6.14) pòm-b-ìʃ bíʃ-á íʃ-ná k'ew-iŋk-ín
 road-SBJ EXIST-DECL DIST-OBJ hear-REFL-SS:NF

hàw-àld bíʃ-á àld-kját'-ètà
 2PL-know NPST:AUX-DECL know:INF-house-LOC

‘There is a way; You have heard that yourselves and know it from school.’

(text 20.26)

6.1.2.3. Locational Usage

It is also possible to use the endophoric distal demonstrative /íʃé/ as a locational deictic, but only anaphorically. It cannot refer to a place which has not already been mentioned, unlike exophoric locational deictics (section 6.1.1.3). I have not found any

instances where the /nàʔé/ demonstrative is used as an anaphoric locational deictic. It can however serve as an exophoric locational deictic (as in ex. 6.9, above).

In (6.15), the anaphor is the location Mus'a Mado mentioned in the first line of the example.

(6.15) mùts'á màd-ét tí-p'íʃ-^lek'-á
Mus'a Mado-LOC 1SG-give.birth-PASS-DECL

íʃ-ét tí-kí-^lá
DIST-LOC 1SG-come-DECL

'I was born in Mus'a Mado (a large k'ebele southeast of Bambassi town). I come from there.'

(text 20.03)

In (6.16), the phrase /íʃ-ét/ is not syntactically required. The locative marker on 'time' (in the first line) serves to indicate that the second event overlaps with the time of the first event. In this example, the function of /íʃ-ét/ may be more pragmatic than syntactic; it may be functioning as a connective, transitional discourse marker. As indicated by the paranthetic note in the free translation, 'then' may be a good rendering in English.

(6.16) mìkìrbét íʃkol-^lhi-t' gis-et
mikir.bet 3PL-go-REL time-LOC

íʃ-ét tí-ʃ-ín-mó wèréd-ná tí-mé:nt-ín
DIST-LOC 1SG-SBJ-CONJ-FOC wereda-OBJ 1SG-tell-SS:NF

'At the time they went to the Mikir Bet (Amharic), at that (then), I also talked to the the Woreda (Amharic) officials...'

(text 26.38)

6.2. The Definite Article

The definite article /ɨj/ is very frequently used in natural Northern Mao discourse as a means of indicating anaphoric reference in participant tracking.¹²⁶ In the discussion below, I will first illustrate the use of the definite article, drawing attention to the difference from those demonstratives which are used anaphorically (section 6.1.2). I will then offer a historical account of the development of the definite marker, suggesting that both the definite marker /ɨj/ and the 3rd person pronoun /ɨjɛ̃/ have been derived from the /ɨjɛ̃/ demonstrative (see section 6.3 below).

The definite marker is used for highly topical elements and is typically used immediately after a participant has been introduced, perhaps as a means of establishing topicality as well as tracking. The demonstratives which function anaphorically, on the other hand, are used only in cases of special focus and almost never for elements that are highly topical; this distinction in pragmatic function is, in fact, one of the central features which divide anaphoric demonstratives from definite articles (Diessel 1999:128-9).

When a participant is introduced, it is most frequently an indefinite noun phrase. In (6.17) below, three participants are introduced: a husband (i), a wife (j), and another man (k); each is marked with subscript coding.

In the first line (6.17, below), both the husband and wife are introduced with no special marking. In the second line, a form identical to that used for ‘husband’ in line one is found, but this form is not interpreted as co-referential with the ‘husband’ of line one, as the later mention of ‘husband’ in the third line makes clear. When the wife is

¹²⁶ In natural Northern Mao discourse, the most frequent means of anaphoric reference in participant tracking is subject marking on the verb.

mentioned the second time (in the second line), ‘woman’ is marked with the definite article /ɨʃ m̀ntsʹ/ DEF woman.

(6.17) jeníʃ ʰgís-ét entʹ-in_i m̀ntsʹ-ìn_j bà:s-bà:s-á
 ancient time-LOC male-CONJ woman-CONJ love-love-DECL
 ‘A long time ago, a man and woman were in love.’

entʹ-ɨʃ_k ɨʃ m̀ntsʹ_j ga:b-èt kí-in
 male-SBJ DEF woman place-LOC come-SS:NF

hí-bíʃ-ɨʃ nakʹɨʃ-ɨʃ_i
 3SG-EXIST-DS:NF husband-SBJ

pá:-bíʃ-ɨʃ
 NEG.EXIST-NPST:AUX-DS:NF

‘A (another) man was coming to the woman’s place when (her) husband was not present...’
 (text 04.02)

Presumably, based on what I’ve observed in many texts, if the definite article were used on the form /entʹ-ɨʃ/ in the second line, this would indeed be interpreted as the same person (i.e. the husband) introduced in the first line. Perhaps of greatest interest here is that the woman is set up as most topical of all the participants and is never again mentioned with an overt noun in the text. Rather, the woman serves as the grammatical subject in every instance where she is mentioned and thus is expressed by the 3SG verb forms. The definite article is found marking each additional nominal instance of the ‘other man’ (a total of nine times) and the ‘husband’ (a total of four more times).

In some instances, participants are introduced as specific indefinites, marked with the numeral /hɨʃki/ ‘one’ (6.18); the use of the numeral ‘one’ for this function is clearly

attested in other languages (Wright and Givón 1987; Diessel 1999:138).

(6.18) jeníʃ ˈdur-èt hiʃk-ògor-ìʃ bíʃ-òw-á
ancient year-LOC one-chief-SBJ EXIST-PST:HAB-DECL
‘In the old days, there used to be one chief.’

íʃ ògor mùnts’-ìʃ nú: wi:-gà-m-bìʃ-à:
DEF chief woman-SBJ how say-FUT-3-NPST:AUX-INTR
‘And what does a wife of the chief say?’
(text 30.01-02)

The ‘chief’ is introduced in the first line of the story, marked with the numeral ‘one’. In the next line, the ‘chief’ begins to be marked with the definite article /íʃ/.¹²⁷ In the remainder of the text, every additional overt mention of ‘chief’ includes the definite article (a total of six additional times).

While the examples above involve the definite marker used each time a participant is mentioned following its introduction, it is more typical for anaphoric marking to include a number of strategies in any one text. For instance, text 05 is the story of Adam AlHassan, a Sudanese man who, according to Northern Mao oral history, first brought modern farming techniques to the Northern Mao and introduced them to Islam. In the account recorded in text 05, AlHassan arrives traveling on a donkey but the donkey wanders off and eats a Mao person’s squash leaves. As a result, the Mao people stab the donkey, killing it. AlHassan comes upon the scene and sees the donkey and then questions the Mao about the donkey. This account is broken up into examples (6.19-6.22)

¹²⁷ The structure of the phrase is [[íʃ ògor]_{AC} [mùnts’]_{PC}]-ìʃ, where an attributive construction (_{AC}) serves as the first element in a possessive construction (_{PC}) and the entire possessive construction is marked with subject case.

below.

In (6.19), the noun phrase ‘donkey’ is indefinite when it is first introduced.

(6.19) àlhásàn-ìʃ kí-in ʃùndó:r-án kí-in
AlHassan-SBJ come-SS:NF donkey-INS come-SS:NF
‘AlHassan came by donkey...’
(text 05.06)

In (6.20), however, the donkey is marked with the definite article when it is mentioned the second time, three lines later.

(6.20) màw-és-ìʃ hí-kòb-t ku:l-èt
Mao-person-SBJ 3SG-live-REL place-LOC

íʃ ʃùndo:r-ìʃ kí-in
DEF donkey-SBJ come-SS:NF
‘The donkey came (without AlHassan) to a place where a Mao
person lived...’
(text 05.09)

In the first half of (6.21), the donkey is not mentioned overtly, apart from 3SG marking on the non-final verb ‘eat’, but in the second half of the example, the definite article appears again, modifying the overt noun ‘donkey’.

(6.21) màw-és osim-wa:l-la kí-in hí-mí-íʃ
 Mao-person squash-leaves-OBJ come-SS:NF 3SG-eat-DS:NF

màwés-wol-íʃ íʃ-ìŋ osim-e
 Mao-person-PL-SBJ 3SG-GEN squash-TV

ósím-wá:l nà-àt
 squash-leave PROX-LOC

íʃ ʃùndo:r-na ts'ér-in íʃkol-^lpí-íʃ
 DEF donkey-OBJ stab-SS:NF 3PL-kill-DS:NF

íʃ-íʃ-ín kí-in int'-ín
 3SG-SBJ-CONJ come-SS:NF see-SS:NF

‘He (the donkey) came and was eating a Mao person’s squash leaves, and the Mao people, due to the squash leaves, stabbed the donkey, and they killed it and he (AlHassan) came and saw...’
 (from text 05.10-12)

At the end of example (6.21), AlHassan returns and sees that the donkey has been killed. He then questions the Mao people about the donkey, using the proximal demonstrative in an exophoric function, pointing to the dead donkey before him.

(6.22) íʃ-ìŋ k'ànts' ínts'-in
 3SG-GEN self be.afraid-SS:NF

nà ʃùndo:r-íʃ nú: hí-in-íʃ hàw-pi-â:
 PROX donkey-SBJ what 3SG-do-DS:NF 2PL-kill-INTR

‘He became afraid (and asked), “What did this donkey do? Did you (PL) kill it?”
 (from text 05.13)

So, it is not always the case that once a participant has received definite marking, it is

always marked with the definite article. We will now turn to discuss the development of the definite article and its sister forms, the 3rd person pronouns.

6.3. On the Development of the Definite Article and 3rd Person Pronoun

The demonstrative pronoun /íǎ/ (illustrated in section 6.1.2.2), which is used anaphorically to track participants in discourse, is very similar in form (and in function) to the definite article /í/ and the 3rd person pronouns /íǎ/ 3SG, /íǎkuwe/ 3DU and /íǎkolè/ 3PL. I do not believe this similarity is accidental. It is almost certainly the case that the definite article and the 3rd person pronoun /í/ base are each derived from the demonstrative /íǎ/. Thus, my analysis differs somewhat from Baye Yimam's, where no /íǎ/ demonstrative is identified and where the definite article is analyzed as a prefix, while adnominal demonstratives are phonologically free forms (2006:191 and 208).

Like the proximal /nà/ form today (in its anaphoric function), the demonstrative /íǎ/ was very likely used adnominally as well as pronominally, serving as a distal counterpart to the proximal /nà/. In its adnominal function, the demonstrative's form would have been /íǎ/, with the loss of the terminal vowel, due to the fact that it is immediately followed by the elements it modifies (cf. section 8.2). But as a demonstrative, the adnominal form would have been used primarily to mark previously mentioned non-topical participants with special focus (Diessel 1999:93), just as the /nà/ proximal form is still used today. It appears that the /íǎ/ demonstrative began to be extended from non-topical to all manner of previously mentioned referents. It was this extension in function which led to the development of the definite article and the 3rd person pronouns: the definite article developed from the adnominal function of the /íǎ/

demonstrative while the 3rd person pronoun developed from the pronominal function of the same demonstrative. Figure 6.1, below, illustrates this development.

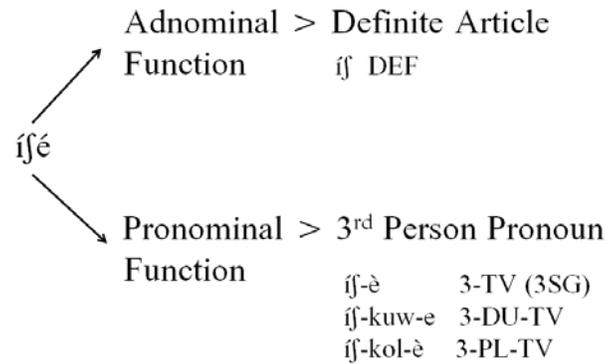


Figure 6.1. The Grammaticalization of the Definite Article and the 3rd Person Pronoun

The large arrows in Fig. 6.1 indicate two older synchronic functions (the adnominal and pronominal uses) of the single demonstrative /ifé/ in its anaphoric function; the > arrows indicate historical reanalysis which produced new forms. Of course, the demonstrative /ifé/ is still found in use as an anaphoric demonstrative pronoun (cf. section 6.2). My consultants translate the demonstrative pronoun /ifé/ with the distal demonstrative form /ja/ in Amharic. The adnominal function of the /ifé/ demonstrative, however, is no longer distinguishable from the definite article, as the form has been extended to many types of referents regardless of topicality.

Diessel notes that “adnominal demonstratives provide a common historical source for definite articles” (1999:128). He goes on to summarize the findings of a variety of studies, showing that while anaphoric demonstratives tend to be used for “non-topical antecedents that tend to be somewhat unexpected, contrastive or emphatic” (1999:128), these anaphoric demonstratives become definite articles as they are extended to “all kinds

of referents in the preceding discourse” (1999:129).

The pronominal function of the /íǵé/ demonstrative also appears to have provided the pathway for the development of Northern Mao’s 3rd person pronoun /íǵè/. Diessel notes that anaphoric pronominal demonstratives track “emphatic, contrastive and unexpected discourse topics” and become 3rd person pronouns as they are “de-stressed...and gradually extended to all persisting topics” (1999:120).

The 3DU and 3PL pronoun forms correspond more closely to the tone pattern of the demonstrative /íǵé/ while the 3SG pronoun appears to have undergone a change in tone melody from the /íǵé/ DIST demonstrative to /íǵè/ 3SG pronoun. Evidence that the 3DU and 3PL were developed directly from the demonstrative source and that the 3SG pronoun’s tone changed independently can be seen in simple downstep behavior. A HL tone melody on a noun always produces downstep of the dual and plural suffixes, while a HH melody on a noun does not (compare 6.23 with 6.24).

	Dual Form	Plural Form
(6.23) $\begin{bmatrix} - \\ - \end{bmatrix}$ > ób-è	$\begin{bmatrix} - & - & - \end{bmatrix}$ > ób- ^l kuw-e	$\begin{bmatrix} - & - & - \end{bmatrix}$ > ób- ^l wol-e
brother-TV	brother-DU-TV	brother-PL-TV

(6.24) $\begin{bmatrix} - & - \end{bmatrix}$ > ná:s-é	$\begin{bmatrix} - & - & - \end{bmatrix}$ > ná:s-kuw-e	$\begin{bmatrix} - & - & - \end{bmatrix}$ > ná:s-wol-e
crocodile-TV	crocodile-DU-TV	crocodile-PL-TV

In the 3rd person pronouns (6.25), the dual and plural forms do not show any downstep, thus suggesting that they were formed not from /íǵè/, the 3SG form, but from

/íʃé/ the demonstrative form and that the 3SG pronoun’s final L tone may be a later innovation.

(6.25)	$\left[\begin{array}{c} - \\ - \end{array} \right]$	>	$\left[\begin{array}{c} - \\ - \quad - \end{array} \right]$	>	$\left[\begin{array}{c} - \\ - \quad - \end{array} \right]$
	íʃ-é		íʃ-kuw-e		íʃ-kol-è
	DIST-TV		3-DU-TV		3-PL-TV

In fact, the only structural difference between the 3SG pronoun as possessor in the possessive construction (i.e. preceding a noun in a noun phrase in a possessive relationship) and the definite article as modifier in the attributive construction (i.e. preceding a noun in a noun phrase with attributive semantics) is the presence of a downstep following the 3SG pronoun. For instance, in (6.26), no downstep is found following the definite article in ‘The child came.’ This is further illustrated by the pitch traces of this utterance, in Figure 6.2.

Attributive Construction with Definite Article

(6.26)	[íʃ	p’íʃ]-íʃ	ha-kí- [↓] á
	DEF	child-SBJ	AFF-come-DECL
	‘The child came.’		

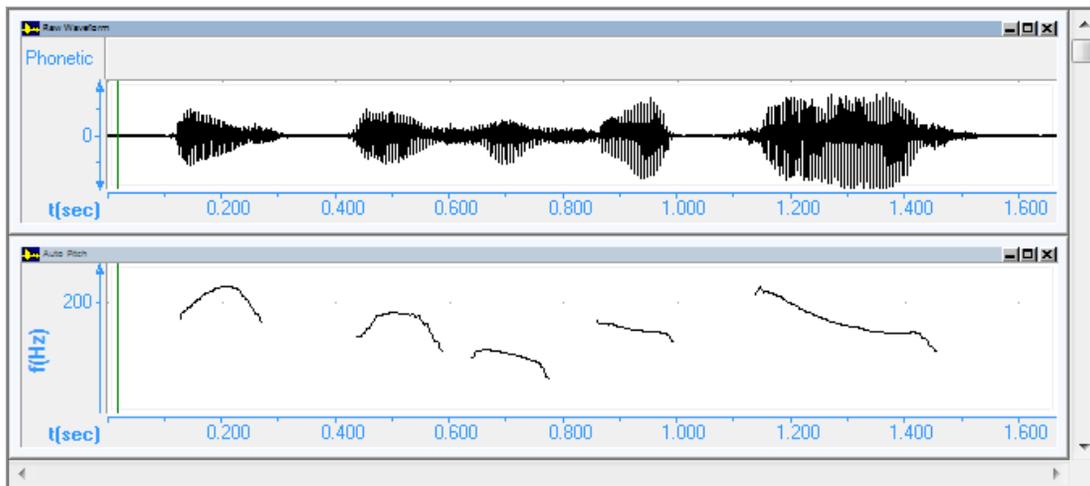


Figure 6.2. Lack of Downstep with Definite Article in /íʃ p'íʃ-ìʃ ha-kí-á/

In example (6.27) and Fig. 6.3, however, a downstep is clearly present following the 3SG pronoun (compare Fig. 6.3 with Fig. 6.2); the downstep is due to the L tone on /íʃ/ 3SG (cf. section 3.2.1 for a discussion of downstep phenomena in Northern Mao).

Possessive Construction with 3SG pronoun

- (6.27) [íʃ ˈp'íʃ]-ìʃ ha-kí-á
 3SG child-SBJ AFF-come-DECL
 'Her/his child came.'

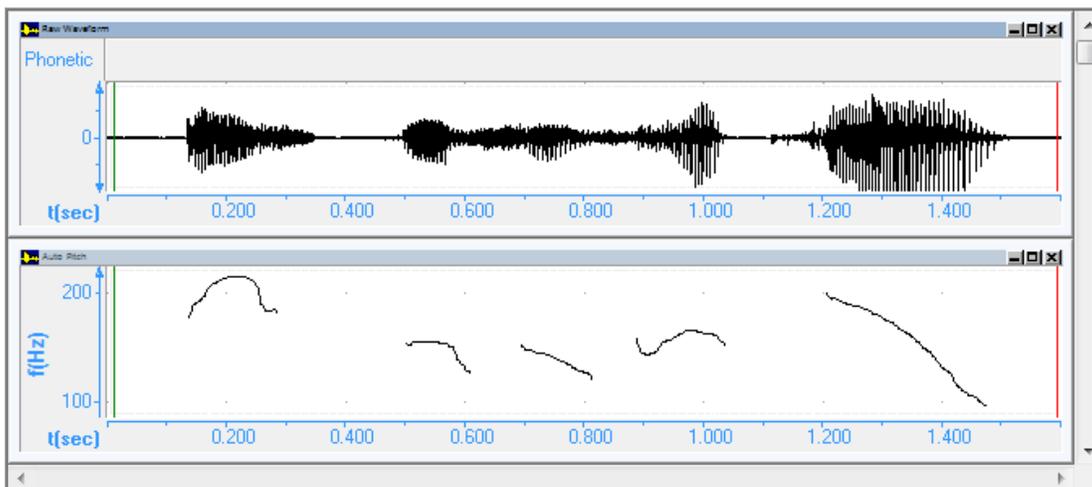


Figure 6.3. Downstep with 3SG Pronoun in / íʃ ˈp'íʃ-ìʃ ha-kí-á /

Apart from the downstep phenomena, the 3rd singular pronoun is clearly differentiated from the definite article when it receives suffixes such as case markers (/ɪf-ɪf/ 3SG-SBJ), postpositions (/ɪf-nà/ 3SG-OBJ) or the terminal vowel, as in citation form (/ɪfè/ 3SG). In each instance, the final tone is L.

CHAPTER VII

NUMERALS AND QUANTIFIERS

Chapter VII examines Northern Mao numerals and quantifiers. In addition to the obvious functional similarity as indicators of quantity, these two grammatical categories can modify nouns through the use of the associative construction (cf. section 4.4.1).

In some respects, numerals are similar to nominals. Like nouns, they most typically modify other nouns through the associative construction and less-commonly in an attributive construction. Ordinal numerals are formed through the addition of the genitive suffix to the cardinal numerals and may modify nouns through the genitive construction. Numerals can also be used pronominally (examples 7.23-7.28, in section 7.1.4.2). Unlike nouns, however, the final vowels on numerals may be [i], [e], [o] or [u] (as opposed to the /e/ on nominals, cf. section 8.2); numeral final vowels are lost only when the following noun (i.e. a construct noun) begins with a vowel.

The small set of quantifiers which have been identified are discussed in section 7.2. These may either modify nouns through the associative construction or function as pronouns.

7.1. Numerals

The discussion of numerals begins with the cardinal numbers (section 7.1.1). The discussion includes a brief examination of evidence that the Mao languages formerly used a 5-base quintesimal system. Today, the system is best analyzed as a 10-base decimal system. Numbers 1-20 are commonly used by most Northern Mao speakers. And many speakers, according to my consultants, use the Northern Mao system up to 100.

Above 100, however, most speakers switch to using Oromo numerals. Ordinal numerals are discussed in section 7.1.2. Section 7.1.3 describes the counting gestures which speakers use for numerals 1-10. Finally, section 7.1.4 details the various ways which numerals are used within the speech context.

7.1.1. Cardinal Numerals

Northern Mao's cardinal numerals 1-10 are illustrated in Table 7.1.

Table 7.1. Cardinal Numerals 1-10

1	hiʃkì	6	kja:nsè
2	numbo	7	kúlùmbò
3	te:zè	8	kúte:zé
4	mets'e	9	kúsméts'è
5	k'wíssí	10	kú:sú

For the most part, these numerals exhibit tonal melodies which fit into the nine noun tone classes (section 3.3.1); the only exception is number 8 /kúte:zé/. As is discussed immediately below, though, this numeral, along with numbers 7 and 9, is very likely morphologically complex historically.

There is strong evidence that the Northern Mao number system, though perhaps best analyzed as a decimal 10-base system today, was at one time a quintesimal 5-base system. For instance, numbers 7 and 8 begin with the sequence [kú] and 9 with the sequence [kús], all of which are likely related to the word /kúsé/ 'hand', a common source for number 5 (cf. Baye Yimam's discussion 2006:185). And following the [kú]/[kús] partial, forms very similar to numbers 2, 3 and 4 are found in the numerals for 7-9 (Table 7.2).

Table 7.2. Evidence for Archaic Quintesimal System in Northern Mao

7	kú-lùmbò hand-two
8	kú-te:zé hand-three
9	kús-méts'è hand-four

Number 6, however, shows no relationship to number 1 at all (Table 7.1) and is perhaps a more recent addition to the system. Number 10 is perhaps derived from the word for ‘hand’, though with a long vowel /kú:sú/.

There is similar evidence in the other Mao languages. In Table 7.3,¹²⁸ the shaded rows provide numerals 1-4 in the other Mao languages; the unshaded rows provide the complex numeral forms 6-9.

Table 7.3. Evidence for Archaic Quintesimal System in Other Mao Languages

	Sezo	Hozo	Ganza
1	ɪʃile	onna	ɪʃi
6	ot-ʃile	ota-on:a	ɪʃki-bin
2	no:mbe	dombo	mambo
7	ot-nombe	ota-dombo	mam-pin
3	si:ze	sijazi	tizi
8	ota-si:ze	ota-sijazi	wo'bo
4	bets'e	bets'i	matsi
9	ota-bets'e	ota-bets'i	ʃele

It is clear that Sezo and Hozo numerals 6, 7, 8 and 9 all involve the 1, 2, 3, and 4 numbers, respectively. In Ganza, only relics of 1 and 2 are found in numerals 6 and 7.

Northern Mao's numerals 11-19 are interesting. These have been constructed with

¹²⁸ The Hozo and Sezo data are from Bender's field notes (personal communication, 2006). The Ganza forms are taken from Hofmeister (2010:26).

the postpositional phrase /kú:s túg-ét/ ten leg/foot-LOC, meaning ‘10 at the feet’, followed by the numerals 1-9.¹²⁹ The word ‘foot’ has been reduced from /túg-é/ to simply [g] (in numerals only), but multiple speakers have offered the full /túg-é/ in hyperarticulations. Numerals 11-19 are illustrated in Table 7.4.

Table 7.4. Numerals 11-19

11	kú:s-g-ét-ijki ten-leg/foot-LOC-one	14	kú:s-g-ét-mets’e ten-leg/foot-LOC-four	17	kú:s-g-ét-kúlumbò ten-leg/foot-LOC-seven
12	kú:s-g-ét-numbo ten-leg/foot-LOC-two	15	kú:s-g-ét-k’wíssí ten-leg/foot-LOC-five	18	kú:s-g-ét-kúre:zé ten-leg/foot-LOC-eight
13	kú:s-g-ét-te:zè ten-leg/foot-LOC-three	16	kú:s-g-ét-kja:nsè ten-leg/foot-LOC-six	19	kú:s-g-ét-kúsméts’è ten-leg/foot-LOC-nine

The postpositional phrase appears to be phonologically bound to the final numeral. First, the postpositional phrase and following numeral are uttered together, very quickly. The initial [h] is lost on the /hi/ki/ in 11 and the [t] on /te:zè/ joins the [t] of the preceding locative to form a single long consonant. But, perhaps even more interesting is the fact that the numerals following the postpositional phrase maintain their citation tonal melody (i.e. they don’t take the corresponding construct noun melody expected of forms in a compound). The postpositional phrase does not modify the final numeral; perhaps at some earlier time, these were joined by a coordinating conjunction. Regardless, today, they have fused together to form the ‘teen’ numerals.

Numbers 20-199 are formed with compounding to indicate multiplication; in these cases, the second numeral in a compound does take the expected construct melody corresponding to the tone class (cf. section 3.3.1).

¹²⁹ While the numeral 8 is /kúte:zé/, the numeral 18 is /kú:s-g-ét-kúre:zé/ with a change from [t] to [r]. The [r] form is used anytime the number 8 is utilized in the higher numbers.

(7.1) numbo-ku:se¹³⁰
two-ten
'twenty'

(7.2) kú:s-ku:se
ten-ten
'one hundred'

These compounded (multiplied numerals) can then be added to other numerals (which may be compounded or not) to achieve greater numerals, through the addition of the coordinating conjunction /-an/.

(7.3) numbo-ku:s-an hiʃk-àn
two-ten-CONJ one-CONJ (2x10 + 1)
'twenty one'

The higher numerals can be expressed through more than one combination, using multiplication as well as addition. For instance, the numeral 120 can be expressed as 100+20 (7.4) or as 12x10 (7.5). My consultants did not have any preference for one way over the other. Other higher numbers have more than one option as well (compare 7.6 and 7.7).

(7.4) kú:s-ku:s-an numbo-ku:s-an
ten-ten-CONJ two-ten-CONJ (10x10 + 2x10)
'one hundred and twenty'

¹³⁰ There are two ways of expressing the number 20. The compound form /numbo-ku:se/ two-ten can be used, meaning 2x10, as in ex.(7.3). Many speakers don't use the numerical system at all for 20, however. Instead the phrase /es-k'ele/ person-body is used meaning, 10 toes and 10 fingers.

- (7.5) kú:s-g-ét-numbo-ku:se
 ten-leg/foot-LOC-two-ten (12x10)
 ‘one hundred and twenty’
- (7.6) kú:s-ku:s-an numbo-ku:s-an hiʃk-àn
 ten-ten-CONJ two-ten-CONJ one-CONJ (10x10 + 2x10 + 1)
 ‘one hundred and twenty one’
- (7.7) kú:s-g-ét-numbo-ku:s-an hiʃk-àn
 ten-leg/foot-LOC-two-ten-CONJ one-CONJ (12x10 + 1)
 ‘one hundred and twenty one’

For the sake of space, I will not continue to list every possible means of constructing these numbers. Table 7.4 provides a selection of numerals which are formed through a combination of compounding and coordination.

Table 7.5. A Selection of Numerals from 30-199

30	te:zè-ku:se three-ten	70	kúlùmbò-ku:se seven-ten	170	kú:s-ku:s-an kúlùmbò-ku:s-an ten-ten-CONJ seven-ten-CONJ
40	mets'e-ku:se four-ten	80	kúre:zé-ku:se eight-ten	181	kú:s-ku:s-an kúre:zé-ku:s-an hiʃk-àn ten-ten-CONJ eight-ten-CONJ one-CONJ
50	k'wíssí-ku:se five-ten	90	kúsméts'è-ku:se nine-ten	190	kú:s-ku:s-an kúsméts'è-ku:s-an ten-ten-CONJ nine-ten-CONJ
60	kja:nsè-ku:se six-ten	100	kú:s-ku:se ten-ten	199	kú:s-ku:s-an kúsméts'è-ku:s-an kúsméts'-àn ten-ten-CONJ nine-ten-CONJ nine-CONJ

According to my consultants, numbers above 100 are only rarely formed in Northern Mao. Speakers prefer to use Oromo numerals (or in some cases Amharic numerals) for the higher numbers, especially over 100. In fact, apart from elicitation, I've not encountered them at all.

Numbers over 100 have been elicited from only one speaker, and as a result, should be seen as somewhat suspect data. Beginning at number 200, use of the conjunction appears to no longer simply indicate addition but can also express multiplication. The speakers interviewed did not use a three way compound

/*numbo-ku:s-ku:s-e/ to show 2x10x10 but instead used /numbo-ku:s-an kú:s-an/, literally 2x10 and 10, for 200; this does not mean 30, as 30 is expressed with /te:zè-ku:se/ three-ten (3x10) (see Table 7.5, above).

Table 7.6. Numbers in the Hundreds

200	numbo-ku:s-an kú:s-án two-ten-CONJ ten-CONJ
300	te:zè-ku:s-an kú:s-án three-ten-CONJ ten-CONJ
400	mets'e-ku:s-an kú:s-án four-ten-CONJ ten-CONJ
500	k'wíssi-ku:s-an kú:s-án five-ten-CONJ ten-CONJ
600	kja:nsè-ku:s-an kú:s-án six-ten-CONJ ten-CONJ
700	kúlumbò-ku:s-an kú:s-án seven-ten-CONJ ten-CONJ
800	kúreezé-ku:s-an kú:s-án eight-ten-CONJ ten-CONJ
900	kúsmés'è-ku:s-an kú:s-án nine-ten-CONJ ten-CONJ

While one of my consultants attempted to form more specific numbers within the hundreds, others were not certain about the formations. Certainly it seems that the forms some speakers produced were ambiguous as to which numbers are multiplied and which are added (7.8).

- (7.8) numbo-ku:s-an kú:s-án te:zè-ku:s-an hiʃk-àn
two-ten-CONJ ten-CONJ three-ten-CONJ one-CONJ
'two hundred and thirty one'

Numbers in the thousands can be expressed in at least three ways (7.9-7.11) and are somewhat ambiguous as well. The /-iʃ/ form in (7.10) is identical to the subject case marker, but it's function is not clear in this numeral.

(7.9) hishkì-ku:s-an kú:sé-ku:s-an
 one-ten-CONJ ten-ten-CONJ
 ‘one thousand’

(7.10) kú:s-ku:s-ij hishkì-ku:se
 ten-ten-SBJ? one-ten
 ‘one thousand’

(7.11) k'wíssí-ku:s-es-k'elè
 five-ten-person-body (i.e. twenty)
 ‘one thousand’

7.1.2. Ordinal Numerals

Ordinal numerals are formed by adding the genitive case suffix to a number. The terminal vowel which may follow the genitive suffix exhibits the same form (i.e. always [e]) and distribution as the terminal vowel (cf. section 8.2) and is thus parsed separately and glossed as TV in the interlinearizations (Table 7.7).

Table 7.7. Ordinal Numerals 1-10

1	hɪʃk-ìŋ-è	6	kja:ns-ìŋ-è
2	numb-ìŋ-è	7	kúlùmb-ìŋ-è
3	te:z-ìŋ-è	8	kúte:z-ìŋ-è
4	mets'-ìŋ-è	9	kúsméts'-ìŋ-è
5	k'wíss-ìŋ-è	10	kú:s-ìŋ-è

The genitive suffix can be added to any cardinal numeral to form any ordinal.

(7.12) kú:s-g-ét-numb-ìŋ-e
 ten-leg/foot-LOC-two-GEN-TV
 ‘twelfth’

(7.13) kú:s-ku:s-ìŋ-è
 10-10-GEN-TV
 ‘one hundredth’

7.1.3. Northern Mao Counting Gestures

The Northern Mao visually represent their numerals 1-10 with counting gestures (see Figure 7.1).

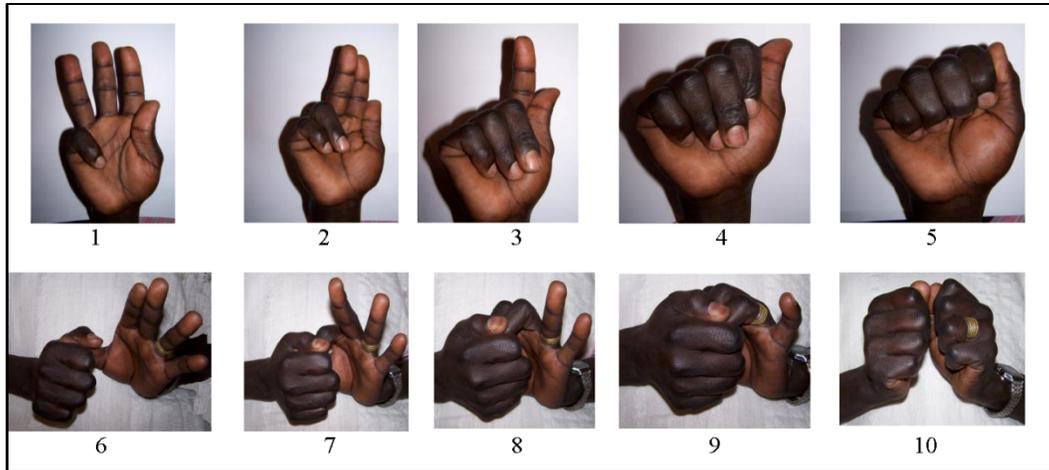


Figure 7.1. Northern Mao Counting Gestures for 1-10

These are frequently used at market and, according to my consultants, are also used by the Bertha and Oromo speakers who live in the area.

Numerals 1-5 are indicated on the right hand, beginning with the little finger. The number of fingers folded down indicates the referenced quantity. The difference between 4 and 5 is indicated only by the top of the thumb (pointing out for 4 and held tightly against the index finger for 5). Two hands are used for numbers 6-10. The right hand holds the referenced quantity of fingers of the left hand for numbers 6-9, beginning with the thumb. The numeral 10 is indicated by two fully closed fists, with the inside of the wrists facing one another.

7.1.4. Numerals in Context

Both cardinal and ordinal numerals can be used to modify nouns or as pronouns

themselves. I will illustrate numerals as modifiers first.

7.1.4.1. Numerals as Modifiers

Cardinal numerals appear to be able to modify nouns through the use of either the associative (section 4.4.1) or attributive (section 4.4.2.1) constructions. Most speakers that I have consulted with appear to use the associative construction most of the time. However, I have encountered speakers using the attributive construction as well, with no apparent difference in meaning. Each is discussed below.

In the associative construction, the numeral is phonologically bound to the following noun and the associative tone pattern is found on the noun (cf. the discussion in sections 3.3.2.1-3.3.2.3). As noted in the introduction to Chapter VII, numerals maintain their final vowels when they modify nouns (exs. 7.16-7.18) unless the following word begins with a vowel (7.14 and 7.15).

(7.14) kú:s-és-^lwol-e
ten-person-PL-TV
'ten people'

(7.15) tí-ŋ ^lnik-ìʃ te:z-ì:m-wol-la kot'-á
1SG-GEN father-SBJ three-cow-PL-OBJ have-DECL
'My father has three cows.'

(7.16) numbo-kját'-^lkuw-e
two-house-DU-TV
'two houses'

(7.17) hishkì-je:ts'-es-ìʃ pòn-á
one-run:INF-person-SBJ arrive-DECL
'One runner arrived.'

- (7.18) numbo-jé:ts'-es-kuw-ij̃ pòn-and-á
 two-run:INF-person-DU-SBJ arrive-NSG-DECL
 'Two runners arrived.'

In the attributive construction, the numeral is free, always maintains its final vowel and the modified noun exhibits the expected construct noun tonal melody (cf. section 3.3) and does not exhibit the H tone on M2 tone-bearing units attested in the associative construction (cf. section 3.3.2).

- (7.19) kú:sú es-wol-e
 ten person-PL-TV
 'ten people'

- (7.20) numbo kjat'-kuw-e
 two house-DU-TV
 'two houses'

Ordinal numerals, formed with the genitive case suffix, modify nouns through the genitive construction (cf. section 4.4.3.2); they cannot modify nouns in an associative construction. That is, ordinals occur only as free modifiers, as do nouns which take the genitive case suffix.

- (7.21) hiʃk-ìŋ je:ts'-es-ij̃ pòn-á
 one-GEN run:INF-person-SBJ arrive-DECL
 'The first runner arrived.'

- (7.22) numb-ìŋ je:ts'-es-ij̃ pòn-á
 two-GEN run:INF-person-SBJ arrive-DECL
 'The second runner arrived.'

7.1.4.2. Numerals as Pronouns

When a numeral is used as a pronoun, it can receive marking for case like other

pronouns. Unlike other pronouns, however, I have found no pronominal numerals taking the dual or plural suffixes. I do not have ungrammatical forms to show that the number inflectional suffixes are prohibited but of the more than 20 examples in my texts, no pronominal numerals carry number marking.

(7.23) numb-uʃ ha-kí-wand-á
 two-SBJ AFF-come-NSG-DECL
 ‘Two came.’

(7.24) hiʃk-iʃ ha-bíʃ-^lá
 one-SBJ AFF-EXIST-DECL
 ‘There is one.’

(7.25) í-té te:z-nà ha-wos-kj-á
 3SG-SBJ three-OBJ AFF-take-TOWARD-DECL
 ‘S/He brought three.’

Ordinal numerals also can function as pronouns. In these instances, all core case markers (subject or object), relational nouns and postpositions (locative/source and instrument/comitative) follow the genitive case marker.

(7.26) hiʃk-ìŋ-ìʃ pòn-á
 one-GEN-SBJ arrive-DECL
 ‘The first arrived.’

(7.27) múnt’s-iʃ numb-ìŋ-nà ha-int’-á
 woman-SBJ two-GEN-OBJ AFF-see-DECL
 ‘A woman saw the second one.’

(7.28) hiʃk-ìŋ-ʃàl-nà ha-tí-jéts'-[↓]á
 one-GEN-way-OBJ AFF-1SG-run-DECL
 'I ran to the first one.'

7.2. Quantifiers

Northern Mao has a small class of quantifiers which can modify nouns as well as serve as pronouns (Table 7.8).

Table 7.8. Quantifiers

Quantifier	Gloss
gǎ:	'many'
níts'és	'few'
hiʃkihiʃk(i)	'some' (literally: one-one)
túnkúl(és)	'every'
mú:kés	'all'

When the quantifiers modify nouns, they occur as the first form in an associative construction (7.29-7.31).

(7.29) hiʃkihiʃk-es-ìʃ nà-àt ha-kí-[↓]á
 some-person-SBJ here-LOC AFF-come-DECL
 'Some people came here.'

(7.30) túnkúl-és-ìʃ kà:l-là ha-mí-[↓]á
 every-person-SBJ porridge-OBJ AFF-eat-DECL
 'Everybody ate porridge.'

(7.31) kam-ìʃ mú:kés-[↓]ma:r-nà ha-mí-mí-[↓]á
 fire-SBJ all-grass/bush-OBJ AFF-eat-eat-DECL
 'A fire destroyed (ate up) all the wilderness.'

When quantifiers are used as pronouns, they take the expected case forms in relevant syntactic environments. In (7.32), two quantifiers are used. In the first line, /gǎ:/ 'many' is used as a predicate nominal for the negative non-final existential (which is

functioning as a copula in this example). In the second line, /níts'és/ 'few' serves as the subject of the final existential clause and exhibits the subject case marker /-íʃ/.

(7.32) màw-és-íʃ gǵá: bíʃ-wá
Mao-person-SBJ many EXIST:INF-NEG:NF

níts'és-íʃ ha-bíʃ-^lá
few-SBJ AFF-EXIST-DECL
'They Mao people are not many, they are few.'

CHAPTER VIII

NOUN PHRASES

Chapter VIII explores Northern Mao noun phrases. The discussion begins with an examination of the constituency of noun phrases and the order of modifiers. I will illustrate how the noun modification constructions (discussed in section 4.4) function within noun phrases (section 8.1). The discussion then turns to the various elements which may attach to the right edge of noun phrases. The first is the terminal vowel. In particular, we will examine the terminal vowel's interesting distribution as a phrasal affix (section 8.2). Second, we will briefly examine the marking of case and oblique relations (section 8.3). Case markers are illustrated in section 8.3.1 while postpositional marking of obliques is covered in section 8.3.2. The case marker vs. postposition distinction is discussed in section 8.3.3. In section 8.3.4, I discuss problems in analyzing the marker of semantic goals. Finally, in section 8.4, I briefly illustrate the use of the coordinate conjunction on noun phrases.

8.1. Noun Phrases: Constituency and Ordering

According to my textual database and my own observations, Northern Mao noun phrases, in natural discourse, most typically contain no more than three elements, including the head noun. As a result, I have had to rely on elicited data in order to examine the relative order of various modifiers (e.g. number, color and dimension) in the various types of noun phrases. In the discussion below, I explicitly identify those patterns which are attested only in elicited examples. However, my consultants were quick to provide the elicited data and did not appear to have any reservations regarding

their grammaticality.

In section 4.4, I illustrate four noun modification constructions: associative, attributive (and its genitive subset) and possessive. The associative construction (section 4.4.1) is not relevant to noun phrase structure because it produces nouns, which, while not always lexicalized, are phonological compounds.¹³¹ The attributive and possessive constructions, however, produce noun phrases. While the discussion in section 4.4 involves only the minimal expressions of these constructions (as part of the examination of noun behavior and tests for nounhood), this section (8.1) examines these constructions in their maximal expressions.

Table 8.1, lists the order of constituents for three constructions which produce noun phrases.¹³² First is the simple construction, where the noun phrase is a noun or a pronoun, without any modification. Second is the attributive construction (and its subset genitive construction); this construction can produce the most complex noun phrases identified thus far in Northern Mao. The third construction is the possessive construction. I will discuss and illustrate each in turn, following Table 8.1.

¹³¹ For instance, while some elements (such as numerals (cf. section 7.1.3.1) or infinitive forms of verbs (cf. section 4.4.1)) functionally modify nouns through the associative construction, they are phonologically bound to their head and are syntactically compound nouns of the structure modifier-head.

¹³² The following is a key to the abbreviations in Table 8.1: N, noun; Pro, pronoun; DEF, definite article; DEM, demonstrative; NP_{GEN}, noun phrase in the first position in the genitive construction; the braces indicate that the DEF, DEM and NP_{GEN} are found in the same syntactic position and are mutually exclusive; NP_{POSS}, noun phrase in the first position in the possessive construction; NUM, numeral; and RC, relative clause. The asterisk, following the RC, indicates that multiple relativized verbs may be included in this position.

Table 8.1. Constituency and Order in Northern Mao Noun Phrase Types

Construction	Order of Constituents	Minimal Requirements
Simple	N Pro	either N or Pro
Attributive (and Genitive)	$\left\{ \begin{array}{l} \text{DEF} \\ \text{DEM} \\ \text{NP}_{\text{GEN}} \end{array} \right\}$ NUM RC* N	any one or more of the modifiers +N
Possessive	NP _{POSS} N	both elements must be present

The simple construction (Table 8.1) is of least interest to us presently, as it is made up of either a noun (8.1) or pronoun (8.2) and fails to illustrate anything more about constituency; the simple construction, of course, offers nothing in terms of constituent order.

(8.1) es-ɨʃ ha-kí-ʼá
 person-SBJ AFF-come-DECL
 ‘A person came.’

(8.2) tí-ʃ ha-tí-kí-ʼá
 1SG-SBJ AFF-1SG-come-DECL
 ‘I came.’ (with emphasis on ‘I’)

In the attributive construction, the first position of the noun phrase is reserved for a demonstrative (8.3), the definite article (8.4) or a genitive-marked noun phrase (8.4 and 8.5). Of course, none of these is required. Because each of these elements is found only in the initial syntactic position and never co-occur, the set may be considered members of a determiner class.¹³³

¹³³ It is not yet clear if Northern Mao exhibits any evidence of determiner phrases. This question merits further research. Specifically, what needs to be identified are tests, such as coordination or perhaps substitution, which could show whether numerals, relative clauses and head nouns group together, apart from a modifying determiner. The rare instances of coordination which I have observed have not been enough to substantiate a determiner phrase.

(8.3) jéʃ kəm-it kjat'-è
 DIST be.big:INF-REL house-TV
 'that big house'

(8.4) íʃ kəm-it kjat'-è
 DEF be.big:INF-REL house-TV
 'the big house'

(8.5) tí-ŋ kəm-it kjat'-è
 1SG-GEN be.big:INF-REL house-TV
 'my big house'

(8.6) íʃ es-ŋ kəm-it kjat'-è
 DEF person-GEN be.big:INF-REL house-TV
 'the person's big house'

Demonstratives do not take number marking when they occur adnominally (8.7 and 8.8).

(8.7) nà numbu t'íʃin-t kəm-it kan-kuw-e
 PROX two be.black:INF-REL be.big:INF-REL dog-DU-TV
 'these two big black dogs' (elicited phrase)

(8.8) nà te:zè t'íʃin-t kəm-it kan-ol-e
 PROX three be.black:INF-REL be.big:INF-REL dog-PL-TV
 'these three big black dogs' (elicited phrase)

The second position in the attributive construction is reserved for numerals (8.7 and 8.8, above), after the determiners (whether demonstrative, the definite article, the NP_{GEN}) (Table 8.1). After numerals, in the third position, multiple relative clauses (i.e. nominalizations of verbs) can serve as additional modifiers to indicate color or dimension. The order of modifiers follows number, color, and then dimension (8.7 and 8.8). As noted in section 4.7, color and dimension can also be expressed by infinitive

verb stems joined to their head nouns via the associative construction.

I did not elicit any examples of age (old, young, etc.) or value (good, bad, etc.) modifiers together with other modifiers and have found none in my text corpus. As a result, I am not sure as to the order of age and value modifiers relative to color and dimension in the attributive construction. As noted in section 4.7, age and value modifiers can occur as either relativized (i.e. nominalized) verbs or as infinitive verbal nouns joined in the associative construction, as can color and dimension modifiers. It seems likely that age and value modifiers, when they are phonologically free (i.e. relativized verbs in the attributive construction), follow numerals, just as other relativized verbs do.

Several speakers have also offered examples where the numeral is joined to the following relative clause in an associative construction (identifiable by tone on the relativized verb) (8.9).

- (8.9) numbu-t'íʃin-t kèm-it kan-kuw-e
two-be.black:INF-REL be.big:INF-REL dog-DU-TV
'two big black dogs' (elicited phrase)

Dimension modifiers are not able to precede color modifiers (as in 8.10).

- (8.10) *nà kèm-it t'íʃin-t kan-è
PROX be.big:INF-REL be.black:INF-REL dog-TV

The third type of noun phrase is formed with the possessive construction (cf. section 4.4.3). When the possessive construction is used, possessor-possessum juxtaposition is required. That is, the head noun of the embedded possessor NP (denoted as NP_{POSS} in Table 8.1) must immediately precede the possessum noun. The NP_{POSS} is bracketed within the main noun phrase in (8.11).

(8.11) [[nà es] kjat'-è]
 PROX person house-TV
 'this person's house'

Presumably, it is the immediate juxtaposition of an animate head noun (of the NP_{POSS}) before another noun which indicates the possessive construction itself. The presence of any free modifier before the possessum noun renders the construction unacceptable to speakers (8.12).

(8.12)* nà es kè̄m-it kjat'-è
 PROX person be.big:INF-REL house-TV
 intended 'this person's big house'

If a possessum is modified through the associative construction, where the modifier and the possessum form a single noun, the construction is acceptable (8.13). In this instance, the juxtaposition requirement is satisfied.

(8.13) nà es kè̄m-kjat'-è
 PROX person be.big:INF-house-TV
 'this person's big house'

According to data I have elicited, the NP_{POSS} may contain its own modifiers, like any NP (8.14). In my texts, however, noun phrases with more than one modifier in the NP_{POSS} are not attested. Possessive pronouns are themselves noun phrases and may not be preceded by any element when they occur in the possessive construction (8.15 and 8.16).

(8.14) í̄ kè̄m-it es kjat'-è
 DEF be.big:INF-REL person house-TV
 'the big person's house' (elicited data)

(8.15) ham kjaɬ'-è
1PL house-TV
'our house'

(8.16) ham kè̃m-kjaɬ'-è
1PL be.big:INF-house-TV
'our big house' (elicited example)

The juxtaposition requirement calls into question whether the possessor noun (the head of the NP_{POSS}) or pronoun (which is the full NP_{POSS}) is actually bound to the possessum, phonologically. There is evidence that the NP_{POSS} is not bound to the possessum N which follows: the possessor noun (head of the NP_{POSS}) can take number marking (8.17). Additionally, the tonal patterns in the possessive construction are not the same as those found in associative constructions (where elements are phonologically bound). This suggests that the possessor and possessum are not bound to one another (cf. sections 3.5 and 4.4.1).

(8.17) íʃ es-wol a:ts'-tòs wos-ín
DEF person-PL language-speak:INF take-SS:NF
'...they take the people's language...'
(text 21.10)

8.2. The Terminal Vowel

As in many Omotic languages (Hayward 1987 and 1990), Northern Mao nominals (including nouns, pronouns, demonstratives, the definite article, and nominalized verbs) carry a final (terminal) vowel in citation form, which is absent in many but not all morpho-syntactic environments (cf. section 4.2.1). Throughout this grammar, I call this final nominal vowel the terminal vowel (TV), in keeping with an Omoticist tradition

(Hayward 1987 and 1990).

In Northern Mao, the terminal vowel's phonetic realization is usually [ɛ] like other short /e/ vowels, but it can also be realized as [e], [ə], or even as the low central vowel [a] when the immediately preceding vowel in the noun stem is [a] (cf. section 2.3.1). The tone of the terminal vowel may be H, M or L, determined by the noun tone class of the nominal to which it attaches (cf. section 3.2.3). This section provides a thorough description of the syntactic distribution of Northern Mao's terminal vowel.

The Northern Mao terminal vowel is best described as a phrasal affix since only heads of noun phrases are host candidates and the vowel itself, when it co-occurs with case marking, follows the case marker. The distribution of the terminal vowel is predictable; it is found on any nominal occurring at the end of an utterance (i.e. at the right edge of utterances, including citation forms which are the simplest of utterances). There are two important exceptions to this distributional statement.¹³⁴ We will explore the distribution of the terminal vowel below, after briefly considering terminal vowels in other Omotic languages.

In other Omotic languages terminal vowels do not appear to operate as phrasal affixes. That is, multiple nominals in a single noun phrase may carry their terminal vowels--at least in some well-described Omoto languages of the Omotic family (Hayward 1987:220). Terminal vowels in other Omotic languages may be /e/, /a/, /o/ and, in some languages /i/ as well, varying according to noun class (Hayward 1987). Many of these

¹³⁴ In addition to the utterance-final environment, the terminal vowel is also found on predicate nominal NPs in certain environments in a cleft construction (cf. example 8.23 and section 11.1.3) and also on NPs serving as the standard in equative comparative constructions (cf. examples 8.30-8.31 and section 11.1.4).

terminal vowels in Omotic languages are not present in all inflected forms, such as when the nouns carry other suffixes (1987:216). For this reason, Hayward does not consider these terminal vowels part of the nominal root (1987:217).¹³⁵ Due to their differentiation relative to noun class (i.e. their unpredictability), however, terminal vowels must be included in the lexical representation.

In Northern Mao as well, the terminal vowel must be included in the lexical representation of isolated nominals. While the single vowel /e/ does not distinguish any noun classes, the tone which it bears is assigned by the tone class of the noun to which it attaches. The terminal vowel and its tone must be included in lexical representations in order for the full noun tone melody to be clearly indicated. It has been my experience that nominals cited in isolation, without their terminal vowels (and the terminal vowels' tone), are frequently unrecognizable to speakers.

Hayward points out that in many Omotic languages the terminal vowel is not found when suffixes such as case markers are present on a noun. In Northern Mao, however, it is not possible to say that the terminal vowel is lost when case markers or other suffixal elements such as number marking, postpositions, etc. Rather, the lack of the terminal vowel in these contexts may be a function of the limited distribution of the terminal vowel itself (which is mainly utterance-final) and not the result of loss triggered by other morphemes. First, it is clear that when head nouns take a subject or object case marker, the terminal vowel is not present (as in 8.18, below). This fits with Hayward's

¹³⁵ In this grammar, I do not talk about noun (or verb) roots *per se*. Rather, I prefer to talk about roots which may take either a nominal or verbal melody and become noun, infinitive verb or finite verb stems (cf. section 3.6). Noun and infinitive verb stems, then, are roots with nominal melodies which then take the terminal vowel when they occur in the appropriate syntactic contexts.

findings for some other Omotic languages (1987:216). But in Northern Mao, even when the optional object case marker is not present, the terminal vowel is still prohibited (8.19). So, it is not the presence of the /-na/ case marker itself which precludes the presence of the terminal vowel.

(8.18) íʃ kan-ìʃ p'íʃ-nà ha-tás-[↓]á
 DEF dog-SBJ child-OBJ AFF-bite-DECL
 'The dog bit a child.'

(8.19) íʃ kan-ìʃ p'íʃ ha-tás-[↓]á (*ungrammatical with /p'íʃ-e/)
 DEF dog-SBJ child AFF-bite-DECL
 'The dog bit a child.'

In fact, Northern Mao's terminal vowel can be found following the subject case marker when the subject noun phrase is utterance-final (as in 8.21, below).¹³⁶ Thus, the presence of the TV appears to be determinable, not simply by the absence of other nominal suffixes, but by the larger syntactic environment.

We will now examine data which supports the distributional generalizations given above. First, Table 8.2 provides a sample of nominals, including a prototypical noun, pronoun, demonstrative, the definite article and two nominalized verbs in their nominal citation forms (i.e. the simplest of utterances).

¹³⁶ The terminal vowel is never found immediately following the object case marker /-na/ or any other suffix that ends in a vowel. That said, it is found following vowel-final stems, such as /ki-je/ come:INF-TV, where the approximant [j] is inserted and in /nà-ʔé/ PROX-TV, where the glottal stop is inserted.

unusual among verbs in Northern Mao. It appears to have been formed via relativization of the existential¹³⁷ (bíʃ EXIST > bi-t-è EXIST:INF-REL-TV) and is thus, historically, at least, a nominal form itself. In the copular construction, this relativized existential is found utterance-finally and thus carries the terminal vowel at its right edge (8.21).¹³⁸

(8.21) íʃ es-ìʃ ma:gèw bi-t-è Past
 DEF man-SBJ friend EXIST:INF-REL-TV
 ‘The man was a friend.’

In the future form, the fully-finite irrealis future existential serves as the copular verb.¹³⁹

(8.22) íʃ es-ìʃ ma:gèw Future
 DEF person-SBJ friend

 ha-bíʃ-gà-m-bìʃ-á
 AFF-EXIST-FUT-3-NPST:AUX-DECL
 ‘The man will be a friend.’

¹³⁷ The verb stem of this historically relativized existential is in the infinitive form and in this relativized form, the root has lost the final [ʃ]. Despite this loss of the final root consonant, /bi-t(-e)/ is the synchronic form of the relative existential: /nà:-t bi-t es-ìʃ ha-bíʃ-á / here-LOC EXIST-REL person-SBJ AFF-EXIST-DECL ‘There is a person who was here.’

¹³⁸ Elsewhere in this grammar, I gloss /bitè/ as either a PST:AUX or as be.PST, translated as ‘was’, depending on its function in the particular example.

¹³⁹ The final verb in (8.22) carries the declarative marker /-á/. All verbs, apart from the past copular form (described above) and the hypothetical conditional counterfactual (section 10.2.4.2), carry a final vowel (typically an utterance-type marker, cf. section 10.4). Of course, the terminal vowel could be part of a phonological constraint which applies generally, to all phrases, at the level of an utterance. It is true that the only context where Northern Mao words end with consonants is in connected speech (i.e. utterance-internally, not finally). But the terminal vowel is found following vowel-final nominal stems in the relevant syntactic environments as well. Consider, for instance, the following: /ki-t-ìʃ nà-ʔé/ come:INF-REL-SBJ PROX-TV ‘Who came is this one.’ Here, the vowel-final demonstrative /nà/ takes the TV. If the terminal vowel were really motivated only phonologically, there would be no need for another vowel following the [a]. Incidentally, the glottal stop in /nàʔé/ is only found when the final vowel is present. No glottal stop is present when /nà/ is used attributively.

Thus far, we have seen nominals only at the ends of utterances taking this terminal vowel. Some of these, as in (8.18), are at the ends of clauses while others, such as those in citation form, are not found in clause structures at all. But, as noted above, there are two exceptions to the utterance-final distributional generalization. The first exception is that predicate nominals in cleft constructions do take the terminal vowel, if the meaning is present tense and no copular verb is used (cf. section 11.1.3).

In the cleft construction (section 11.1.3), a nominal predicate is in first position, followed by a copular verb if necessary for tense (i.e. past or future, not present) and then a relativized verb at the end.

(8.23) es-è ki-t-ìʃ-é
 person-TV come:INF-REL-SBJ-TV
 ‘It’s a person who came.’

(8.24) es bi-t-è ki-t-ìʃ-é
 person EXIST:INF-REL-TV come:INF-REL-SBJ-TV
 ‘It was a person who came.’

(8.25) es ha-bíʃ-gà-m-bíʃ-á
 person AFF-EXIST-FUT-3-NPST:AUX-DECL

 ki-gàm-t-ìʃ-é
 come:INF-FUT-REL-SBJ-TV
 ‘It will be a person who will come.’

It is clear from examples (8.23-8.25) that the distribution of the terminal vowel on the clefted nominal predicate is predictable only in terms of whether it is followed by a copular verb or not. The terminal vowel is found on both the clefted NP and the

relativized verb in (8.23), where no copular verb is needed (for the present meaning). The terminal vowel is not found on the clefted NP when copular elements are present (8.24 and 8.25).¹⁴⁰

In the copular constructions in (8.26) and (8.27), we can see that the TV is found only at the end of the end of the clause.

Canonical Copular Constructions (not clefts)

(8.26) es-ìʃ ki-t-è
person-SBJ come:INF-REL-TV
'A person is who came.'

(8.27) ki-t-ìʃ es-è
come:INF-REL-SBJ person-TV
'Who came is a person.'

The lack of the TV following the subject case marking in (8.26) and (8.27) and the presence of the terminal TV on both elements in (8.23) can be explained by the utterance-final generalization offered above in conjunction with the exception noted for predicate nominals in 'present' cleft constructions: in (8.23), the TV is found on the clefted predicate (where there is no copula) and is also found at the end of the utterance (on the relativized verb). In (8.26) and (8.27), the terminal vowel appears on the utterance-final nominal.

¹⁴⁰ There is another pattern which I have observed in only two sentences (see example 5.18 in section 5.4.1). In at least this one instance, a Northern Mao speaker appears to have used the interrogative /-à:/ and declarative /-á/ utterance type markers (section 10.4), following the subject case marker, on the relativized verb in a cleft construction. The use of the utterance type markers allowed the speaker to distinguish a cleft question from a cleft statement in example (5.18). I have no other data on clefts in interrogatives, and so I can't be sure how widespread this is. I do know that in the non-verbal constructions, which are clearly similar to clefts, utterance type markers are not used on nominals at the ends of the utterance (cf. example 8.20, above).

These two statements obtain regardless of the complexity of a noun phrase.

(8.28) [numbu t'ɪʃɪn-t kɛm-it kan-kuw-e]
two be.black:INF-REL be.big:INF-REL dog-DU-TV

[ki-and-it-ɪʃ-é]

come-NSG-REL-SBJ-TV

'(They are) two big black dogs who came.' (elicited example)

In Northern Mao, any nominal which serves as a modifier of another noun in a noun phrase does not carry the terminal vowel. This is a departure from the pattern found in many other Omotic languages (Hayward 1987:220). In the possessive construction, for instance, where the possessor precedes the possessum, the possessor does not carry the TV (8.29).

(8.29) es p'ɪʃ-è
person child-TV
'a person's child'

In the discussion surrounding example (8.21), I note that the /bitè/ copula/auxiliary includes the terminal vowel; presumably, this is due to the form's historical derivation as a relativized existential. When the copular form /bitè/ is found in a relative clause, modifying a final head noun, the terminal vowel surfaces only on the head noun of the noun phrase (8.30 and 8.31).

(8.30) [[nà-àt bi-t]_{RC} shak'-è]_{NP}
 here-LOC EXIST:INF-REL goat-TV

[tí-pí-t-ìf-é]

1SG-kill-REL-SBJ-TV

‘It is the goat that was here that I killed.’

(8.31) [[nà-àt bi-t]_{RC} shak']_{NP} bitè
 here-LOC EXIST:INF-REL goat be.PST

[tí-pí-t-ìf-é]

1SG-kill-REL-SBJ-TV

‘It was the goat that was here that I killed.’

The data throughout section 8.1 also show that when nominals such as demonstratives and relativized verbs modify nouns, the terminal vowel is not found on the nominal modifiers (exs. 8.3-8.17).

The second exception to the distributional generalization provided above is found in equivalent comparative constructions, where two noun phrases are predicated as equivalent in terms of the quality mentioned. In these constructions, the “standard” NP appears as if it were in its citation form, with the terminal vowel (8.32 and 8.33).

Standard NP

(8.32) tí-f [íf-è] kwáts'-ìt-é
 1SG-SBJ 3SG-TV be.tall:INF-REL-TV
 ‘I am as tall as s/he.’

Standard NP

(8.33) íf-ìf [jéf es-è] kwáts'-ìt-é
 3SG-SBJ DIST person-TV be.tall:INF-REL-TV
 ‘S/he is as tall as that person.’

The standard NPs in (8.32 and 8.33) are not utterance or clause-final. They do not meet the conditions I have posited above, yet they clearly exhibit TVs.

In the non-equivalent comparative construction, the standard NP obligatorily takes a /-na/ suffix, which is identical to the object case marker (section 8.3.1.2) and the goal marker (section 8.3.4).

Standard NP

- (8.34) tí-ʃ [íʃ-nà] kwáts'-ìt-é
1SG-SBJ 3SG-OBJ be.tall:INF-REL-TV
'I am taller than s/he.'

Standard NP

- (8.35) íʃ-ìʃ [jéʃ es-nà] kwáts'-ìt-é
3SG-SBJ DIST person-OBJ be.tall:INF-REL-TV
'S/he is taller than that person.'

Since the non-equivalent comparative construction obligatorily marks the standard with /-na/, the mere absence of /-na/ on the standard of an equative comparative construction could clearly signal the difference in meaning.¹⁴¹

It is clear that the TV is itself not a case marker. Also, its absence on the predicative NP before the /bitè/ (8.21) or the irrealis future existential (8.22) in the equative constructions demonstrates that not all nominal predicates are marked with a

¹⁴¹ The /-na/ object marker is not obligatory when it marks canonically (SOV) positioned objects (cf. section 8.3.1.2). It may be that the /-na/ was not always required in the comparative, and if this was the case, the presence of the terminal vowel would have served to disambiguate the equative comparative from the comparative where the /-na/ was absent. That is, the /-na/ (or its absence) and the /-e/ then serve as markers, designating the type of comparative construction. But this is speculation. Both the equivalent and non-equivalent comparative constructions are discussed in section 11.1.4.

final /e/. It seems likely, given the evidence from other Omotic languages (Hayward 1987 and 1990), that the TV in Northern Mao has been lost in some syntactic environments (e.g. on all nominals when they attributively modify other nouns) and remains as a relic in others (e.g. the standard in the equative comparative construction). Generally speaking then, the TV is a phrasal affix found on noun phrases (i.e. including simple nouns or pronouns) when they are in citation form, at the ends of utterances, at the ends of predicates or when they serve as the standard in the equivalent comparative construction.

8.3. Case and Oblique Relations

Case and oblique (adpositional) relations are marked with post-posed phrasal affixes in Northern Mao. These are not, however, completely discrete categories. Markers for core arguments such as subject /-ij/ and object /-na/ as well as genitive /-(i)ŋ`/ and vocative /-o ~ a/ are called case markers in this grammar. The markers for locative/source /-et(a)/, and for instrument/comitative /-an/ I call postpositions. These postpositions mark oblique relations. The marker for goal NPs /-na/, which is the same morphological shape as the object case marker, appears to exhibit some features of case and some features of postpositions. The case markers and postpositions can be illustrated on a continuum, with goal somewhere in between the poles (Figure 8.1).

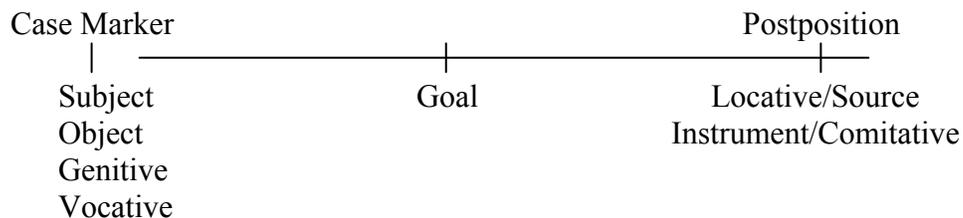


Figure 8.1. Markers of Case and Oblique Relations

In the discussion below, I will first illustrate the use of the case markers (section 8.3.1)

and then the use of the postpositions (section 8.3.2). Distinguishing between case markers and postpositions is a matter of some interest within Omotic studies (Hayward 2002); I will illustrate my rationale for treating them distinctly (in section 8.3.3) before describing the behavior of the goal marker (in section 8.3.4).

The subsections devoted to case marking below do not include a discussion of alignment phenomena; Northern Mao's alignment system, and its coding and behavior properties, is discussed in Chapter XIV.

8.3.1. Case Markers

There are four case markers in Northern Mao; they attach to the right edge of the noun phrase (Table 8.3).

Table 8.3. Northern Mao Case Markers

Marker	Case
/-iʃ/	Subject
/-na/	Object
/-iŋ`/	Genitive
/-o/ and /-a/	Vocative

In the following discussion, I will focus on the forms of the markers and their allomorphs.

In addition to the discussion below, the genitive case marker is illustrated in section 4.4.2.2.

8.3.1.1. Subject Case

All overt noun phrase subjects carry the form /-iʃ/ or its lexically conditioned allomorph /-tɛ/, with one exception (cf. section 8.4, where case marking is optional when

the conjunction is used).

(8.36) es-ìʃ ha-kí-↓á
person-SBJ AFF-come-DECL
'A person came.'

(8.37) íʃ es-ìʃ ʃó:ʃ-ná ha-pí-↓á
DEF person-SBJ snake-OBJ AFF-kill-DECL
'The person killed a snake.'

The form /-té/ serves as the subject case marker on the plural pronouns; the form /-té/ can be used on the 3rd singular pronoun (cf. section 5.1, Table 5.1).

(8.38) ham-té ham-ki-á
1PL-SBJ 1PL-come-DECL
'We came.' (emphasis is indicated by the free pronoun)

(8.39) í-té ʃó:ʃ-ná ha-pí-↓á
3-SBJ snake-OBJ AFF-kill-DECL
'S/he killed a snake.'

Both Baye Yimam (2006) and Girma Mengistu (2007:9) analyze this /-té/ marker as a focus particle, deriving from a copula, and do not consider it a case marker.

8.3.1.2. Object Case

All grammatical objects may be marked with the /-na/ object case marker or its allomorphs: the phonologically conditioned /-la/ and the lexically conditioned /-tá/.

(8.40) múnts'-ìʃ p'íʃ-(na) ha-ka:m-á
woman-SBJ child-OBJ AFF-love-DECL
'A woman loved a child.'

The /-la/ allomorph is found following any nominal which ends with the

consonant [l] (8.41 and 8.42).

(8.41) tí-ŋ m̀unts'-iʃ kà:l-là ha-ká:l-^lá
1SG-GEN woman-SBJ porridge-OBJ AFF-cook.porridge-DECL
'My wife prepared porridge.'

(8.42) hàwèl-là ha-tí-int'-á
2PL-OBJ AFF-1SG-see-DECL
'I saw you (PL).'

Just as the form /-té/ can be used as a marker for subject case on the plural pronouns, the form /-tá/ can be used as the object case suffix on the plural pronouns (cf. section 5.1, Table 5.1). The form /-tá/ may not be used, however, on the 3SG pronoun.

(8.43) hàw-tá ha-tí-int'-á
2PL-OBJ AFF-1SG-see-DECL
'I saw you (PL).'

Object marking is only required, however, when the object occurs outside of its canonical preverbal position. That is, when the object occurs in the first position in the clause, the object case marker is obligatory. I have not yet determined what other factors may condition the occurrence of the object case marker.

(8.44) p'iʃ-na m̀unts'-iʃ ha-ka:m-á
child-OBJ woman-SBJ AFF-love-DECL
'A woman loved **a child**.'

The object case marker /-na/ is also used as a marker of semantic goals in movement predications (i.e. involving motion verbs) (cf. section 8.3.4).

8.3.1.3. Genitive Case

The genitive case marker /-iŋ`/ can be used on noun phrases which modify a head

noun (8.45). Most typically, the semantic relationship is one of possession or ownership. This is the genitive construction--a subset of the attributive construction (cf. sections 4.4.2.2 and 8.1).

- (8.45) tí-ŋ ˩ma:gèw-ìʃ íʃ es-ìŋ mùnts'-na
 1SG-GEN friend-SBJ DEF person-GEN woman-OBJ
- ha-int'-w-á
 AFF-see-HRSY-DECL
 'My friend saw the man's wife (I heard).'

The genitive suffix includes a low tone at the right edge which triggers a downstep of the following tones (as seen in 8.45).¹⁴² As noted in section 8.1, the genitive-marked noun phrase patterns syntactically like the demonstrative and the definite article, and may be considered a member of a determiner category in Northern Mao.

8.3.1.4. Vocative Case

The vocative case is marked with either an /-a/ or /-o/ suffix (cf. Baye Yimam 2006:182). This case marks the addressee in direct address, and may be used for animals as well as for humans. It is important to note that the vocative is not expressed with the same form as the noun in citation (which takes the /e/ TV, cf. section 8.2).

- (8.46) so:nts'-ol-a màr-kí-wà wít'-nà
 child-PL-VOC grab-TOWARD-1PL:IMP calabash-OBJ
 'Children, hand me a calabash.'
 (text 18.04)

As may be expected, in all of my examples both from texts and elicitation,

¹⁴² As discussed in section 3.2.1, the downstepping environment requires a H tone before the floating low register. Additionally, L tones do not undergo downstep.

vocative noun phrases are always in first position within a clause, and may in fact, serve as the entire utterance (8.47).

(8.47) kan-á
dog-VOC
'Dog!'

(8.48) am-a nogdów hì-int'-â:
mother-VOC lion 2SG-see-INTR
'Mother, did you see a lion?'

(8.49) ges-a tí-ná pat-í
friend-VOC 1SG-OBJ help:INF-2SG:IMP
'Friend, help me!'

Some nouns also take /-o/ to mark vocative, with no apparent change in meaning.

(8.50) ges-o tí-ná pat-í
friend-VOC 1SG-OBJ help:INF-2SG:IMP
'Friend, help me!'

(8.51) am-o ʃàŋk' mà:l-ol-an ko:ʃ-in
mother-VOC leopard child-PL-COM play-SS:NF

ham-kèm-á
1PL-spend.day-DECL
'Mother, we spent the day playing with the leopard cubs.'
(The speaker here is a baby bushbuck, text 03.03)

8.3.2. Postpositions: Markers of Oblique Relations

There are two postposition forms which attach to noun phrases and which mark four distinct semantic roles for noun phrases functioning as obliques: the locative and

source postposition /-et(a)/, the instrument and comitative postposition /-an/. I consider noun phrases which take these postpositions to be obliques because I have not yet encountered any constructions which require them for grammaticality. These postpositions and the noun phrases to which they attach are semantically, not syntactically required elements (cf. section 8.3.3).

8.3.2.1. The Location/Source Postposition

The postposition /-et(a)/ marks noun phrases as obliques of location or source (i.e. of movement). It is common for relational nouns to be used along with another noun in locational and source predications (8.53 and 8.65). But as (8.52) and (8.64) show, relational nouns are not required syntactically; rather, they provide greater semantic specificity (cf. the discussion of relational nouns in section 4.5).

Locative

- (8.52) tí-ŋ ʔkjaɾ'-èt há:l-ʔá
 1SG-GEN house-LOC sleep-DECL
 'S/he slept at my house.'

Locative with Relational Noun

- (8.53) tí-ŋ ʔkjaɾ'-sis-et há:l-ʔá
 1SG-GEN house-inside-LOC sleep-DECL
 'S/he slept inside my house.'

Source

- (8.54) bàmbàs-ét ha-tí-kí-ʔá
 Bambassi-SOURCE AFF-1SG-come-DECL
 'I came from Bambassi.'

Source with Relational Noun

- (8.55) bàmbàs-ʃál-èt ha-tí-kí-↓á
Bambassi-way-SOURCE AFF-1SG-come-DECL
'I came from Bambassi.'

In movement predications, speakers sometimes leave off the source or goal (section 8.3.4) postpositions, effectively leaving the relational noun 'way' /ʃalè/ to serve as a postposition (cf. section 4.5).

8.3.2.2. The Instrument/Comitative Postposition

The postposition /-an/ serves as a marker for instrument (INS) and comitative (COM) obliques. Examples (8.56 and 8.57) illustrate the use of the /-an/ in marking instruments.

- (8.56) kús-án ha-mí-↓á
hand-INS AFF-eat-DECL
'S/he ate by hand.'

- (8.57) kas-an ak'-na ha-tí-áf-↓á
hoe-INS corn-OBJ AFF-1SG-plant-DECL
'I planted corn with a hoe.'

Examples (8.58 and 8.59) illustrate the use of /-an/ in marking comitatives.

- (8.58) tí-ŋ ↓ma:gèw-àn ha-tí-hadèm-↓á
1SG-GEN friend-COM AFF-work-DECL
'I worked with (alongside) my friend.'

- (8.59) rám-àn sùk'-ná ha-tí-hów-j-↓á
Rama-COM store-OBJ AFF-1SG-go-AWAY-DECL
'I went to the store with Rama.'

Baye Yimam reported the use of /-na/ for marking instruments (2006:188). In my

research, I have only encountered the /-an/ suffix marking instrumentals. Example (8.60) shows that there is no synchronic morpho-phonological process which relates the two markers, providing /kus-na/ hand-OBJ in opposition to /kus-an/ hand-INS .

(8.60) kas-an tí-ŋ ↓kus-na tí-héz-↓á
 hoe-INS 1SG-GEN hand-OBJ 1SG-hit-DECL
 ‘I hit my hand with a hoe.’

I have found no examples where the /-an/ instrument/comitative suffix is used in conjunction with relational nouns.

Before discussing the case or postpositional status of the goal marker, I will first lay out the rationale I use for distinguishing the case and postpositions I have identified above (in sections 8.3.1 and 8.3.2). The analysis of the goal marker, it turns out, is more complicated and will be taken up in section 8.3.4.

8.3.3. A Note on Distinguishing Case Markers and Postpositions in Northern Mao

Hayward notes there has not been a consensus in analyzing markers such as locative, instrumental or comitative, etc. in Omotic and Cushitic languages (2002:56). In his review of earlier work, Hayward notes that some scholars have analyzed these markers as belonging to the category of case markers while others have differentiated these from cases such as nominative, accusative and genitive. The problem is in part related to the fact that both case and these markers (i.e locative, instrumental or comitative, etc.) occur as phrasal affixes, post-nominally, on the head noun of the noun phrase (Hayward 2002:57). Ultimately, Hayward argues for using the term “case” for traditional case domains like nominative, accusative and genitive and prefers the term

“postposition” for the others.¹⁴³ My analysis of subject, object, genitive and vocative markers as case markers (section 8.3.1) and the locative/source and instrumental/comitative markers as postpositions (section 8.3.2) follows Hayward’s suggestion (2002). But as will be seen, the issue is not completely straightforward.

I will first explain my reasoning for analyzing the locative/source and instrument/comitative markers as postpositions which express oblique relations. In short, noun phrases take the locative/source and instrument/comitative postpositions for reasons of semantic necessity; their assignment or licensing is not due to the grammatical context or construction itself.

Northern Mao’s cleft construction provides an illustration of the relevance of such a distinction. In the cleft construction (cf. section 11.1.3), the first noun phrase (the clefted element) serves as a predicate of a copular construction. A relativized verb follows the cleft and serves as the grammatical subject of this construction.

In the cleft construction, core argument case suffixes such as those which mark subject and object cannot appear on the predicate noun phrase. This is, of course, no surprise since the relativized verb is marked with the subject case suffix /-ij/ (8.61), and the clefted NP is the predicate of an equative (i.e. copular) construction, rendering it unsuitable for marking with the object suffix (8.62). The point is, of course, that the core cases of subject and object are assigned by morphosyntactic, and not semantic,

¹⁴³ Hayward also discusses problems related to analyzing relational nouns as postpositions (2002:57). I am in agreement with his conclusion, that relational nouns are best treated as a subcategory of nouns. In Northern Mao, relational nouns can be used as nouns themselves, and when they function relationally, they are joined to the preceding noun through the associative construction (a productive way of joining two nouns in a modifier-head relationship, cf. section 4.4.1). The discussion of relational nouns is found in section 4.5.

specifications.

Predicate Subject

- (8.61) [tí-jé] [ha-kí-t-ìʃ-é]
1SG-TV AFF-come-REL-SBJ-TV
'It is I who came.'

Predicate Subject

- (8.62) [tí-jé] [[íʃ es-ìʃ] hí-héz-t-ìʃ-é]
1SG-TV DEF person-SBJ 3SG-come-REL-SBJ-TV
'It is I who(m) the person hit.'

In (8.62), the subject NP is a relative clause with its own subject embedded within. Both the subject internal to the relative clause and the full relative clause are marked as subjects.

But the locative/source and instrumental/comitative postpositions are particularly relevant to semantic considerations and are hence still required on clefted noun phrases under the indicated semantic conditions (i.e. even when functioning as predicates) (8.63-8.66).

Locative Predicate

- (8.63) [tí-ŋ kjat'-ètà] hí-há:l-t-ìʃ-é
1SG-GEN house-LOC 3SG-sleep-REL-SBJ-TV
'It is at my house that s/he slept.'

Source Predicate

- (8.64) [bàmbàs-étà] hí-kí-t-ìʃ-é
Bambassi-SOURCE 3SG-come-REL-SBJ-TV
'It is from Bambassi that s/he came.'

Instrument Predicate

- (8.65) [kús-án-è] hí-mí-t-ìʃ-é
hand-INSTR-TV 3SG-eat-REL-SBJ-TV
'It is with (her/his) hand that s/he ate.'

Comitative Predicate

- (8.66) [tí-ŋ ˠma:gèw-àn-è] hí-hadèm-t-ìʃ-é
1SG-GEN friend-COM-TV 3SG-work-REL-SBJ-TV
'It is with my friend that s/he worked.'

So, the cleft construction demonstrates that the locative/source and instrument/comitative postpositions are relevant to semantics--more so, at least, than traditional cases like subject and object. These postpositions are assigned not by morpho-syntactic requirements but by communicative need (cf. examples 8.70-8.71, below).

Now that we have seen the syntactic rationale for distinguishing case markers from postpositions in Northern Mao, we can turn to the discussion of the goal marker. I will first illustrate the marker itself. Then, I illustrate the behavior of goals in the cleft construction and discuss whether goals appear to be peripheral or core elements.

8.3.4. Goal: Case or Postposition?

Obliques of goal are marked with /-na/ (or its phonologically-conditioned allomorph [-la]) which is identical in morphological form to the object case suffix. The /-na/ marker is optional on goal NPs just as the /-na/ object marker is on objects when in canonical (SOV) word order (section 8.3.1.2).

- (8.67) bàmbàs-(ná) ha-tí-hów-ˠá
Bambassi-GOAL AFF-1SG-go-DECL
'I went to Bambassi.'

The relational noun 'way' /ʃalè/ is often used in goals, just as it is in other movement

predications (8.55, above).

- (8.68) bàmbàs-ǰál-(là) ha-tí-hów-¹á
Bambassi-way-GOAL AFF-1SG-go-DECL
'I went to Bambassi.'

Now, we will return to the cleft test and examine the behavior of the goal marker. Interestingly, it is not possible to use the goal marker on a clefted NP (8.69), just like the object marker (8.62).

- (8.69)* bàmbàs-nà hí-kí-t-ìǰ-é
Bambassi-GOAL 3SG-come-REL-SBJ-TV
intended: 'It is to Bambassi that I came.'

In fact, if the locative/source postposition is left off the clefted NP in (8.64), the clefted NP of the construction is interpreted as a goal (8.70).

- (8.70) bàmbàs-é hí-kí-t-ìǰ-é
Bambassi-TV 3SG-come-REL-SBJ-TV
'It is to Bambassi that I came.'

The clefted NP in (8.70) appears to be interpreted as a goal because the verb 'come' involves movement, there is no locative/source postposition on the clefted NP, and the /-na/ marker is prohibited on clefted NPs.¹⁴⁴ Why the goal marker should be prohibited on clefted NPs while the locative/source postposition, with which it is frequently substitutable, is not prohibited is a matter which deserves some consideration. Goal NPs

¹⁴⁴ The relativized verb has a subject marker /hí-/ which prevents the clefted NP from being interpreted as coreferential with the subject of the relativized verb (as in 8.69). Of course, the location 'Bambassi' would be a strange subject indeed for the verb 'come'. When relativization occurs on the subject, there is a gap where subject marking would normally be found on the verb (cf. sections 4.6.2.2 and 13.2). Apart from headless relative clauses and relativization on the subject, subject markers are found on the relativized verb.

which are not in clefts are optionally marked morphologically (8.67 and 8.68, above).

And the morphological form /-na/ is identical to the form used for marking objects (section 8.3.1.2). Could goal NPs be objects of motion verbs?

Certainly, it is clear that core case markers, including the object case marker /-na/, are also prohibited on clefted NPs. Thus, when the instrument postposition /-an/ is left off the clefted NP and the relativized verb is transitive (as in 8.65), the clefted NP is interpreted as the object of the relativized verb (8.71)

- (8.71) kús-é hí-mí-t-ìʃ-é
hand-TV 3SG-eat-REL-SBJ-TV
'It is a hand that s/he eats.'

Ultimately, then, the /-na/ goal marker does not pattern like the locative/source and instrument/comitative forms in the cleft construction. Rather, its absence from the clefted NP mirrors the behavior of the subject and object core case markers.

There is other evidence, however, that goal NPs might be obliques (i.e. peripheral) not core arguments. First, in movement predications, goal marked NPs are syntactically substitutable with locative/source (compare 8.72 to 8.73) and instrumental/comitative postpositional phrases (8.74). The same verb is used in each example; only the goal, source or instrument element changes.

- (8.72) [íʃ wam-(nà)] tí-kí-ʋá
DEF river-GOAL 1SG-come-DECL
'I came to the river.'

(8.73) [íʃ wam-èt] tí-kí-ʋá
DEF river-SOURCE 1SG-come-DECL
'I came from the river.'

(8.74) [íʃ wam-àn] tí-kí-ʋá
DEF river-INS 1SG-come-DECL
'I came by the river.' (passing by the river or following it)

Second, the goal NP is not syntactically required--even in movement predications, as seen in (8.74) above and in (8.75) below.

(8.75) kwalla tí-kí-ʋá
yesterday 1SG-come-DECL
'I came yesterday.'

But we could say that goal is semantically understood even when not syntactically realized, as a sort of definite null (cf. Fillmore 1986). And if there is a definite null goal, the goal in example (8.72) is not actually substitutable with the locative (in 8.73) or instrument (in 8.74), where the definite null would be. My consultants do not accept any attempt to form a passive where a goal would be the subject of a passivized motion verb. It is perhaps crucial to note that the goal marker is not required (8.72) while the postpositions are (8.73 and 8.74). The absence of the goal marker, still requires a goal interpretation (8.72).

Dimmendaal notes,

This property, the use of core case with certain basic (non-derived) verbs of motion, appears to be common in Omotic and Cushitic languages. These verbs consequently behave like transitive verbs, i.e. they require the same case frame as high transitivity verbs like 'eat' or 'beat' (2003:100).

As we have seen (in 8.75, above), the goal is not required syntactically. The verb 'eat',

however, is similar in that it does not always require an object (8.76).

- (8.76) kwalla tí-mí-^lá
yesterday 1SG-eat-DECL
'I ate yesterday.'

Thus, throughout this grammar, apart from the present section, I gloss semantic goal NPs as objects and the /-na/ marker as OBJ.

8.4. Conjoining Noun Phrases

Noun phrases can be joined through the use of a coordinating conjunction /-an/. The conjunction may be any of the following forms [-n] ~ [-an] ~ [-in]. After a vowel, the form [-n] is used (8.78 and 8.80). After the subject case marker, the form [-in] is used (8.81). The form [-an] is used elsewhere (8.78 and 8.79).

In (8.78) and (8.79) noun phrases are joined with the coordinating conjunction and serve as objects of the verb. In these instances, the optional object case marker is not used.

- (8.78) màw-és-wol-ijf àmàrìjǎ-n gál-á:ts'-àn
Mao-person-PL-SBJ Amharic-CONJ Oromo-tooth-CONJ

k'ú àld-ín
only know-SS:NF
'Mao people only know Amharic and Oromo...'
(txt 20.06)

- (8.79) p'ijf-ijf pák-àn kà:l-àn ha-mí-^lá
child-SBJ injera-CONJ porridge-CONJ AFF-eat-DECL
'A child ate injera and porridge.'

In (8.80), the optional object case markers are used. Interestingly, the case marking is

found on both noun phrases, before the coordinating conjunction, rather than at the end of the main conjoined noun phrase.

- (8.80) p'íʃ-íʃ pák-nà-n kà:l-là-n ha-mí-¹á
 child-SBJ injera-OBJ-CONJ porridge-OBJ-CONJ AFF-eat-DECL
 'A child ate injera and porridge.'

Interestingly, the subject case marker, which is normally not optional (cf. section 8.3.1.1), is apparently optional on conjoined noun phrases which serve as subject (compare 8.81 with 8.82, 8.83 with 8.84, and 8.85 with 8.86).

- (8.81) kan-íʃ-ín àndúr-íʃ-ín jé:ts-j-and-á
 dog-SBJ-CONJ cat-SBJ-CONJ run-AWAY-NSG-DECL
 'A dog and a cat ran away.'

- (8.82) kan-án àndúr-án jé:ts-j-and-á
 dog-CONJ cat-CONJ run-AWAY-NSG-DECL
 'A dog and a cat ran away.'

- (8.83) ìn-íʃ-ín p'íʃ-íʃ-in ha-kí-wand-á
 mother-SBJ-CONJ child-SBJ-CONJ AFF-come-NSG-DECL
 'A mother and a child came.'

- (8.84) ìn-án p'íʃ-an ha-kí-wand-á
 mother-CONJ child-CONJ AFF-come-NSG-DECL
 'A mother and a child came.'

- (8.85) túg-íʃ-án kús-íʃ-án íʃ-nà ha-manʔk'-á
 foot-SBJ-CONJ hand-SBJ-CONJ 3SG-OBJ AFF-hurt-DECL
 '(Her/His) feet and hands hurt him.'

- (8.86) túg-án kús-án íʃ-nà ha-maŋk'-á
 foot-CONJ hand-CONJ 3SG-OBJ AFF-hurt-DECL
 ‘(Her/His) feet and hands hurt him.’

Conjoined noun phrases which serve as subjects provide the only instance I have found where subject case marking is not found on subjects.

The conjunction /-an/ may be related to the instrument/comitative postposition /-an/. Compare (8.87) to (8.80). It is not uncommon to find a conjunction and a comitative marker based on the same morphological form (Payne 1997:339).

- (8.87) p'íʃ-iʃ pák-àn kà:l-là mí-^lá
 child-SBJ injera-INS porridge-OBJ eat-DECL
 ‘A child ate porridge with injera.’

The conjunction can be used in a “neither x nor y” sense, if the main verb is negative (8.88).

- (8.88) p'íʃ-iʃ pák-àn kà:l-àn mì-wé-jà
 child-SBJ injera-CONJ porridge-CONJ eat:INF-NEG-NFUT:AUX
 ‘A child did not eat injera or porridge.’

Disjunction is not marked by a single morpheme on a noun phrase. It is only expressed periphrastically, through the use of nouns in citation form (with their terminal vowels) and an existential marked with a conditional suffix /-ʃɪn/ (8.89 and 8.90).

- (8.89) kan-é àndúr-é hí-biʃ-ʃɪn ha-jé:ts'-j-^lá
 dog-TV cat-TV 3SG-EXIST-COND AFF-run-AWAY-DECL
 ‘Either a dog or a cat ran away.’
 (Literally, ‘If it were a dog, cat, ran away.’)

(8.90) kan-é hí-bij-ḥin àndúr-é hí-bij-ḥin
dog-TV 3SG-EXIST-COND cat-TV 3SG-EXIST-COND

ha-jé:ts' -j-[↓]á

AFF-run-AWAY-DECL

'A dog or a cat ran away.'

(Literally, 'If it were a dog, if it were a cat, ran away.')

It is possible to use a form /jòkín/ between two noun phrases to indicate disjunction. My consultants identify this form as a borrowing from Oromo and say that it is not proper Northern Mao. But it is nonetheless used by some speakers, both in the Diddessa and Bambassi areas.

(8.91) pák-nà jòkín kà:l-là ha-mí-[↓]á
injera-OBJ DISJ porridge-OBJ AFF-eat-DECL
'S/he ate injera or porridge.'

CHAPTER IX

VERBS: AN ORIENTATION AND OVERVIEW

The verb system in Northern Mao is especially complex; four chapters are devoted to exploring verbs. Chapter IX offers an orientation to and an overview of Northern Mao verbs. Here, I focus on illustrating only those features of verbs which are most widespread in the language. The topics explored in this chapter are relevant to final (Chapter X) and non-final (Chapter XII) verb types, as well as to some of the more finite subordinate verb types (Chapter XIII).¹⁴⁵ Final, non-final and subordinate verb conjugations, however, do indeed exhibit inflectional morphology that is not discussed here. The reader is directed to the relevant chapters for the rest of the story.

I begin with the basic verbal word-form opposition: the realis and irrealis forms and their distinct morphological item-arrangements (section 9.1). I then discuss the use of finite vs. non-finite verb stems (the finite-infinitive verb stem opposition) in building particular types of verbal words (section 9.2). Then, I briefly illustrate the verbal citation form (section 9.3). Next, I illustrate and discuss the various subject marker paradigms relative to verb types (section 9.4). I offer a hypothesis on the historical development of the irrealis verb form and the future tense marker (section 9.5). I also illustrate and explore the distribution of the affirmative prefix relative to verb and utterance types (section 9.6). I illustrate the use of various derivational suffixes (section 9.7) and identify

¹⁴⁵ The four chapters devoted to verbs are not all consecutive. Following the orientation and overview and the final verb chapters (IX and X, respectively), single verb constructions (Chapter XI) is included before the final two chapters dealing with verbs: non-final verbs/clause chains (XII) and subordinate verbs (XIII). This organization is helpful because the discussion of non-final and subordinate verbs (together called ‘dependent verbs’ in this grammar) require some reference to simpler single verb constructions.

instances of verbal compounding (section 9.8).

9.1. The Realis-Irrealis Opposition

The most basic distinction in the Northern Mao verbal system is the realis-irrealis opposition. This is the guiding “genius” of Northern Mao. Realis and irrealis verbs are marked distinctly by their item-arrangement and not by any single morpheme. Most verbs in the language take one of these forms. Only verbs in the imperative and jussive utterance types and some (more nominalized) subordinate verbs are formed apart from these two basic patterns. The patterns can be summarized as follows: the realis verb takes subject prefixes (section 9.1.1) while the irrealis verb form takes subject suffixes and always requires one of several phonologically bound auxiliary elements after the subject suffix (sections 9.1.2 and 9.1.3).

Mithun describes the realis-irrealis distinction as one where:

...realis portrays situations as actualized, as having occurred or actually occurring, knowable through direct perception. The irrealis portrays situations as purely within the realm of thought, knowable only through imagination (1999:173).

Mithun’s description obtains for the Northern Mao data. In declarative and interrogative utterances, the realis verb form is used for events of the past or present, i.e. those which did or are currently taking place. The irrealis verb form is used for events of the future, all negative events (in the past, present or future) and counterfactual events (i.e. events which are contra-reality but which are not morphologically marked as negative).

Figure 9.1, below, exhibits the distribution and use of the realis and irrealis verbal word-forms in Northern Mao.

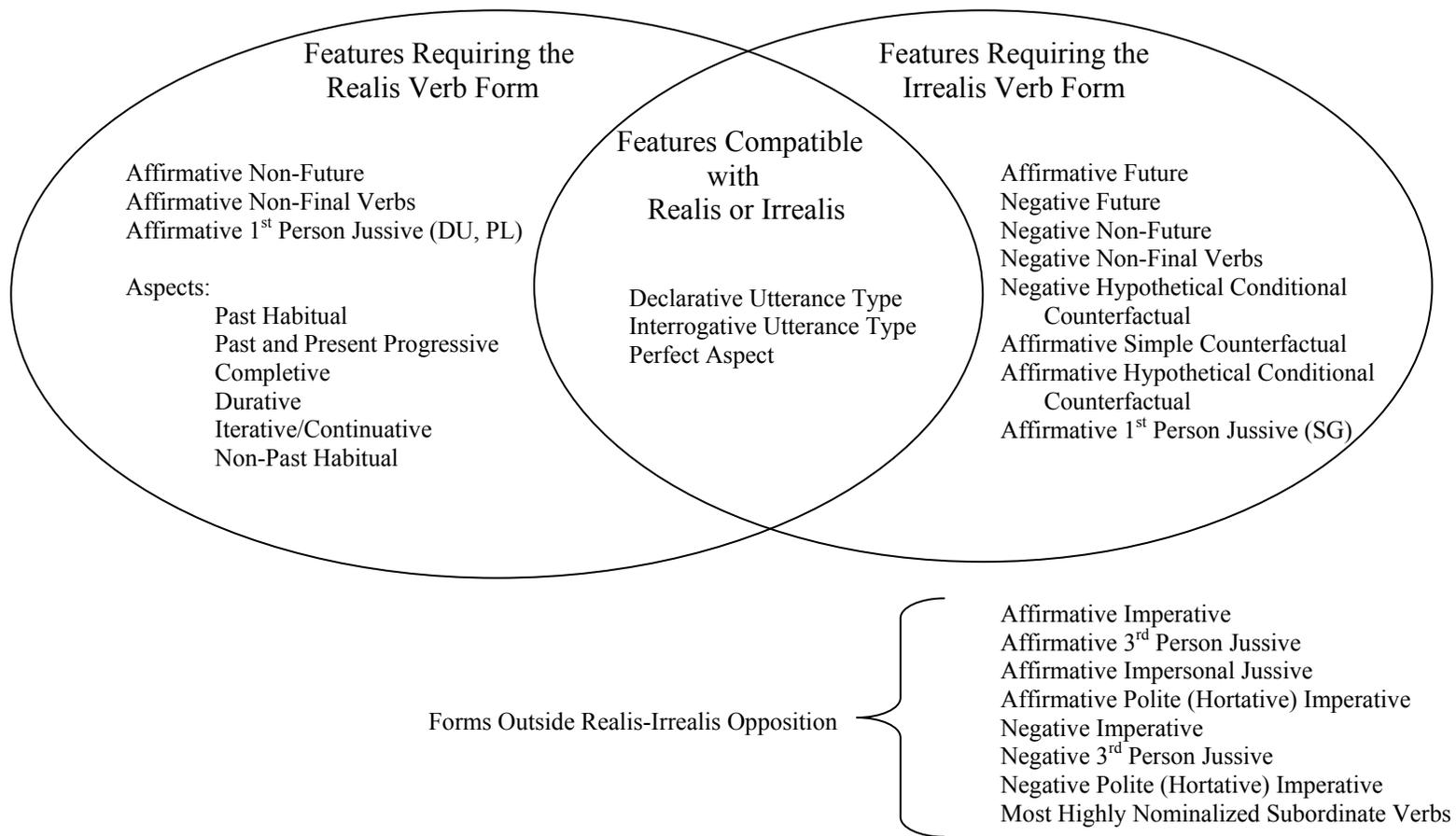


Figure 9.1. The Distribution of the Realis and Irrealis Verb Forms

The verbal words formed by the features in Fig. 9.1 are final verbs, unless specifically noted as non-final or subordinate forms. All affirmative non-final verbs take the realis verb form while negative non-final verbs require the irrealis verb form. Most nominalized subordinate verb forms are outside the realis-irrealis system as noted at the bottom of Fig. 9.1 along with a number of final verb forms (the affirmative imperative, affirmative 3rd person jussive, affirmative impersonal jussive, affirmative polite (hortative) imperative, negative imperative, negative 3rd person jussive and negative polite (hortative) imperative).

Let's now turn to the verbal features (and the composite verb forms) for which the realis-irrealis opposition is relevant. First, I will discuss the shared center features in Fig. 9.1 (i.e. those features which are compatible with either the realis or irrealis verb forms). Declarative and interrogative utterance types/speech acts (sections 10.4.1 and 10.4.2) and the perfect aspect (sections 10.2.2.2, for realis, and 10.2.3.3, for irrealis) are features which may be used with either the realis or irrealis verb form. When the realis verb form is used in declarative or interrogative utterances (with or without perfect aspect), it expresses affirmative non-future tense. The affirmative non-future tense is a feature of the realis verb form itself (cf. the left-most portion of Fig. 9.1). The non-future tense of the realis verb is morphologically unmarked (cf. section 10.2.1).

When the irrealis verb form is used with the declarative or interrogative utterances (with or without perfect aspect), it may be used to express the affirmative future, negative future, or negative non-future. The future tense on the irrealis verb is morphologically marked (cf. section 10.2.1). Affirmative future and negation (with future or non-future

tense) are features associated with the irrealis verb form (cf. the right-most portion of Fig. 9.1). Each of these realis and irrealis conjugations are distinguished by other morphological marking, and will be discussed in relevant sub-sections below. For now, I am sketching out the system in the most general terms possible. Perfect aspect, can be marked on realis and irrealis verbs (signifying a non-future perfect with realis and a future perfect with irrealis) in declarative and interrogative utterances (cf. sections 10.2.2.2 and 10.2.2.5, for the realis perfect and section 10.2.3.3, for the irrealis perfect). While other aspects can be marked on realis verbs (section 10.2.2), only perfect is compatible with both realis and irrealis verb forms. Aspectual marking is not found in other utterance types (such as imperative or jussive utterances, cf. section 10.4.3).

The left side of Fig. 9.1 indicates that only the realis verb form is used for a wide array of morphologically-marked aspectual expressions within the non-future tense domain on final verbs: past habitual, past and present progressive, completive, durative, iterative/continuative and non-past habitual (section 10.2.2). Only the realis verb form is used on affirmative non-final verbs (section 12.2); and on these non-final verbs, the realis form does not necessarily express non-future tense. The realis verb form is also used with the affirmative 1st person jussive verb (when the subject of the verb is dual or plural). As noted above, the realis verb form is not used on any negatives or counterfactuals and is never used when expressing future tense.

The right side of Fig. 9.1 indicates that the irrealis verb form is used for all negative verbs (both future and non-future tenses) in declarative and interrogative utterances (section 10.5.1 and 10.5.2). Unlike the realis verb form, which is associated

with the morphologically unmarked non-future tense on final verbs, the irrealis verb form is used with both future and non-future tense final verbs. The irrealis verb is used for non-future events, however, only on negative (section 10.5) or counterfactual verbs (section 10.2.4). The irrealis verb form may be used to express future tense on affirmative or negative verbs. Only the irrealis verb form is used exclusively on negative non-final verbs (section 12.3) and all counterfactual constructions (section 10.2.4). It is also used for the affirmative 1st person jussive verb form when the subject is singular.

The realis and irrealis opposition is not relevant to all verb forms (cf. the list at the bottom of Figure 9.1). Apart from the 1st jussive forms (where the singular utilizes the irrealis verb while the dual and plural forms require the realis verb), the imperative and jussive verbs (cf. sections 10.4.3-10.4.6) do not use the realis or irrealis verb patterns. The realis-irrealis distinction is also irrelevant for many subordinate verbs. Most subordinate verbs are nominalized through a variety of strategies and many don't take subject markers at all. The realis-irrealis distinction is relevant only in the most finite subordinate clauses (cf. Chapter XIII).

In the discussion below, I turn to the realis and irrealis verb forms themselves. I will begin with a focus on only the differences between the affirmative realis (section 9.1.1) and the affirmative irrealis (section 9.1.2). The structure of negative (irrealis) verbs is discussed afterwards, in section 9.1.3.

The basic position classes of the realis and irrealis verb forms can be illustrated through the use of affirmative declarative final verb forms; the affirmative declarative provides the widest array of position classes. The two verb forms are illustrated in

adjacent Tables (9.1 and 9.2) for easy comparison.

The irrealis form (Table 9.2) is discussed in section 9.1.2. Section 9.1.1, below, discusses the position classes of the realis verb.

Table 9.1. The Realis Verb's Position Classes (Affirmative Non-Future Declarative)

Inflectional Prefixes		Finite Verb Stem	Derivational Suffixes		Inflectional Suffixes				
Affirmative	Subject Prefix		Valence Decreasers	Applicative	Perfect	Non-Singular	Past Habitual	Hearsay	Utterance Type
ha- AFF	(see Table 9.6, section 9.4.1)		-ek' PASS -iŋk REFL -mùnd RECP	-tà APPL	-ti PF	-and NSG	-òw PST:HAB	-w HRSY	-á DECL -à: INTR

*Table 9.1 is meant to exemplify only the simple realis construction. It does not include the addition of auxiliary verbs, serialized/compounded verbs (including directionals, cf. section 9.8), or stem reduplication which are used for expressing various aspects (cf. section 10.2.2).

Table 9.2. The Irrealis Verb's Position Classes (Affirmative Future Declarative)

Inflectional Prefix	Finite Verb Stem	Derivational Suffixes		Inflectional Suffixes						
Affirmative		Valence Decreasers	Applicative	Perfect	Non-Singular	Tense	Subject Suffix	Auxiliary	Hearsay	Utterance Type
ha- AFF		-ek' PASS -iŋk REFL -mùnd RECP	-tà APPL	-ti PF	-and NSG	-gà FUT	(see Table 9.6, section 9.4.1)	-biŋ NPST:AUX -n NPST:AUX	-w HRSY	-á DECL -à: INTR

*Table 9.2, like 9.1, does not include serialized/compounded verbs (including directionals), cf. section 9.8, or stem reduplication which are used for expressing various aspects (cf. section 10.2.2) within the irrealis structure.

9.1.1. The Position Classes of the Realis Verbal Word

There are ten position-classes on the realis verbal word; these position-classes obtain for final realis verbs and for the most finite subordinate verb structures (cf. Chapter XIII). Non-final verbs can take perfect and progressive aspect inflectional suffixes, but none of the other inflectional suffixes (cf. Chapter XII). While I've not found any single final verb with all ten positions filled, I have found one verb occurring in a text with as many as eight of these position classes filled (9.1). Examples (9.2-9.3) illustrate the relative position of the other position classes.

(9.1) ha-no:m-ek'-tà-ti-and-w-á
AFF-trade-PASS-APPL-PF-NSG-HRSY-DECL
'They have been traded (to someone) (they say).'
(speaking of sister-exchange for marriage)

(9.2) ha-tí-héz-[↓]ek'-ti-á
AFF-1SG-hit-PASS-PF-DECL
'I have been hit.'

(9.3) ha-wos-and-òw-[↓]á
AFF-take-NSG-PST:HAB-DECL
'They used to take it.'

The ten position classes are organized into the broad morphological categories: inflectional prefixes, finite verb stem, derivational suffixes and inflectional suffixes. Essentially all realis verbs can take the prefixes, verb stem and derivational suffixes. The choice of specific inflectional suffixes, on the other hand, is more dependent upon syntactic context and the type of verb. For instance, final verbs can take the inflectional suffixes in Table 9.1 but, as noted at the beginning of this section, non-final verbs can

only take the perfect and progressive aspect suffixes, not the other inflectional suffixes (cf. Chapter XII). The rest of this chapter, then, focuses on only those elements which are commonly attested: the inflectional prefixes, verb stem and derivational suffixes.

The columns of Table 9.1 represent the full set of members of those position classes, on the realis verb, which are closed. The affirmative, applicative, perfect, non-singular, past-habitual and hearsay classes contain only one member each. The finite verb stem is, of course, an open class with many members. There are nine subject prefixes, including the three zero 3rd persons (SG, DU and PL). Within the derivational suffixes, there are three valence decreaseers: passive, reciprocal and reflexive. The hearsay evidential marker is not part of a wider evidential system and is the only member of its class. There are two utterance type suffixes which can occur in the final position on the realis verb: declarative and interrogative.

Some position classes are mutually exclusive. The perfect and the past habitual marker cannot co-occur in the same word. The reflexive and reciprocal valence decreaseers cannot co-occur with the applicative. The applicative can, however, follow the passive marker (cf. example 9.1, above). For this reason, I have positioned it in a class by itself. The non-singular marker /-and/ is only found when the subject of the verb is 3rd person dual or 3rd person plural; for these person-numbers, the subject prefix is zero; they are distinguished only by the NSG suffix or free pronouns (when used).¹⁴⁶ The hearsay evidential marker is only found on declarative utterances. In my discussion of utterance

¹⁴⁶ All other number indications are expressed by the subject prefixes themselves (cf. section 9.4, below).

types (section 10.4), I include hearsay-marked utterances as subsets of declarative utterances (cf. section 10.4.1.2).

The realis verb always requires a finite verb stem, as indicated by the tonal melody of the stem itself.¹⁴⁷ There are thus two relevant levels to the category *stem* in Northern Mao's verbal system: the stem₁ (either finite or non-finite, as indicated by tone melody) and the stem₂ which includes the derivational suffixes (Table 9.1).

Only the subject prefixes, the finite verb stem and the utterance markers are always present on all final realis verbs. On non-final realis verbs, only the finite verb stem is always present (same-subject clause chains do not require subject marking and non-final verbs never carry utterance type markers). The affirmative prefix /ha-/ is optional in the declarative verbs and exhibits an interesting distribution relative to subject prefixes on the realis verb (cf. section 9.6.2, below). Of course, derivational markers, directionals, perfect aspect, the non-singular (NSG) suffix, and past habitual aspect are also not always expressed; their use is dependent on the context and intended meaning.

9.1.2. The Irrealis Verbal Word

The irrealis verb is formed with an item-arrangement different from the realis verb (Table 9.2, above). That said, most of the position classes are in the same order as the realis verb (Table 9.1). Important differences include tense marking, subject suffixes, and the requirement of an auxiliary verb--all within the inflectional suffixes morphological category (Table 9.2).

¹⁴⁷ The reader is here directed to section 9.2 (with relevance to section 3.6 as well) where the finite-infinitive verb stem opposition is discussed.

In the affirmative declarative utterance, the irrealis verb always carries a future tense marker /-gà/ (cf. section 9.5, where the history of the irrealis verb is discussed). In the declarative, the irrealis verb serves as the future counterpart to the realis (non-future) verb. Future tense (section 10.2.1) and the counterfactual modality (section 10.2.4) require the use of the /-gà/ FUT suffix which follows the NSG /-and/. The future tense suffix is not found on all irrealis verbs, however. It is not used on the negative non-future declarative, and interrogative verbs (sections 10.5.1 and 10.5.2).

Subject marking is suffixal on the irrealis verbs (not prefixal as on the realis verb, section 9.1.1). Subject suffixes follow the future tense suffix if it is present and the NSG suffix, if the future tense suffix is not present (as in the negative non-future declarative or interrogative). An auxiliary element and the utterance type suffix follow the subject markers.

The choice of auxiliary element is dependent upon the tense and modality (e.g. counterfactual) of the verb as well as the attitude of the speaker (cf. sections 10.2.3 and 10.2.4). The affirmative irrealis future verb form requires either the /-bij/ (9.5, below) or /-n/ (9.4 and 9.6) auxiliaries. These are glossed as non-past auxiliaries. Other uses of the irrealis verb, such as in the simple counterfactual (section 10.2.4.1) and negative final verb domains (section 10.5.1 and 10.5.2), require different auxiliary elements (cf. section 10.3.1). All auxiliary elements on the irrealis verb form immediately follow subject suffixes and precede the utterance type suffixes. This item arrangement is likely preserving an older subordinate + final verb construct (cf. section 9.5). Examples (9.4-9.6) provide irrealis counterparts to the realis examples (9.1-9.3, section 9.1.1).

- (9.4) ha-no:m-ek'-tà-wand-gà-m-bìʃ-w-á
AFF-trade-PASS-APPL-NSG-FUT-3-NPST:AUX-HRSY-DECL
'They will be traded (to someone) (they say).'
- (9.5) ha-héz-^lek'-ti-gà-t-n-á
AFF-hit-PASS-PF-FUT-1SG-NPST:AUX-DECL
'I will have been hit (surely).'
- (9.6) ha-wos-ti-gà-t-n-á
AFF-take-PF-FUT-1SG-NPST:AUX-DECL
'I will have taken (it).'

The other position classes of the irrealis verb (Table 9.2) are in the same order as in the realis verb (Table 9.1). The past habitual cannot be used in the irrealis verb; it is an inherently realis category.

9.1.3. The Negative Irrealis Verbal Word

All negative irrealis verbal words (there are multiple types) exhibit three differences from the affirmative irrealis verbs: 1) the /ha-/ affirmative prefix is prohibited; 2) the infinitive verb stem is used, rather than the finite (cf. section 9.2); and 3) a negative suffix is required (positioned after the non-singular suffix). Other differences are relevant to different tenses or subjects.

Table 9.3 illustrates the position classes of the irrealis negative verb constructions. While all negative future verbs can be categorized as instantiations of a single construction (row 1, Table 9.3), negative non-future verbs are divided into multiple constructions: non-3rd person (row 2, Table 9.3) and 3rd person hearsay declarative/interrogative (row 3, Table 9.3), and 3rd person neutral declarative (row 4, Table 9.4).

The negative future construction (row 1, Table 9.3) is used for all person subjects. This form takes the future tense suffix /-gà/ and either the auxiliary /-bif/ (for the irrealis negative general future construction, cf. section 10.2.3.1, for the affirmative form) or the auxiliary /-n/ (for the irrealis negative certain/immediate future construction, cf. section 10.2.3.2, for the affirmative form). The negative suffix /-á/ is positioned after the non-singular suffix. The other position classes (derivational and inflectional suffixes) follow the same order as in the affirmative irrealis verb (Table 9.2, above). The verb stem column in Table 9.3 is empty to signify that the verb stem is itself an open class; the verb stem position is also empty for the affirmative realis and irrealis verbs (Tables 9.1 and 9.2, above). Membership of the other position classes (all of which are closed) is fully represented in Table 9.3. Shaded cells are used to indicate morpheme classes which are not relevant to a particular verb construction and are mentioned in the discussion of each verb construction below.

Table 9.3. The (Irrealis) Negative Non-3rd Person and Negative Future Verb Constructions' Position Classes

		INF Verb Stem	Derivational Suffixes		Inflectional Suffixes							
			Valence Decreasers	Applicative	Perfect	Non- Singular	Negative	Tense	Subject Suffix	Auxiliary	Hearsay	Utterance Type
1	Future (all persons)		-ek' PASS -iṅk REFL -mùnd RECP	-tà APPL	-ti PF	-and NSG	-á NEG	-gà FUT	(see Table 9.6, section 9.4.1)	-biʃ NPST:AUX -n NPST:AUX	-w HRSY	-á DECL -à INTR
2	Non-Future (non-3 rd person)		-ek' PASS -iṅk REFL -mùnd RECP	-tà APPL	-ti PF		-á NEG		(see Table 9.6, section 9.4.1)	-e:z NFUT:AUX -biʃ NPST:AUX	-w HRSY	-á DECL -à: INTR
3	Non-Future (3 rd person) HRSY DECL & INTR		-ek' PASS -iṅk REFL -mùnd RECP	-tà APPL	-ti PF	-and NSG	-wé NEG				-w HRSY	-á DECL -à: INTR
4	Non-Future (3 rd person) Neutral DECL		-ek' PASS -iṅk REFL -mùnd RECP	-tà APPL	-ti PF	-and NSG	-wé NEG			-jà NFUT- AUX		

The negative non-future non-3rd person construction (row 2, Table 9.3) is so-called because it is limited to non-3rd person subjects. This form expresses non-future tense by the lack of the future tense suffix and takes one of two auxiliary verbs (/ -e:z/ or /-biʃ/) which are interchangeable with one another. The shaded cells in row 2 indicate that the non-singular and tense inflectional suffixes are not attested in this construction. This is because 1) this construction is not used for any 3rd person subjects (and the non-singular is only found with 3rd person dual or plural subjects, cf. section 9.4.1) and 2) this construction is non-future and is not morphologically marked for tense; the absence of the future tense suffix indicates non-future tense.

Rows 3 and 4 of Table 9.3, illustrate the position classes of the negative non-future form used with 3rd person subjects. Tense and subject suffix classes are not relevant for the negative non-future 3rd person constructions (rows 3 and 4, Table 9.3). No auxiliary is used in the negative non-future 3rd person hearsay declarative and interrogative constructions (row 3, Table 9.3). The negative non-future neutral declarative does not take the hearsay or utterance type marking (declarative or interrogative) (row 1, Table 9.4). Rather, only the auxiliary /-jà/ (from a copula) follows the negative suffix (cf. section 10.5.1.1). The negative suffix in the negative non-future 3rd person constructions is /-wé/ (or the allomorph [-w] in the negative non-future 3rd person interrogative construction, cf. section 10.5.2), as opposed to the /-á/ negative found on the negative future and non-future non-3rd person verb constructions (in rows 1 and 2, Table 9.3).

As with the affirmative realis and irrealis verbs in Tables 9.1 and 9.2, above, some

of the morphological categories are mutually exclusive. Hearsay marking does not co-occur with the interrogative utterance type, and of course, declarative and interrogative utterance types do not co-occur. As noted for the negative future construction, above, the choice of auxiliary is meaningful (general future vs. certain/immediate future, cf. section 10.2.3). The full final verb constructions (which include these constructions and others as well) are all illustrated and discussed in section 10.4.

The examples below briefly illustrate the negative verb constructions as final verbs. Examples (9.7-9.8) illustrate the negative future construction.

(9.7) wós-tà-ti-á-gà-hì-bìf-á
 take:INF-APPL-PF-NEG-FUT-2SG-NFUT:AUX-DECL
 ‘You will not take it (for someone).’

(9.8) wós-ek’-ti-and-á-gà-m-bìf-á
 take:INF-PASS-PF-NSG-NEG-FUT-3-NPST:AUX-DECL
 ‘They will not have been taken.’

Example (9.9-9.10) illustrate the negative non-future non-3rd person construction in the declarative utterance.

(9.9) wós-tà-j-ti-á-hì-è:z-a
 take:INF-APPL-AWAY-PF-NEG-2SG-NFUT:AUX-DECL
 ‘You did not take it away (for someone).’

(9.10) hez-ek’-ti-á-tí-bíf-á
 hit:INF-PASS-PF-NEG-1SG-NPST:AUX-DECL
 ‘I have not been hit.’

The examples below illustrate the negative non-future 3rd person hearsay declarative (9.11) and interrogative construction (9.12). Before the interrogative suffix, the negative

suffix allomorph /-w/ is found, instead of /-wé/. The negative suffix's H tone is realized as a fall on the interrogative suffix (9.12), cf. section 10.5.2.

(9.11) hez-ek'-ti-wé-w-^lá
hit:INF-PASS-PF-NEG-HRSY-DECL
'S/he has not been hit (they say).'

(9.12) hez-ek'-ti-w-â:
hit:INF-PASS-PF-NEG-INTR
'Has s/he not been hit?'

Examples (9.13-9.14) illustrate the negative non-future 3rd person neutral declarative construction.

(9.13) wós-tà-ti-and-wé-jà
take:INF-APPL-PF-NSG-NEG-NFUT:AUX
'They have not been taken.'

(9.14) hez-ek'-ti-wé-jà
hit:INF-PASS-PF-NEG-NFUT:AUX
'S/he has not been hit.'

The use of the infinitive verb stem as opposed to the finite verb stem, as in negative verbs in declarative or interrogative utterances (exs. 9.7-9.14), is also utilized on negative non-final verbs (cf. sections 9.2 and 12.3). These and other uses of the finite vs. infinitive verb stem are the topic of the next section.

9.2. The Finite-Infinitive Verb Stem Opposition

In addition to the realis-irrealis opposition, verbs in Northern Mao also make use of a finite-infinitive (non-finite) verb stem opposition. The distribution of this opposition is not indicated in Fig. 9.1, above, but is indicated in Fig. 9.2, below. As illustrated in

sections 2.5.3 and 3.6, infinitive verb stems exhibit tonal melodies which fall into one of the nine noun tone classes: H1, M, L, HL1, MH, ML, H2, HL2 and LH. The finite verb stem melodies however are simply H, M or L for the vast majority of verbs (e.g. monosyllabic stems). While infinitive verb stems can serve as nouns and take nominal morphology (cf. section 4.6.2), they can also be used in a variety of verb forms. In the discussion below, I will use the verb ‘eat’ (the citation form is /ha-mí-[↓]á/ AFF-eat-DECL); its finite verb stem takes a H tone while its infinitive takes a L tone (/mì-jè/ eat:INF-TV).

First, as demonstrated in sections 3.6 and 4.6.2 and throughout Chapter XIII, subordinate verb constructions make use of both the finite and infinitive verb stems. When a verb stem itself is nominalized, the stem most typically appears in the infinitive form and, depending on the type of subordinate structure, may be followed by case marking, an indication of nominalization (9.15 and 9.16), or a subordinator (9.17).

(9.15) mì-ìʃ ha-nok-á
 eat:INF-SBJ AFF-be.good-DECL
 ‘Eating is good.’

(9.16) mì-nà ha-tí-ka:m-á
 eat:INF-OBJ AFF-1SG-love-DECL
 ‘I love eating.’

(9.17) mì-gàʃ ha-tí-wó:l-[↓]á
 eat:INF-PURP AFF-1SG-want-DECL
 ‘I want to eat.’

When the subordinated structure contains more than the verb stem itself (i.e. including an embedded object (9.18), subject marking (9.19) or an oblique (9.20), etc.), the finite verb

stem is required on the subordinate verb. In these instances, perhaps we can say that an entire verb phrase is nominalized (to some extent). The entire subordinate structure may be followed by the object case marker (9.18), which is optional, as it is in other instances (cf. section 8.3.1.2).

(9.18) kà:l-là mí-gàf-nà ha-tí-wó:l-^lá
 porridge-OBJ eat-PURP-OBJ AFF-1SG-want-DECL
 ‘I want to eat porridge.’

(9.19) tí-mí-gàf ha-wó:l-^lá
 1SG-eat-PURP AFF-want-DECL
 ‘S/he wants me to eat.’

(9.20) kjat'-sis-et mí-gàf ha-tí-wó:l-^lá
 house-inside-LOC eat-PURP AFF-1SG-want-DECL
 ‘I want to eat inside the house.’

Interestingly, it is possible to nominalize the verb phrase even when the subordinate unit contains only the simple verb stem (compare 9.22 to 9.21); it is not possible, however, to use the infinitive verb stem when more than the simple verb stem is present in the subordinate structure (compare 9.23 to 9.24). In (9.23 and 9.24) the subordinate verb is perhaps best analyzed as a clause, due to the presence of bound pronominal marking on the subordinate verb. These subject-marked subordinate verbs (and more complex clauses with embedded material like objects, locatives, etc.) cannot take the infinitive stem.

(9.21) jè:ts'-ìf ha-nok-á
 run:INF-SBJ AFF-be.good-DECL
 ‘Running is good.’

(9.22) jí:ts'-ìf ha-nok-á
 run-SBJ AFF-be.good-DECL
 'Running is good.'

(9.23)* tí-jè:ts'-gàf-nà ha-wó:l-á
 1SG-run:INF-PURP-OBJ AFF-want-DECL
 intended: 'S/he wants me to run.'

(9.24) tí-jé:ts'-gàf-nà ha-wó:l-á
 1SG-run-PURP-OBJ AFF-want-DECL
 'S/he wants me to run.'

Second, the finite-infinitive verb stem opposition is exhibited in non-final (medial) verbs. All affirmative non-final verbs (whatever other features from Fig. 9.1 they might have) require the finite verb stem (9.25), while all negative non-final verbs require the infinitive verb stem (9.26).¹⁴⁸

(9.25) kà:l-là mí-in ha-hów-j-á
 porridge-OBJ eat-SS:NF AFF-go-AWAY-DECL
 'S/he ate porridge and went away.'

(9.26) kà:l-là mì-wá ha-hów-j-á
 porridge-OBJ eat:INF-NEG:NF AFF-go-AWAY-DECL
 'S/he did not eat porridge and went away.'
 OR 'Without eating porridge, s/he went away.'

Affirmative non-final verbs are discussed in section 12.2, while negatives are discussed in section 12.3. Both examples above (9.25 and 9.26) include non-final clauses where the

¹⁴⁸ The translocative directional /-j/ AWAY in examples (9.25 and 9.26) and its cislocative /-kj/ counterpart TOWARD are discussed in section 9.8.2, (under verbal compounding). These forms are reduced phonologically but do not fall into a single position class. They have become grammaticalized through compounding/serialization and may be found following the verb stem or the applicative /-tà/.

subject is the same as the final clause; different non-final markers are used to indicate different subject non-final clauses as well as temporally integrated non-final clauses (cf. Chapter XII).

Finally, the finite-infinitive verb stem opposition is relevant to final verbs as well. The distribution of the finite and infinitive verb stems on the final verb forms, relative to both the affirmative-negative polarity and utterance or modality types is summarized in Table 9.4.

Table 9.4. The Distribution of Finite and Infinitive Verb Stems on Final Verbs

Final Verb Utterance or Modality Type	Affirmative	Negative
Declarative (all tenses and aspects)	Finite Stem	Infinitive Stem
Interrogative (all tenses and aspects)	Finite Stem	Infinitive Stem
Simple Counterfactual	Finite Stem	--
Hypothetical Conditional Counterfactual	Finite Stem	Infinitive Stem
1 st Person Jussive	Finite Stem	--
3 rd Person Jussive	Infinitive Stem	Finite Stem
Polite (Hortative) Imperative	Infinitive Stem	Finite Stem
Impersonal Jussive	Infinitive Stem	--
Imperative	Infinitive Stem	Infinitive Stem

There are no negative forms for the simple counterfactual, 1st person jussive or impersonal jussive verb forms. The use of the finite-infinitive opposition across affirmative and negative forms and utterance / modality types is illustrated with many examples below. But first, three generalizations can be made: 1) declarative and interrogative utterances pattern together, using the finite stems on affirmative verbs and the infinitive stems on negative verbs; 2) all imperative and jussive forms (except 1st person jussive) use the infinitive stem on affirmative verbs--an obvious and important break from the declarative and interrogative pattern; and 3) imperative verbs are the only utterance type which consistently use a single stem type, regardless of affirmative-

negative polarity (see Figure 9.2, below).

Figure 9.2, below, illustrates the interaction between the two widespread oppositions in Northern Mao's verbal system: the realis-irrealis opposition and the finite-infinitive verb stem opposition. The finite-infinitive verb stem opposition is particularly relevant to the irrealis verbal form (occurring on all negative irrealis verbs) and on other verbal forms which are outside the reali-irrealis opposition. The interaction between the finite-infinitive opposition and the realis-irrealis opposition (as represented in Figure 9.1) is shown in Figure 9.2, below. Those utterance types and verb forms which require the infinitive verb stem are outlined in a box; all other types take the finite verb stem. We've seen previously (in section 9.2) that the finite-infinitive opposition is relevant to subordinate and non-final verbs. In the discussion below, I will illustrate the uses of the infinitive verb stem on final verbs.

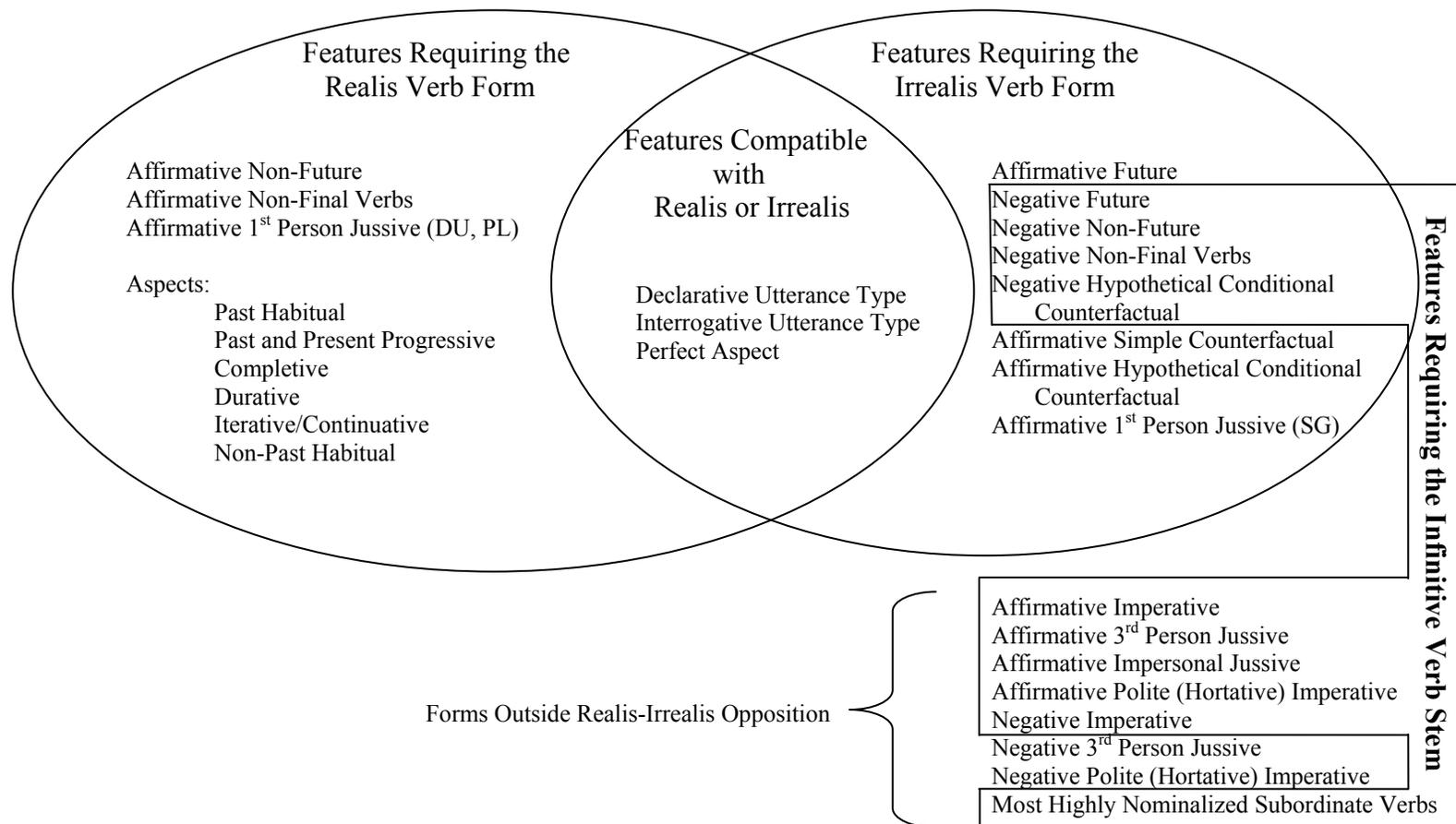


Figure 9.2. The Distribution of the Finite and Infinitive Verb Stems and the Intersection with the Realis-Irrealis Opposition

All verbs in declarative (section 10.4.1) and interrogative (section 10.4.2) utterances, regardless of tense and aspect or the realis-irrealis modality category, take the finite verb stem when affirmative, but the infinitive verb stem when negative (9.27-9.34).

Affirmative Realis Non-Future Declarative

- (9.27) ha-mí-[↓]á
AFF-eat-DECL
'S/he ate.'

Negative Irrealis Non-Future Declarative

- (9.28) mì-á-tí-bìŋ-[↓]á
eat:INF-NEG-1SG-NPST:AUX-DECL
'I did not eat.'

Affirmative Irrealis Future Declarative

- (9.29) ha-mí-gà-m-bìŋ-á
AFF-eat-FUT-3-NPST:AUX-DECL
'S/he will eat.'

Negative Irrealis Future Declarative

- (9.30) mì-á-gà-m-bìŋ-á
eat:INF-NEG-FUT-3-NPST:AUX-DECL
'S/he will not eat.'

Affirmative Realis Non-Future Interrogative

- (9.31) kí-íŋ mí-à:
who-SBJ eat-INTR
'Who ate?'

Negative Irrealis Non-Future Interrogative

- (9.32) kǐ-íʃ mǐ-wé-j-à:
who-SBJ eat:INF-NEG-COP-INTR
'Who did not eat?'

Affirmative Irrealis Future Interrogative

- (9.33) kǐ-íʃ mǐ-gà-m-bìʃ-à:
Who-SBJ eat-FUT-3-NPST:AUX-INTR
'Who will eat?'

Negative Irrealis Future Interrogative

- (9.34) kǐ-íʃ mǐ-á-gà-m-bìʃ-à:
Who-SBJ eat:INF-FUT-3-NPST:AUX-INTR
'Who will not eat?'

Counterfactuals (cf. section 10.2.4) also require the irrealis verb form. The simple counterfactual is always morphologically affirmative (though semantically negative) and takes only the finite verb stem (9.35).¹⁴⁹ The hypothetical conditional counterfactual verb form may be morphologically affirmative or negative, and thus, may take either the finite or the infinitive verb stem (for the negative form). The hypothetical conditional counterfactual (9.36-9.37) is so named because the final counterfactual verb requires a preceding hypothetical conditional clause (cf. sections 10.2.4 and 13.4.2). In its negative form, the hypothetical conditional counterfactual can express meaning similar to a concessive conditional (as in an “even if...would not” construction).

¹⁴⁹ Counterfactuals are treated as a subset of the irrealis modality in this grammar and not as an utterance-type or speech act on par with moods like declarative, interrogative, imperative, or jussive (cf. section 10.2.4).

Irrealis Simple Counterfactual

- (9.35) *kwalla ha-mí-gà-t-bítè*
yesterday AFF-eat-FUT-1SG-PST:AUX
'I was gonna work yesterday (but didn't).'

Affirmative Irrealis Hypothetical Conditional Counterfactual

- (9.36) *mì-mìs-ìf hí-bí-t-an*
eat:INF-thing-SBJ 3SG-EXIST-REL-INS

ha-mí-gà-tí-ntè
AFF-eat-FUT-1SG-HYP:AUX
'If there were food, I would have eaten.'

Negative Irrealis Hypothetical Conditional Counterfactual

- (9.37) *mì-mìs-ìf hí-bí-t-an*
eat:INF-thing-SBJ 3SG-EXIST-REL-INS

mì-á-gà-tí-ntè
eat:INF-NEG-FUT-1SG-HYP:AUX
'If there were food, I would not eat.'

As noted in Fig. 9.1, most of the constructions in the imperative and jussive utterance types do not involve the realis or irrealis verb forms. These verb constructions have not been represented in any of the position class discussion in this chapter; they are discussed in section 10.4.3 as they occur only as final verbs. They are relevant to our discussion of the finite-infinitive verb stem opposition as indicated in Table 9.4. I will briefly illustrate the verb stem behavior in these constructions below.

The 1st person jussive construction (cf. section 10.4.3.3) behaves like the declarative and interrogative verbs, taking the finite stem when affirmative (9.38-9.39). There is no grammaticalized structure allocated to a negative 1st person jussive function.

Rather, speakers simply use the negative (irrealis) future declarative verb form to indicate that they will not do something.

Affirmative 1st Person Jussive (dual and plural form)

- (9.38) kà:l-là han-mí-tà
porridge-OBJ 1DU-eat-1:JUSS
'Let us (dual) eat porridge.'

Affirmative 1st Person Jussive (singular form)

- (9.39) kà:l-là mí-gà-t-tá
porridge-OBJ eat-FUT-1SG-1:JUSS
'Let me eat porridge.'

All the other imperative and jussive verb forms are outside the realis-irrealis system (cf. Fig. 9.2, above, and the discussion in sections 10.4.3 and 10.5.3). The 1st person jussive forms, on the other hand, appear to be recent grammaticalizations: they do not form a structurally coherent category and clearly did not develop along the same pathway as other imperative or jussive forms. The 1st person dual and plural jussive form follows the realis verb form (with subject prefixes) while the 1st person singular jussive follows the irrealis future verb form with the /-ta/ 1:JUSS suffix in the place of the auxiliary, hearsay, and utterance type slots (cf. Table 9.2).

The 3rd person jussive (cf. section 10.4.3.2) and the polite (hortative) imperative (cf. section 10.4.3.5) are more typical representatives of the imperative and jussive forms. Like other imperative and jussive forms (excluding the 1st person jussive, discussed just above), they take the infinitive verb stem when affirmative (9.40 and 9.42). Curiously, the 3rd person jussive and polite (hortative) imperative take the finite verb stem when negative (9.41 and 9.43).

Affirmative 3rd Person Jussive

- (9.40) kà:l-là mì-tínè
porridge-OBJ eat:INF-3:JUSS
'Let him/her eat porridge.'

Negative 3rd Person Jussive

- (9.41) kà:l-là án-í-mí-nè
porridge-OBJ NEG-3SG-eat-NPST:AUX
'Let him/her not eat porridge!'

Polite (Hortative) Imperative

- (9.42) kà:l-là há-mi-í
porridge-OBJ IMPR-eat:INF-2SG:IMP
'May you eat porridge.'

Negative Polite (Hortative) Imperative

- (9.43) kà:l-là án-ì-mi-nè
porridge-OBJ NEG-2SG-eat-NPST:AUX
'May you not eat porridge!'

The tone of the verb stem 'eat' in the polite (hortative) imperative (examples 9.42 and 9.43) is not the expected surface form. In (9.42), this is due to the /há-/ prefix,¹⁵⁰ and in (9.43), it is due to partial assimilation from the L-toned prefix (cf. section 3.2.2).

The impersonal jussive (9.44) takes the infinitive verb stem (cf. section 10.4.3.4). There is no negative form for the impersonal jussive. See also footnote #150 regarding the polite (hortative) imperative example (9.42) for a discussion of the tonal phenomena

¹⁵⁰ In (9.42), the /há-/ impersonal prefix imposes tonal changes on the infinitive verb stem's melody; interestingly, the changes are identical to the same patterns attested between citation melodies and construct noun melodies when nominal forms are modified by a preceding element. In (9.42), the L-toned infinitive stem exhibits a M-tone after the /há-/. This is like L-toned nouns exhibiting a ML construct noun melody (cf. section 3.3.1). The same tonal change is seen on the infinitive stem in the impersonal jussive, which also takes the /há-/ impersonal prefix (9.44). This is illustrated further in sections 10.4.3.4 and 10.4.3.5.

involved here.

Affirmative Impersonal Jussive

- (9.44) kà:l-là há-mi-tínè
porridge-OBJ IMPR-eat:INF-3:JUSS
'May s/he eat porridge.'

Finally, verbs in imperative utterances take only the infinitive verb stem, whether affirmative or negative (9.45 and 9.46).

Affirmative Imperative

- (9.45) kà:l-là mì-í
porridge-OBJ eat:INF-2SG:IMP
'Eat porridge!'

Negative Imperative

- (9.46) kà:l-là mì-áf-í
porridge-OBJ eat:INF-NEG-2SG:IMP
'Don't eat porridge!'

The use of an infinitive stem for some conjugations of otherwise finite verbs is not unprecedented. And it may be that it is an areal feature. In the southern variety of Gumuz (a geographically close Nilo-Saharan language), for instance, the infinitive form of the verb, marked by a /ma-/ prefix, is used in future tense verbs as well as in purposives and some other nominalized structures (Colleen Ahland, personal communication).

Two other Omotic languages, Benchon (TNDA-TN-Girmira group, according to Bender 2003) and Sheko (TNDA-DA-Dizoid group, according to Bender 2003) have been documented as exhibiting a similar phenomenon where tone on verbs alternates to

indicate modal distinctions (Rapold 2006; Hellenthal 2010).¹⁵¹ Hellenthal notes that in Sheko, there are four levels of contrastive tone (2010:113). Verb stems in Sheko can be classified as H or L and paradigmatically group into three categories: basic, factual and non-factual (2010:114). In Sheko, the basic paradigm includes the imperative singular and jussive. The factual paradigm includes the realis and obvious moods. The non-factual paradigm includes the irrealis, optative and negative (Hellenthal 2010:113). These semantic paradigms are distinguished by tonal differences on the verb stem.

In Northern Mao, it is clear that the two tone patterns on verb stems are related to the finite and infinitive functions (cf. sections 3.6 and 4.6.2). While some conjugations require the finite stem and others require the infinitive stem, the Northern Mao verb stems do not fit clearly into factual/non-factual categories.

Unlike Sheko verbs, for instance, Northern Mao realis and irrealis (future and counterfactual forms) all use the finite verb stem.¹⁵² Certainly we might expect verbs in the irrealis modality, and especially counterfactuals, to require a non-factual stem. Yet, these constructions take the same stem (the finite stem) as the realis verb. We might also expect all negatives to take a non-factual stem, but again, the finite-infinitive verb stem opposition is not consistently utilized in this way; while the infinitive is used for negative declarative and interrogative verbs, it is used for the affirmative in most imperative and

¹⁵¹ While both Rapold and Hellenthal note these findings, I will only consider the pattern in Sheko, as its tone system is more similar to Northern Mao (Sheko has 4 levels with the presence of modified noun melodies (Hellenthal 2010)). Benchnon's tone system, on the other hand has as many as 5 levels with a 6th contour tone (Rapold 2006) and does not bear much similarity to Northern Mao's system.

¹⁵² The hypothetical conditional counterfactual uses the finite verb stem when affirmative and the infinitive verb stem when morphologically negative (cf. section 10.2.4.2).

jussive verbs. It could be that the distribution of the finite and infinitive verb stems has more to do with the actual pathways of grammaticalization itself than with synchronic function (cf. Cristofaro 2010).

Whatever the case, it is clear that unlike the situations in Benchnon and Sheko, the terms *factual* and *non-factual* do not capture the behavior of the Northern Mao data. That said, the fact that some Omotic languages, only very distantly related to Northern Mao, utilize tone as a marker relevant to some verb conjugations suggests that there may have been some older Omotic or perhaps even areal system where tone as a marker of polarity or modality did play a role.

9.3. The Verbal Citation Form

Before continuing in our orientation to and overview of the Northern Mao verb system (and specifically the morphological categories attested on multiple verb types), I will briefly describe the citation form of the verb. The 3rd person realis (i.e. non-future) declarative verb serves as the citation form for verbs in Northern Mao. This verb is formed with the affirmative prefix /ha-/ + a finite verb stem + the declarative suffix /-á/. The subject marking for 3rd person on the realis verb is zero and is not indicated in my glosses but is apparent from the English translations.

- (9.47) ha-héz-^lá
AFF-hit-DECL
'S/he hit (it).'

While it is possible to parse off the /ha-/ affirmative prefix and the /-á/ declarative suffix, speakers almost always include these when talking about a verb form in the abstract. The affirmative prefix is discussed in detail in section 9.6. The declarative marker is

illustrated in section 10.4.1. As noted in section 9.1, there is no realis marker *per se*; rather, the item-arrangement of the verb stem and its morphology indicates the verbs status as realis.

9.4. Subject Marking

We now turn from the discussion of the two widespread oppositions in the Northern Mao verbal system and the verbal citation form to the morphological features which are attested on multiple types of verbs (across the final, non-final and subordinate divisions). Our examination, however, is not restricted to the order of the position classes of the morphology listed in Tables 9.1-9.3. Because of some important historical developments which involve both the /ha-/ affirmative prefix and the bound pronominal subject prefixes, it is important to discuss all verbal subject marking (in section 9.4) as well as some thoughts on the historical development of the irrealis verb form (section 9.5) before examining the /ha-/ affirmative prefix (section 9.6). Thus, in this section we discuss the various systems of subject marking on final and dependent verbs (i.e. the three verb types: final, non-final and subordinate).

As illustrated in sections 9.1.1-9.1.3, subject markers on final declarative or interrogative verbs may occur as prefixes or as suffixes, depending on whether the realis or irrealis verb form is used (i.e. as prefixes on the realis vs. suffixes on the irrealis). In some instances, the affixes are not of the same morphological shape, having come from different sources (cf. section 9.5, below). Likewise, final verbs and dependent verbs (i.e. non-final verbs and subordinate verbs) do not use exactly the same set of subject markers.

Generally speaking, subject markers¹⁵³ correspond to the free pronominal forms in Northern Mao (see Table 9.5, below).

9.4.1. Subject Marking on Final Verbs

Three categories of subject markers are found on final verbs. First, all final realis verbs take subject prefixes (column 1 of Table 9.5). For the most part, these correspond clearly to the free pronouns (column 4 of Table 9.5). This is true for all the subject prefixes used with the realis verbs except for 3rd person forms, which are zero marked today on main-clause realis verbs but which utilize subject marking related to the corresponding free pronouns in dependent verb forms (cf. section 9.4.2).

Irrealis verbs, on the other hand, take subject suffixes. But these fall into two sub-categories. First are the subject suffixes found on irrealis non-future negative verb forms (column 2 of Table 9.5). These forms include the negative non-future declarative verb forms (section 10.5.1) and the negative non-future interrogative verb forms (section 10.5.2). The second group of subject suffixes (column 3 of Table 9.5) is found on irrealis future verb forms, including the general future and the certain/immediate future verbs (section 10.2.3).¹⁵⁴

¹⁵³ I use the term *subject marker* when referring to bound pronominal subject marking on the realis and irrealis verbs together. On the realis, these markers are prefixes, while on the irrealis, they are best analyzed as suffixes today, though they may have at one time been prefixes on the following existential or copular forms which serve as bound auxiliaries today.

¹⁵⁴ In section 9.5, I discuss a historical scenario which may have led to the more divergent third-column suffixes (i.e. those on the irrealis future verb forms).

Table 9.5. Subject Markers on Final Verbs with Corresponding Free Pronouns

Gloss	Realis Verbs	Irrealis Non-Future Negative Verbs	Irrealis Future	Free Pronouns
1SG	tí-	-t´	-t´	tí-jé
1DU	han´-	-n´	-n´	han-é
1PL	ham`-	-m`	-m`	hambèl-è
2SG	hì-	-hì	-è̀m /-gà/ FUT + /-è̀m/ 2SG > [gè̀m]	hì-jè
2DU	háw-	-w´	-´ (H Tone) /-gà/ FUT + /-´/ 2DU > [gǎ:]	háw-é
2PL	hàw-	-ẁ	-̀ (L Tone) /-gà/ + /-̀/ 2PL > [gà:]	hàwèl-è
3SG*	Ø-	-Ø-	-m`	íj-è
3DU	Ø- /-and/	-Ø- /-and/	-m` /-and/	íj-kuw-e
3PL	Ø- /-and/	-Ø- /-and/	-m` /-and/	íj-kol-è

* The 3rd person subject marking on subordinate verbs, such as relativized realis verbs, is /hí-/. It seems likely that this form, found only in subordinate clauses, was at an earlier time present on main clause verbs as well. Given the /hì-/ 2SG form, it seems reasonable to assume that the 3SG form /hí-/ found on affirmative, non-future dependent verbs is a reflex of an old minimal tone pair between 2nd and 3rd persons.

The prefixes in column 1 and the suffixes in column 2 show a great deal of similarity. The only difference in shape is the lack of the [ha] sequence on the suffixes in column 2. The suffixes in column 3 also lack the [ha] sequence which is present on the subject prefixes (column 1) and on the corresponding free pronouns (column 4).¹⁵⁵ Only the first person suffixes in column 3 are the same as those in column 2. In column 3, 2DU and 2PL are expressed only by tone and the vowel of the future suffix /-gà/ is lengthened, perhaps compensatorily, as the [w] consonants have been lost in each of these instances.

¹⁵⁵ Section 5.1.2 offers a detailed discussion of the [ha] sequence on pronouns and subject prefixes.

The subject marking is thus expressed through the modification of the future suffix: /-gǎ:/ FUT:2DU and /-gà:/ FUT:2PL.¹⁵⁶

The 2SG and all 3rd person suffixes in column 3 involve the form /-m`/ (with a floating L tone following the [m]). This form is not found on other morphemes marking the 2SG or 3rd persons (prefixes, suffixes or free pronouns). A suffix of the same shape /-m`/ is found marking 1PL, but it is consistently found marking 1PL (cf. columns 1 and 2 of Table 9.5) and is not an innovation on the irrealis future verb form suffixes. The 1PL and 3SG are fully neutralized. The 2SG subject is distinguished by a vowel change on the future suffix /-gà/ which precedes the /-m`/: /-g-èm`/ FUT-2SG. The 3DU and 3PL are also neutralized with one another but distinguishable from the other subject markers by the use of the /-and/ NSG marker.

Interestingly, not all of the [m] forms come from the same source. As mentioned above, the /-m`/ 1PL suffix in column 3 corresponds to the 1PL free pronoun in column 4 (disregarding the sequence [ha], for now), the column 1 prefix and the column 2 suffix. The /-m`/ in the 2SG and 3rd persons appears to be the result of a reanalysis from an older subordinate verb marker which gave rise to the future tense marker (cf. section 9.5, below).

9.4.2. Subject Marking on Dependent (Non-Final and Subordinate) Verbs

The term *dependent* verb is used here to include both non-final finite verbs in clause chains, and subordinate verbs. Most affirmative, non-future dependent verbs take the same subject prefixes as the final realis verbs (column 1 of Table 9.6) for all 1st

¹⁵⁶ I use the colon to separate two glosses which are not separable in interlinearization.

person and 2nd person subjects. Affirmative, non-future dependent verbs with 3rd person subjects, however, exhibit unique subject prefixes. That is, where the realis verb has a zero marker for 3rd person subjects, dependent verbs mark the 3rd person subject overtly (Table 9.6) with forms which correspond to the free pronouns in Table 9.5, above.

Table 9.6. Subject Marking on Affirmative, Non-Future Dependent Verbs with Corresponding Free Pronouns

Gloss	Subject Marker	Pronoun in Citation Form	Pronoun with Subject Case	Pronoun with Object Case
3SG	hí-	íʃ-è	íʃ-íʃ í-té	íʃ-nà
3DU	íʃ-kuw-	íʃ-kuw-e	íʃ-kuw-íʃ	íʃ-kuw-na
3PL	íʃ-kol-	íʃ-kol-è	íʃ-kol-íʃ íʃ-kol-té	íʃ-kol-là íʃ-kol-tá

9.5. Thoughts on the Historical Development of the Irrealis Verb, the Future Tense Suffix and Subject Marking

As noted in section 9.3 and later in sections 10.2.3 and 10.2.4, the irrealis verb may be used with the future tense suffix on future verbs (affirmative and negative) and on counterfactuals, or without the future tense suffix on negative non-future verbs. The item-arrangement of the irrealis future form (Table 9.3, above) suggests that this verb form may have been derived from a subordinate verb followed by a fully finite existential (/bɪʃ/) or copular (/n/) verb. This historical analysis is supported by a two facts: 1) today's future tense suffix /-gà/ is similar to a purposive subordinate marker /-gàʃ/ found on some complements as well as on purpose adverbials (cf. section 13.3.2 for its use on complements and 13.4.1 for the purpose adverbial); and 2) the subject suffixes which follow the /-gà/ FUT suffix are themselves immediately followed by auxiliary elements

which have been grammaticalized from lexical verbs (cf. section 10.3.1).

The subject suffixes used on irrealis future verbs today (column 3 of Table 9.5, above) show significant innovations from the other two sets of subject markers. These innovations include an intrusive [m] which joins the 2SG suffix and appears to replace the zero 3rd person marking as well. The other innovation is in the 2nd dual and plural forms where the vowel of the /-gà/ future tense suffix is lengthened. Where does this intrusive [m] come from? And could the intrusion of the [m] be related to the innovation of vocalic length?

The future tense suffix /-gà/ appears to have been /-gàm/ at an earlier stage in its development. Internal irregularities found in the future relative clause preserve an older [m] which clearly does not mark 3rd person, as shown by the 1st person future relative clause below (9.48).

- (9.48) tí-kí-gàm-b-t
1SG-come-FUT-NPST:AUX-REL
'that I will come'.

The [m] (in 9.48) cannot be parsed separately from the future suffix. It is important to recall that the subject in most affirmative, non-future dependent verb forms (i.e. all non-final verbs that take subject marking and most subordinate verbs) in Northern Mao is marked by a prefix (cf. section 9.4.2). And the [m] in /-gàm/ is found on future relativized verbs regardless of what subject prefix precedes the verb stem.

The development of the irrealis verbs involved not only the irrealis verb forms themselves, but also the development of a future tense suffix as well as new innovations in subject marking suffixes on irrealis future and some counterfactual verbs (cf. section

10.2.4 for the counterfactuals).

At the first stage, the final irrealis verb forms in Table 9.2 could have been derived from something like (9.49).

- Stage 1 (Reconstructed): Subordinate Verb and Finite Final Verb
(9.49) héz-gàm Ø-bíʃ-^lá
hit-PURP 3-EXIST-DECL
Literal reconstructed meaning: ‘S/he is in order to hit.’
(effective force: ‘She intends to hit.’)

During this stage, irrealis (and future) were expressed through such a periphrastic construction. Northern Mao’s internal evidence (as in example 9.48, above) suggests that the form /-gàm/, likely a subordinator, was reanalyzed as a future tense marker (as in 9.50).¹⁵⁷

- Stage 2 (Reconstructed): /-gam/ becomes future tense suffix
(9.50) héz-gàm Ø-bíʃ-^lá
hit-FUT 3-EXIST-DECL
‘S/he will hit.’

It is not clear if the existential verb was phonologically bound to the erstwhile subordinate structure or not at this stage.

But what we do know is that the /-gàm/’s final consonant [m], with its L tone, underwent reanalysis itself, becoming interpreted as a new subject suffix /-m`/ for all 3rd persons and for 2SG (9.51-9.53).

¹⁵⁷ The purposive subordinator today is /-gàʃ/ and the old future form was /-gàm/. I hypothesize that /-gàm/ was an older purposive form. I can’t be sure that this was the exact function, but the form /-gàm/ does appear to have functioned as a subordinator. Perhaps the [ʃ] on today’s subordinator /-gàʃ/ comes from a reduction of the relational noun /ʃal/ ‘way,’ used on postpositional phrases in movement predications.

before the new /-m`/ 2SG (9.52). Additionally, the /-m`/ simply filled the gap where no 3rd person markers had been (9.51) (cf. column 1 and column 2 of Table 9.5).

It appears that the /-gàm/ suffix was not involved in the formation of the negative irrealis non-future declarative and interrogative verbs (cf. sections 10.5.1 and 10.5.2). Perhaps this verb form developed after the /-gàm/ was reinterpreted as a future tense suffix. Consider the present-day forms of the negative irrealis non-future verb (9.54) and negative irrealis future verb (9.55).

Negative Irrealis Non-Future

- (9.54) hez-á-hì-bìʃ-^lá
hit:INF-NEG-2SG-NPST:AUX-DECL
'You did not hit.'

Negative Irrealis Future

- (9.55) hez-á-g-è-m-bìʃ-á
hit:INF-NEG-FUT-2SG-NPST:AUX-DECL
'You will not hit.'

In (9.54), there is no hint of the old future tense suffix /-gàm/ on the negative non-future verbs (cf. column 1 of Table 9.7, below). The 2SG subject marker on the negative non-future is of the same shape as the realis verb's subject marker.¹⁶⁰ The negative future, however, like all irrealis future verbs, shows the innovations in the subject marking (9.55). It is clear that when the future tense suffix is present, the subject markers have innovated (following the pattern summarized in column 3 of Table 9.5).

¹⁶⁰ That said, some speakers do not pronounce the [h] on the 2SG suffix when the verb is negative (that is, following the /-á/ NEG). Rather, they say [hezájbiʃa]. In hyperarticulations, however, the [h] is indeed present.

To further illustrate this, Table 9.7, below, provides complete verbal paradigms for the negative non-future, negative future and affirmative future irrealis verbs across all person subjects.

In Table 9.7, there are a few patterns which set the negative non-future paradigm off from the negative future and affirmative future: 1) the paradigm is split between two basic patterns (one for 1st and 2nd persons and one for 3rd persons; these are only functionally related patterns, as negative non-future forms--they do not fit the same structural template); 2) the 1st person suffix appears in its unreduced /-tí/ form rather than its /-t/ reduction, as is the case on all other irrealis verbs; 3) the declarative suffix is frozen with a downstepped H tone as opposed to the constant H tone on the declarative suffix of other irrealis verb forms. While the first two facts may suggest a more recent grammaticalization for the negative non-future, the third fact is a mystery. It is true that the declarative suffix does normally downstep after a H-toned verb stem (section 3.2.1) but this does not occur normally after a L-toned prefix has triggered partial assimilation and lowered the stem's tone (as may be occurring in the 1PL, 2SG and 2PL examples of the negative non-future) (cf. section 3.2.2). And besides, the auxiliary elements are normally toneless, receiving their tone from the left and never producing downstep (section 3.2.3). This is certainly true of the auxiliaries in the negative and affirmative future form (columns 2 and 3 of Table 9.7).

Table 9.7. Irrealis Verb Forms Relative to Tense and Affirmative-Negative Polarity Across Person Subjects

	Negative Non-Future	Negative Future	Affirmative Future
1SG	tjám-á-tí-bíʃ- ^l á count:INF-NEG-1SG-NPST:AUX-DECL 'I did not count.'	tjám-á-gà-t-bíʃ-á count:INF-NEG-FUT-1SG-NPST:AUX-DECL 'I will not count.'	ha-tjam-gà-t-bíʃ-á AFF-count-FUT-1SG-NPST:AUX-DECL 'I will count.'
1DU	tjám-á-n-bíʃ- ^l á count:INF-NEG-1DU-NPST:AUX-DECL 'We (dual) did not count.'	tjám-á-gà-n-bíʃ-á count:INF-NEG-FUT-2SG-NPST:AUX-DECL 'We (dual) will not count.'	ha-tjam-gà-n-bíʃ-á AFF-count-FUT-1DU-NPST:AUX-DECL 'We (dual) will count.'
1PL	tjám-á-m-bíʃ- ^l á count:INF-NEG-1PL-NPST:AUX-DECL 'We (plural) did not count.'	tjám-á-gà-m-bíʃ-á count:INF-NEG-FUT-1PL-NPST:AUX-DECL 'We (plural) will not count.'	ha-tjam-gà-m-bíʃ-á AFF-count-FUT-1PL-NPST:AUX-DECL 'We (plural) will count.'
2SG	tjám-á-hì-bíʃ- ^l á count:INF-NEG-2SG-NPST:AUX-DECL 'You did not count.'	tjám-á-g-è-m-bíʃ-á count:INF-NEG-FUT-2SG-NPST:AUX-DECL 'You will not count.'	ha-tjam-g-è-m-bíʃ-á AFF-count-FUT-2SG-NPST:AUX-DECL 'You will count.'
2DU	tjám-á-w-bíʃ- ^l á count:INF-NEG-2DU-NPST:AUX-DECL 'You (dual) did not count.'	tjám-á-gǎ-bíʃ-á count:INF-NEG-FUT-2DU-NPST:AUX-DECL 'You (dual) will not count.'	ha-tjam-gǎ-bíʃ-á AFF-count-FUT-2DU-NPST:AUX-DECL 'You (dual) will count.'
2PL	tjám-á-w-bíʃ- ^l á count:INF-NEG-2PL-NPST:AUX-DECL 'You (plural) did not count.'	tjám-á-gà-bíʃ-á count:INF-NEG-FUT-2PL-NPST:AUX-DECL 'You (plural) will not count.'	ha-tjam-gà-bíʃ-á AFF-count-FUT-2PL-NPST:AUX-DECL 'You (plural) will count.'
3SG	tjám-wé-jà count:INF-NEG-COP 'S/he did not count.'	tjám-á-gà-m-bíʃ-á count:INF-NEG-FUT-3-NPST:AUX-DECL 'S/he will not count.'	ha-tjam-gà-m-bíʃ-á AFF-count-FUT-3-NPST:AUX-DECL 'S/he will count.'
3DU/PL	tjám-ánd-wé-jà count:INF-NSG-NEG-COP 'They (dual/plural) did not count.'	tjám-ánd-á-gà-m-bíʃ-á count:INF-NSG-NEG-FUT-3-NPST:AUX-DECL 'They (dual/plural) will not count.'	ha-tjam-and-gà-m-bíʃ-á AFF-count-NSG-FUT-3-NPST:AUX-DECL 'They (dual/plural) will count.'

The innovations resulting from the /-gàm/ form have also impacted the irrealis counterfactual verb forms (cf. section 10.2.4). The irrealis counterfactual verb forms appear to have developed from the irrealis future verb. Both the simple and hypothetical conditional counterfactuals include the future tense marker, and the /-m`/ suffix marks 2SG and 3rd person. Interestingly, though, the hypothetical conditional counterfactual marks the 3rd person by a vowel change on the future tense suffix (cf. the discussion in section 10.2.4.2).

Now, we turn briefly to the other question posed early in this section: what about the innovation of vocalic lengthening in the /-gà/ future suffix? The vocalic lengthening of the [a] in /-gà/ FUT on the 2DU and 2PL future verbs (cf. Table 9.7) does not appear to be related to the intrusive [m] which we have been discussing. As noted above, the [m] was lost before subject markers that began with consonants other than [h], such as before 1SG, 1DU and 1PL as well as 2DU and 2PL (cf. the discussion around example 9.53, above). And the [a] vowel is lengthened only in the 2DU and 2PL instances. The lengthening is very likely compensatory, however, and was probably sparked by the loss of the [w] in the /-w`/ 2DU and /-w`/ 2PL markers.

In short, the reanalysis of /-gàm/ from a subordinator > future tense > future tense + subject suffix provides us with an explanation for the two sets of suffixes found on irrealis verbs in Table 9.5: the irrealis non-future negative verbs (column 2) and the irrealis future verbs (column 3). Once /-gàm/ became a future tense marker, the negative irrealis non-future forms developed, leaving subject suffixes on these verb forms unaffected and clearly corresponding to the morphological shape of the subject prefixes

on realis verbs (column 1 of Table 9.5). On the irrealis future and counterfactual verbs, where the /-gàm/ future tense suffix remained and was shortened to /-gà/, new 2SG and 3rd person suffixes with the shape /-m`/ appear.

9.6. The Affirmative Prefix /ha-/

Affirmative declarative verbs in Northern Mao frequently begin with what I have called the /ha-/ affirmative prefix. But this analysis is somewhat tentative. The /ha-/ prefix exhibits a perplexing distribution which poses problems for a single synchronic analysis. While the prefix occurs optionally on all final irrealis (affirmative) declarative verbs, across all subject persons, the distribution on the final realis declarative verb is more complicated. On the final realis declarative verb, the /ha-/ prefix occurs optionally on realis declarative verbs when the subject is 1SG or 3rd person (singular and non-singular) but is prohibited on the 2SG realis declarative verb. On realis declarative verbs with 1DU, 1PL, 2DU and 2PL subjects, the subject markers begin with a sequence [ha] which cannot be parsed separately and is not optional (see column 1, Table 9.5, above). The /ha-/ prefix appears to exhibit relevance to speech act / utterance types. It appears optionally in declarative utterances in the distribution described above but is required in polar interrogatives, where the answer is assumed to be affirmative, for the 1SG and 3rd person subjects and exhibits the same distribution as on the realis declarative verb for the other person subjects. It is prohibited in content interrogatives, all negative verb forms, imperatives and the simple jussive. There is, however, a /há-/ prefix (with a distinct tone) which serves as an obligatory prefix on the impersonal jussive and the polite (hortative) imperative form (cf. sections 10.4.3.4 and 10.4.3.5).

The free pronouns which correspond to the verbal subject markers (1DU, 1PL, 2DU and 2PL) also begin with a sequence [ha], while the other pronouns (1SG, 2SG and 3rd persons) do not (Table 9.5). I believe that this [ha] sequence is cognate with the /ha-/ verbal prefix (cf. section 5.1.2).

In Ahland (2009), the /ha-/ prefix was analyzed as a declarative marker.¹⁶¹ This analysis has become untenable as more data have been examined. For instance, the /ha-/ prefix does not appear on negative declaratives or any other negative forms. I have tentatively glossed the /ha-/ prefix as affirmative (AFF) throughout this grammar. This is based on its distribution: i.e. the /ha-/'s absence on all negative verbs and content interrogatives, as well as its optional presence on affirmative declaratives and its obligatory presence on polar interrogatives, where the expected response is the affirmative (cf. section 10.4.2.1). It is not clear why an affirmative marker would be optional on declarative utterances, however. I have identified an apparent cognate form in Ganza, another Mao language (cf. section 9.6.5). The /ha/ form in Ganza exhibits a number of distributional similarities to the /ha-/ prefix in Northern Mao. That said, I cannot be certain that Ganza's /ha/ form should be analyzed as an affirmative marker.

In the discussion below, I first illustrate the structural distribution of the /ha-/ on irrealis and realis (affirmative) declarative verbs, its distribution relative to utterance types and negative forms, and then briefly discuss a possible historical scenario, making

¹⁶¹ In contrast, the analysis presented in this grammar is that the suffix /-á/ is the declarative marker. Previously (in Ahland 2009), the /-á/ was analyzed as a realis marker. The /-á/ suffix appears on declarative utterances, both affirmative and negative. My analysis in this grammar is that both the realis and irrealis categories are marked only by their item-arrangement in Northern Mao. This allows for all utterance type markers to be found utterance-finally, as is observed in some other Omotic languages (cf. Hellenthal 2010:296ff).

use of comparative and internal evidence, as to how the /ha-/ may have come to exhibit at least a portion of its distribution today.

9.6.1. Distribution of /ha-/ on the Irrealis Future Declarative Verb

The /ha-/ prefix is optional on final affirmative irrealis future declarative verbs across all person subjects; in the irrealis future declarative verb, subject marking follows the /-gà/ FUT marker (cf. section 9.4.1).

- (9.56) (ha-)pè:ʃ-gà-t-bíʃ-á 1SG
 AFF-slap-FUT-1SG-NPST:AUX-DECL
 ‘I will slap (it).’
- (9.57) (ha-)pè:ʃ-gà-n-bíʃ-á 1DU
 AFF-slap-FUT-1DU-NPST:AUX-DECL
 ‘We (DU) will slap (it).’
- (9.58) (ha-)pè:ʃ-gà-m-bìʃ-á 1PL
 AFF-slap-FUT-1PL-NPST:AUX-DECL
 ‘We (PL) will slap (it).’
- (9.59) (ha-)pè:ʃ-gè-m-bìʃ-á 2SG
 AFF-slap-FUT-2SG-NPST:AUX-DECL
 ‘You will slap (it).’
- (9.60) (ha-)pè:ʃ-gǎ:-bíʃ-á 2DU
 AFF-slap-FUT-2DU (tone)-NPST:AUX-DECL
 ‘You (DU) will slap (it).’
- (9.61) (ha-)pè:ʃ-gà:-bíʃ-á 2PL
 AFF-slap-FUT-2PL (tone)-NPST:AUX-DECL
 ‘You (PL) will slap (it).’

(9.62) (ha-)pè:ʃ-gà-m-bìʃ-á 3SG
 AFF-slap-FUT-3-NPST:AUX-DECL
 ‘S/he will slap (it).’

(9.63) (ha-)pè:ʃ-and-gà-m-bìʃ-á 3DU/PL (NSG)
 AFF-slap-NSG-FUT-3-NPST:AUX-DECL
 ‘They (DU/PL) will slap (it).’

9.6.2. Distribution of /ha-/ on the Realis Declarative Verb

The distribution of /ha-/ is inconsistent across various subject person markers on the realis verb. As noted above (section 9.4.1), the subject markers precede the finite verb stem in the realis verb. The affirmative prefix /ha-/ optionally precedes the /tí-/ 1SG marker and also occurs optionally on all realis verbs with 3rd person (singular, dual or plural) subjects (where the subject marker is zero), without respect to transitivity (9.64 vs. 9.65) or other phenomena.

(9.64) (ha-)tí-pè:ʃ-á 1SG
 AFF-1SG-slap-DECL
 ‘I slapped (it).’

(9.65) (ha-)tí-gùnz-á 1SG
 AFF-1SG-be.sad-DECL
 ‘I am sad.’

(9.66) (ha-)gùnz-á 3SG
 AFF-be.sad-DECL
 ‘He/she is sad.’

(9.67) (ha-)gùnz-and-á 3DU/PL (Non-Singular)
 AFF-be.sad-NSG-DECL
 ‘They (DU/PL) are sad.’

9.6.3. Distribution of /ha-/ Relative to Utterance Types and Negatives

The affirmative prefix appears to be relevant to the various utterance types as well as negative forms. In polar interrogatives, when the answer is assumed to be affirmative, the /ha-/ is obligatorily used for 1SG and 3rd person subjects but exhibits the same distribution as on the realis declarative verb for other person subjects (i.e. prohibited before 2SG and fused as [ha] with 1DU/PL and 2DU/PL) (section 10.4.2.1). In content interrogatives (section 10.4.2.2), the affirmative prefix is prohibited on 1SG and 3rd person subjects, though the [ha] sequence is present on realis verbs in content interrogatives where it has been fused with the subject markers (as noted in section 9.6.2 for the declarative verbs). Propositions can be marked as hearsay within the declarative utterance type (section 10.4.1.2). The affirmative prefix exhibits the same distribution on hearsay verbs as it does on other verbs in declarative utterances (section 10.4.1).

The /ha-/ prefix is prohibited in the imperative and jussive utterance types (section 10.4.3). That being said, there is an impersonal (IMPR) prefix /há-/ with H tone, unlike the /ha-/ AFF- with M tone. This /há-/ IMPR prefix is found only on impersonal jussives and on polite (hortative) imperatives (sections 10.4.3.4 and 10.4.3.5, respectively). It is not clear if this H-toned /há-/ IMPR prefix is cognate with the M-toned /ha-/ prefix.

All negative forms prohibit the occurrence of /ha-/ (cf. sections 9.2, 10.5 and 12.3). Negation is not viewed as part of the utterance type system in this grammar, as negative forms are attested for all utterance types. Table 9.8, below, highlights the distribution of the affirmative prefix, relative to utterance types and negative forms.

Table 9.8. Distribution of /ha-/AFF Relative to Utterance Types and Negative Forms

	/ha-/ is Optional	/ha-/ is Required	/ha-/ is Prohibited
Declarative (realis/irrealis)	+		
Polar Interrogative		+	
Content Interrogative			+
Imperatives			+
Jussives			+
Negatives			+

Thus, the affirmative prefix /ha-/ is found optionally on verbs in the affirmative declarative (realis and irrealis forms). It is most typically obligatory in polar interrogatives. Some speakers require the /ha-/ on all polar interrogatives while other speakers require it only on those polar interrogatives where an affirmative response is expected, cf. section 10.4.2.1. The /ha-/ is prohibited in other utterance types and on all negative verbs.

9.6.4. Distribution of /ha-/ on Non-Final and Subordinate Verbs

Affirmative non-final and subordinate verbs use the realis verb form and the corresponding subject prefixes (section 9.4.2). The /ha-/ affirmative prefix is sometimes found on non-final and the more finite subordinate verbs, though its presence on these dependent verbs is less frequent than on affirmative declarative final verbs.

The /ha-/ prefix is not required on the non-final verb in the same-subject clause chain in (9.73). While one of my consultants provided (9.73) with the /ha-/ prefix, others have rejected the utterance with the /ha-/.

(9.73) (ha-)hí-in ham-mi-á
 AFF-go-SS:NF 1PL-eat-DECL
 ‘We went and ate.’

Example (9.74) clearly shows the /ha-/ prefix on a non-final verb (also a same-subject clause chain) in natural discourse (on the verb ‘take’ in line 3).

(9.74) papìn-àn jéʃk-mùnd-ín màk-á
 papine-INS call-RECP-SS:NF gather-DECL
 ‘...(they) calling one another by the papine (horn), (they) gathered.’

ʃak’ go:l-ín bi-t mìs go:l-ín
 goat slaughter-SS:NF EXIST-REL thing slaughter-SS:NF
 ‘slaughtering goats, slaughtering whatever there is...

púw-ná máʃ-in pák-nà ha-wos-wos-ín¹⁶²
 beer-OBJ brew.beer-SS:NF injera-OBJ AFF-take-take-SS:NF
 ‘brewing beer, taking lots of injera...

hów-in e: màk-mùnd-ín tur-and-á
 go-SS:NF yes gather-RECP-SS:NF was(OROMO)-NSG-DECL
 ‘they went...yes, they were gathered together (in unity).’
 (text 29.22-23)

Of the seven non-final verbs in (9.74), only one exhibits the /ha-/ prefix. In fact, in my textual database, there are fewer than ten instances of non-final verbs exhibiting the /ha-/ prefix (out of more than 900 instances of non-final verbs). I do not know what factors condition the appearance of the /ha-/ on non-final verbs. It is clear that the /ha-/ is only found on affirmative non-final verbs (as expected), and has been found only on same-

¹⁶² I analyze full verb stem reduplication as the mark of iterative/continuative aspect. This particular example, however, resembles a pluractional function. The reduplication appears to indicate that a lot of injera (the verb’s object) was taken.

subject chains thus far. I do not know if it can be used on other types of non-final verbs.

The /ha-/ prefix is more frequently found on affirmative subordinate verb forms than on non-final verbs. Examples (9.75-9.77) illustrate the use of the affirmative prefix on affirmative verbs in relative clauses.

(9.75) hádèm hadèm-t es-ìʃ ha-í-hadèm-bi-t
word work-REL person-SBJ AFF-3SG-work-N.PST:AUX-REL

àr-èt háràb àn-wé-jà
reason-LOC error not.find:INF-NEG-NFUT:AUX

‘A person who works, because s/he is working, does not not make mistakes.’

(This is a proverb, meaning essentially that to err is human and that mistakes are an expected part of work. The final verb is lexically negative (/ha-àn-á/ ‘not find’) and is itself morphologically negated, which I thus translate as “does not *not* make mistakes.”)

(9.76) ha-íʃ-kol-no:m-tà-j-t’ pa:lt-ìʃ
AFF-3-PL-trade-APPL-AWAY-REL maiden-SBJ

p’iʃ-wá hí-bíʃ-ʃín
give.birth:INF-NEG:NF 3SG-EXIST-COND

‘If the maiden who was exchanged (in marriage) doesn’t give birth...’

(Literally: ‘If the maiden who was traded away (for someone) exists without giving birth...’)

(text 28.08)

(9.77) ha-tí-go:l-t ʃak’-óʃk-nà ha-ʃén-^lá
AFF-1SG-slaughter-REL goat-meat-OBJ AFF-buy-DECL

‘S/he bought the goat meat that I slaughtered.’

Verbs in negative relative clauses cannot take the /ha-/ prefix (9.78 and 9.79).

affirmative final verbs in the declarative and polar interrogative utterance types, in the distributions described above. It is also found on some affirmative non-final verbs and on more-finite affirmative subordinate verbs. The /ha-/ is never found on morphologically negative verbs.

9.6.5. A Note on Ganza's /ha/ Form

While no corresponding prefix has been reported for the Hozo or Sezo Mao languages (thus far), new data on the Ganza language (the other member of the Mao subgroup) shows that Ganza has a /ha/ form which appears to be cognate with the affirmative /ha-/ prefix in Northern Mao (Hofmeister 2010).¹⁶³ The /ha/ form in Ganza, however, has not become fused with any of the pronouns or subject markers. And as noted in section 5.1.1, there is no dual opposition in the Ganza pronominal paradigm.

In the discussion below, I first describe the distribution of the /ha/ form in Ganza relative to utterance type (as that is relevant for Northern Mao's /ha/ form, cf. section 9.6.3). Second, I will describe the morpho-syntactic properties of the /ha/ form in those utterance types where it may be found.

Like Northern Mao, the /ha/ form in Ganza exhibits some relevance to utterance-type and verb conjugation. I have made distributional observations from reading through Hofmeister's manuscript. These are represented, in Table 9.9.

The distribution of the /ha/form in Ganza is very similar to the distribution of the affirmative /ha-/ prefix in Northern Mao, relative to utterance types (cf. section 9.6.3).

¹⁶³ I have not found any /ha/ form in Reidhead's (1947) work, but as he notes in the Preface, he was able to spend only eight weeks with one primary consultant; the data were then rechecked with several others, according to Reidhead. Hofmeister, while not a trained linguist, did spend considerable time learning to speak Ganza while living in the area.

According to Hofmeister’s 2010 manuscript, Ganza’s /ha/ form is frequently (but not always) attested in past/present declarative conjugations (2010:15ff) and in at least some polar interrogatives (2010:37). The /ha/ form is not attested in future declarative conjugations (2010:15-16), content questions (2010:21ff), imperatives (2010:20), and negatives (2010:19) (Table 9.9).

Table 9.9. Distribution of /ha/ in Ganza
Relative to Utterance Type/Conjugation

	/ha/ attested	/ha/ not attested
Declarative (past/present)	+	
Polar Interrogative	+	
Declarative (future)		+
Content Interrogative		+
Imperatives		+
Negatives		+

Like the affirmative /ha-/ prefix in Northern Mao, Ganza’s /ha/ can be found preceding subject markers before verbs in the past and present declarative utterances (Table 9.10).¹⁶⁴ Ganza’s /ha/ form may occur before any subject marker; it does not exhibit a restricted distribution similar to the /ha-/ prefix on Northern Mao’s realis verbs.

In Ganza, the /ha/ form exhibits the allomorph [fa] which may occur (but does not always) in place of the /ha/ form before the 3SG feminine subject marker (2010:15).

¹⁶⁴ The data in Table 9.10 are from Hofmeister (2010:15). The interlinearization and glossing for the examples are my own. While I gloss the /ha/ form in Ganza as an affirmative (AFF) marker, this is only a guess, based on the distributional observations I have made (and what I have seen in Northern Mao, of course). The suffix /-bo/ appears to be used across tenses (past, present and future) and aspects (continuous) but is not found on questions. I analyze /-bo/ tentatively as a declarative marker and suggest that questions are formed in part through subtractive morphology (i.e. loss of the declarative /-bo/) (cf. Hofmeister 2010:21).

Hofmeister does not represent the /ha/ form as a verbal prefix (Table 9.11); rather, the subject markers which follow /ha/ are represented as bound to /ha/ and the complex as phonologically free from the verb.¹⁶⁵

Table 9.10. Pronouns, Subject Markers and /ha/ in Ganza

	Gloss	Free Pronoun	Subject Marker	Example with /ha/
Singular	1	ti	di	ha-di sho'o-bo AFF-1SG sleep-DECL
	2	ye	na	ha-na sho'o-bo AFF-2SG sleep-DECL
	3M	kyana	ga	ha-ga sho'o-bo AFF-3M sleep-DECL
	3F	ki	gi	ha-gi sho'o-bo AFF-3F sleep-DECL
Plural	1	mu	mu	ha-mu sho'o-bo AFF-1PL sleep-DECL
	2	nam	ma	ha-ma sho'o-bo AFF-2PL sleep-DECL
	3	ku	gu	ha-gu sho'o-bo AFF-3PL sleep-DECL

In the vast majority of Hofmeister's data, the /ha/ form with the following subject marker appears immediately before the verb. But in two examples, other syntactic material (a subject pronoun (on her p. 11) and an object pronoun (on her p. 70)) are found between /ha/-plus-subject marker and the verb.

Ganza's /ha/ form may occur without the following subject markers. The 3rd person subject markers are not always used when there is a non-pronominal subject

¹⁶⁵ The word-status of the Ganza subject markers (i.e. the reduced forms, not the full pronouns) is not completely clear to me, however. Hofmeister's data show the subject markers bound to a variety of preceding elements (e.g. a full pronoun, the /ha/ form, and postpositions), and at other times, they are represented as free elements themselves, with no /ha/ form. But in the vast majority of instances, the /ha/-plus-subject marker complex is positioned immediately before the verb. It is not clear to me if the subject markers are really enclitics or if they might be actually proclitics or even prefixes to the verb itself (in a manner more similar to Northern Mao). Hofmeister does note, in reference to data with overt NP subject and objects, that the subject marker is always positioned immediately before the verb (2010:41).

noun phrase; thus, the /ha/ is sometimes found immediately before the verb (but only when the subject is 3rd person, regardless of gender or animacy) (cf. examples on pp. 14, 24, 29, and 31 of Hofmeister's manuscript). This use of the /ha/ with no 3rd person subject marker is similar to the behavior of the /ha-/ prefix in Northern Mao, where the 3rd person subject prefix has been lost in main clauses today.

Given the similarities in distribution relative to utterance type and the syntactic position of the /ha/ form in Ganza, it is very likely that Ganza's /ha/ is indeed cognate with Northern Mao's affirmative prefix. Both the Ganza and Northern Mao /ha/ forms exhibit distributions and functions which are in line with an *affirmative marker* analysis and both exhibit syntactic positioning before subject markers which themselves precede verbs in some verbal conjugations.

9.7. Derivational Suffixes

All derivational suffixes immediately follow the verb stems in both realis and irrealis declarative forms (section 9.1.1 and 9.1.2). Verbal derivational suffixes include valence decreaseers and valence increaseers. Derivational suffixes can be found on verbs of any type: final, non-final and subordinate. In the discussion below, we begin with an examination of valence decreasing and increasing operations. While the cislocative and translocative directionals carry out derivational operations, they are not part of the derivational class of suffixes and do not always occur in the same positional slot within the verbal word. The directionals are discussed in section 9.8.2.

9.7.1. Valence Decreasers: Passive, Reflexive, and Reciprocal

Three derivational suffixes can decrease the valence in Northern Mao: the passive

suffix /-ek'/,¹⁶⁶ the reflexive /-iŋk/, and the reciprocal /-mùnd/ (cf. Baye Yimam 2006:198-201, for further discussion of the passive and reciprocal forms). Table 9.11 illustrates the derivational suffixes operating on the verb 'hit'.

Table 9.11. Valence Decreasing Suffixes

	Valence Decreasers	Example
1	/-ek'/ PASS	kùwás-iʃ ha-héz- [↓] ek'-á ball-OBJ AFF-hit-PASS-DECL 'A ball was hit.'
2	/-iŋk/ REFL	p'iʃ-iʃ ha-héz- [↓] iŋk-á child-SBJ AFF-hit-REFL-DECL 'A child hit herself/himself.'
3	/-mùnd/ RECP	iʃ p'iʃ-wol-iʃ ha-héz-mùnd-and -á DEF child-PL-SBJ AFF-hit-RECP-NSG-DECL 'The children hit each other.'

Example (9.82) provides an example of a transitive construction involving the verb 'hit'.

- (9.82) p'iʃ-iʃ kùwás-ná ha-héz-[↓]á
child-SBJ ball-OBJ AFF-hit-DECL
'A child hit a ball.'

Throughout the discussion on valence decreasing operations, I will provide first a fully transitive construction (without the valence decreasing morphology) and then show the operation at work through a variety of examples.

Clearly each of the examples in Table 9.11 has undergone a change in valence. In row 1, where the passive suffix is used, the subject of the clause is the semantic patient. It is possible to include the agent, which is demoted from core argument to oblique and

¹⁶⁶ Some speakers use /-hek'/, with an initial [h] and others do so predictably, after vowels. For my primary consultants, however, the passive suffix is vowel initial and receives an approximant onset when it occurs immediately after a vowel.

marked with the instrumental postposition /-an/ (9.83 and 9.84).

(9.83) kùwás-ìʃ p'íʃ-an ha-héz-[↓]ek'-á
ball-SBJ child-INS AFF-hit-PASS-DECL
'A ball was hit by a child.'

(9.84) es-ìʃ kan-án tás-[↓]ek'-á
person-SBJ dog-INS bite-PASS-DECL
'A person was bit by a dog.'

But the inclusion of an agentive oblique is only very rarely attested in my data. In the vast majority of cases, the agent is not mentioned at all, as in (9.85 and 9.86).

(9.85) mì-mìs-ìʃ mí-[↓]ek'-ìʃ tí-hój-j-[↓]á
eat:INF-thing-SBJ eat-PASS-DS:NF 1SG-go-AWAY-DECL
'I left after the food was eaten.'

(9.86) ham-p'íʃ-ek'-t k'ets'-ìʃ bàmbàs-éta
1PL-give.birth-PASS-REL land-SBJ Bambassi-LOC
'The place we were born is Bambassi.'

I have not identified an impersonal passive construction or any other functional passive.

Row 2 in Table 9.11 illustrates the /-iŋk/ reflexive suffix.¹⁶⁷ Example (9.87) illustrates a transitive construction with the verb 'lick', while (9.88) demonstrates a reflexive on the same verb.

(9.87) íʃ kan-ìʃ p'íʃ-na ha-ts'ók-[↓]á
DEF dog-SBJ child-OBJ AFF-lick-DECL
'The dog licked a child.'

¹⁶⁷ The reflexive suffix /-iŋk/ may be historically related to the genitive case marker /-iŋ/.

(9.88) íʃ kan-íʃ ha-ts'ók-^lɪŋk-á
 DEF dog-SBJ AFF-lick-REFL-DECL
 'The dog licked himself.'

The construction in (9.88) is syntactically intransitive. No overt object co-occurs with the reflexive suffix.

In (9.89), the verb 'bite' is used in a transitive construction. When the reflexive suffix is used (9.90), the construction is syntactically intransitive (and the semantic agent and patient are co-referential).

(9.89) kan-íʃ p'íʃ-na ha-tás-^lá
 dog-SBJ child-OBJ AFF-bite-DECL
 'A dog bit a child.'

(9.90) kan-íʃ tás-^lɪŋk-á
 dog-SBJ bite-REFL-DECL
 'A dog bit himself.'

In (9.91) the verb 'wash' is used in a transitive construction.

(9.91) íʃ p'íʃ-nà ha-tí-kúʃ-^lá
 DEF child-OBJ AFF-1SG-wash-DECL
 'I washed the child.'

Example (9.92), illustrates the use of the reflexive suffix on 'wash' serving as a non-final verb, while (9.93) illustrates the reflexive 'wash' as a final verb. Subject marking is most typically absent on non-final verbs in same-subject clause chains (cf. section 12.2).

(9.92) tí-ʃ kúʃ-^lɪŋk-in mèsɡíd-ná tí-k'ùt'-á
 1SG-SBJ wash-REFL-SS:NF mosque-OBJ 1SG-enter-DECL
 'I washed myself and entered the mosque.'

(9.93) tí-kúʃ-^liŋk-á
 1SG-wash-REFL-DECL
 ‘I washed myself.’

In (9.88, 9.90, 9.92 and 9.93), the constructions with the reflexive suffixes are intransitive (syntactically). Only one syntactic argument is observed in each of these examples. There is only one participant, serving as both semantic agent and semantic patient (i.e. agent and patient are co-referential). As noted in section 5.3, there are no reflexive pronouns.

The reflexive suffix has been extended to include an emphatic function. Example (9.94) is clearly transitive, licensing object case on the noun phrase ‘my body’.

(9.94) tí-ŋ ^lk’el-là ha-tí-kúʃ-^lá
 1SG-GEN body-OBJ AFF-1SG-wash-DECL
 ‘I washed my body.’ (not a reflexive)

Curiously, in (9.95), the reflexive suffix is used with no change in the syntactic constituency; there is still the overt object noun phrase ‘my body’.

(9.95) tí-ŋ ^lk’el-là ha-tí-kúʃ-^liŋk-á
 1SG-GEN body-OBJ AFF-1SG-wash-REFL-DECL
 ‘I washed my body by myself.’ (emphatic)

My consultants translate example (9.95) and others like it with emphatic or contrastive stress on an overt subject pronoun in Amharic. One speaker suggested (9.96) as clarification, where the subject (a child) may not be expected to be able to wash himself and the use of the reflexive indicates that he did.

(9.96) ent'-píʃ-iʃ íʃ ʔk'el-là ha-kúʃ-ʔiŋk-á
 male-child-SBJ 3SG body-OBJ AFF-wash-REFL-DECL
 'A boy washed his body himself.'

In (9.97), the verb 'dress' is used in an intransitive construction (i.e. with only one syntactic argument: the subject).

(9.97) p'íʃ-iʃ ha-éd-ʔá
 child-SBJ AFF-dressed-DECL
 'A child dressed (her/himself).'

The meaning of (9.97) is semantically reflexive: the child dressed herself. That said, it is still possible to use the reflexive suffix on this verb (9.98), where the meaning again appears to be emphatic.

(9.98) p'íʃ-iʃ ha-éd-ʔiŋk-á
 child-SBJ AFF-dress-REFL-DECL
 'A child dressed (her/himself) her/himself.'

The reciprocal suffix /-mùnd/ is illustrated in row 3 of Table 9.11. As may be expected, the reciprocal suffix requires a non-singular subject, which could be expressly conjoined noun phrases (9.99), or dual (9.100) or plural (9.101) marking. The participants act upon or relate to each other in each instance.

(9.99) múnts' -iʃ-ìn p'íʃ-iʃ-in
 woman-SBJ-CONJ child-SBJ-CONJ

 gjá:r-mùnd-and-á
 AFF-greet-RECP-NSG-DECL
 'A woman and child greeted one another.'

(9.100) háts'à jó:s-mùnd-ìn
tomorrow dance-RECP-SS:NF

ha-buts'-gà-n-bíʃ-á
AFF-feast-FUT-1DU-NPST:AUX-DECL
'We'll dance with one another and feast tomorrow.'

(9.101) íʃ-kol-té sùdán-èt ha-pí-mùnd-and-á
3-PL-SBJ Sudan-LOC AFF-kill-RECP-NSG-DECL
'They killed each other in Sudan.'

Examples (9.102-9.103), feature imperative verbs marked for 2nd dual. Example (9.102) illustrates the reflexive suffix, where the two participants are told to greet (i.e. kiss) one another. Example (9.103), illustrates the 2nd dual imperative without the reflexive suffix: the two subject participants are told to greet a third participant.

(9.102) gja:r-mùnd-wá
greet:INF-RECP-2DU:IMP
'Greet one another (dual) (with a kiss)!'

(9.103) íʃ-nà gjar-wá
3SG-OBJ greet:INF-2DU:IMP
'Greet (dual) him/her!'

Like the reflexive suffix, the reciprocal exhibits an extended function, where the participants carry out the action together (but not in a reciprocally co-referential fashion). Givón calls this function "joint action" (2001:108). In (9.104) the first non-final verb is a syntactic reciprocal (i.e. the participants are speaking to one another), while the second non-final verb indicates joint action (i.e. the participants are sitting together, not sitting one another down).

(9.104) tòs-mùnd-ín kòw-mùnd-ín
 speak-RECP-SS:NF sit-RECP-SS:NF

bíʃ-and-gà-m-n-á

EXIST-FUT-3-NPST:AUX-DECL

‘...they will live, speaking with one another and sitting together.’

(text 20.25)

9.7.2. Valence Increasers: Applicative and Causative

Two types of derivational suffixes in Northern Mao can increase the valence (Table 9.12): the applicative /-tà/, grammaticalized from the verb ‘give’ (/ha-tà-á/ AFF-give-DECL, in citation form), and the morphological causative /-sis/, which is borrowed from Oromo according to my consultants.

Table 9.12. Valence Increasing Suffixes

	Derivational Suffix and Gloss	Example
1	/-tà/ APPL	p’ij-ij kùwás-ná tí-ná ha-héz-tà-á child-SBJ ball-OBJ 1SG-OBJ AFF-hit-APPL-DECL ‘A child hit a ball for me.’
2	/-sis/ CAUS	p’ij-ij kùwás-ná tí-ná ha-héz-sis-á child-SBJ ball-OBJ 1SG-OBJ AFF-hit-CAUSE-DECL ‘A child made me hit a ball.’

Some of my consultants have suggested that the /-sis/ causative is not a proper Mao form due to it being borrowed. I have only a couple instances of it in my texts, and in those instances, the form is the only derivational suffix used, so I cannot be sure about its position relative to the other derivational suffixes. My guess is that it fits in the same position as the /-tà/ applicative. Because I cannot be sure of its position in complex verbal words and the fact that it is only rarely used and is rejected as not representative of the language by some speakers, I have not included the causative /-sis/ in the position class charts in sections 9.1 and 9.2. All speakers I have worked with appear to prefer to use a

periphrastic causative construction, involving the verb ‘give’ in a different subject clause chain (cf. section 12.4). In the discussion below, I will first illustrate the range of uses of the applicative and then turn to the morphological causative.

The /-tà/ applicative can be used to add an argument to a verb’s valence. The role of serialization in this and other erstwhile verb forms is discussed in section 12.6. In example (9.97, above), the verb ‘dress’ is intransitive (and semantically reflexive). It is possible to augment the valence of the verb and form a transitive construction through the use of the applicative (9.105).

(9.105) íʃ m̀nts’-íʃ p’íʃ-na ha-éd-tà-á
 DEF woman-SBJ child-OBJ AFF-dress-APPL-DECL
 ‘The woman dressed a child.’

The object in (9.105) is clearly not co-referential with the subject. Some speakers accepted a passive formed on this derived verb stem (9.106), though others have noted its strangeness. This is an example which I formed and then checked with speakers. I have not encountered any passives formed where the subject is the participant added by the applicative in natural speech.¹⁶⁸

(9.106) ? p’íʃ-na ha-éd-ek’-tà-á
 child-OBJ AFF-dress-PASS-APPL-DECL
 ‘A child was dressed.’

In (9.107), the verb ‘go.out’ is intransitive. As noted in section 8.3.2.1, the locative-source oblique is not required.

¹⁶⁸ It is entirely grammatical to use both the passive and applicative valence changers on a verb stem at the same time, however (cf. examples (9.1) and (9.4), in sections 9.1.1 and 9.1.2).

(9.107) bàmbàs-ét ha-pòn-á
Bambassi-LOC AFF-go.out-DECL
'S/he went out from Bambassi.'

The construction in (9.108) with the applicative appears to license an object with benefactive semantics. Perhaps the benefactive semantics are due to the applicative's lexical source 'give'.

(9.108) bàmbàs-ét tí-ná ha-pòn-tà-á
Bambassi-LOC 1SG-OBJ AFF-go.out-APPL-DECL
'He went out from Bambassi for me.'

Without the /-tà/ applicative, the transitive construction is unacceptable with the verb stem 'go out' (9.109).

(9.109) * bàmbàs-ét tí-ná ha-pòn-á
Bambassi-LOC 1SG-OBJ AFF-go.out-DECL

The examples above illustrate verbs which, without the applicative, are found in intransitive constructions. In (9.110), however, we find the verb 'write' occurring in a transitive construction, where the verb stem is simple (i.e. no derivational marking).

(9.110) tí-ʃ àlwérg-nà ha-tí-winz-á
1SG-SBJ letter-OBJ AFF-1SG-write-DECL
'I wrote a letter.'

Example (9.111) illustrates the applicative on this verb. In this case, speakers report that the 'person' could be the recipient of the letter or someone who cannot write himself and needs someone else to write it for him. That is, the added argument appears to be interpretable as recipient or benefactive.

(9.111) tí-ʃ es-nà àlwérg-nà ha-tí-winz-tà-á
 1SG-SBJ person-OBJ letter-OBJ AFF-1SG-write-give-DECL
 ‘I wrote a person a letter.’

As may be expected, the meaning of the verb stem itself can affect the semantics of the added element. In (9.112), for instance, the added element (the 1st person pronoun) is not semantically benefactive.

(9.112) nà hadèm-ìʃ tì-nà gǵá: pá:l-tà-á
 PROX work-SBJ 1SG-OBJ very be.heavy-APPL-DECL
 ‘This work was very difficult for me.’

For the most part, however, in cases where a benefactive interpretation is possible, it is found. In (9.113 and 9.114) the verbs ‘steal’ and ‘die’ take the applicative. In both cases, the meaning of the construction clearly includes benefactive.

(9.113) íʃ àlmàkin-nà tí-ná húp’-tà-á
 DEF car-OBJ 1SG-OBJ steal-APPL-DECL
 ‘He stole me the car.’ OR ‘He stole the car for me.’

(9.115) tí-ŋ ʼma:gèw-ìʃ tí-ná ha-hék’-tà-á
 1SG-GEN friend-SBJ 1SG-OBJ AFF-die-APPL-DECL
 ‘My friend died for me.’ (NOT, ‘My friend died on me.’)

I have not been able to use the /-tà/ applicative to add an element with malefactive semantics, apart from examples like (9.112) where the malefactive meaning appears to be a derivative of the verb’s semantics. Also, I have not been able to use the /-tà/ applicative with a verb stem which operates in a ditransitive construction. Only the verb ‘give’ has been clearly identified as operating in a ditransitive construction without the applicative, and ‘give’ cannot take the /-tà/ applicative suffix. In (9.115), for instance, when /-tà/ is

used after the lexical verb /tà/, speakers interpret the string as the reduplicated verb stem construction which indicates iterative or continuative aspect (cf. section 10.2.2.8).

- (9.115) p'ij-na ʃapków-nà tí-tà-tà-á
child-OBJ shoe-OBJ 1SG-give-give-DECL
'I gave a child shoes repeatedly.'

As noted in the introduction to this section, the morphological causative /-sis/ is considered a borrowing from Oromo and thus not proper Mao, according to some speakers. That said, it warrants mentioning here because it does appear on a handful of verbs, mostly dealing with the domain of education (Oromo is the medium of education in the local schools of the area). In (9.116), the verb 'know' is in a transitive construction.

- (9.116) ij p'ij-ij wínz-ná ha-àld-á
DEF child-SBJ write:INF-OBJ AFF-know-DECL
'The student knows how to write.'

In (9.117), however, the verb's valence is extended to include the object 'students'.¹⁶⁹ The same causative suffix is also found on the noun 'teacher', a compound (via the associative construction) with the infinitive verb stem 'know'.

¹⁶⁹ Incidentally, the word 'student' involves the form /támàr/, apparently derived from a borrowing of 'student' in Amharic *temari*. In Northern Mao, however, /támàr/ means 'lessons'. The Amharic form for 'lesson' is *timhirt*. In (9.117), /támàr/ is compounded with 'person' /es/. The form /támàr/ can also be used as an infinitive verb stem meaning 'learn' (9.118). This form could be from the same source as /támàr/ in 'student or it could be from the Amharic verb 'learn' *temare*.

(9.117) àld-sís-[↓]es-ìf támàr-ès-wol-la
know:INF-CAUSE-person-SBJ lesson-person-PL-OBJ

wínz-ná ha-àld-sìs-á
write:INF-OBJ AFF-know-CAUSE-DECL
'A teacher taught the students writing.'
Literally: 'A teacher caused the students to know writing.'

In (9.118) the verb 'learn', borrowed from Amharic, is used with the morphological causative in a 2PL imperative,¹⁷⁰ meaning 'teach'. The object 'them' is not syntactically present in this clause but is clear from the context.

(9.118) támàr-nà támàr-sìs-wà
lesson-OBJ learn-CAUSE-2PL:IMP
'You all teach (them) the lessons!'
(text 22.13)

In (9.119), a non-causative imperative is illustrated, but speakers do not use the verb /támàr/; rather they use the verb /àld/ 'know' which includes the sense 'learn' in common usage elsewhere.

(9.119) támàr-nà àld-wà
lesson-OBJ know-2PL:IMP
'You all learn the lessons.'

It is possible to use the /-sis/ morphological causative outside the domain of education as well, but not all speakers accept this as good Mao. It does appear, however, to be understood by everyone. I have observed the examples below in casual conversations and re-elicited them for inclusion here.

¹⁷⁰ Thus three different languages have contributed to this one wordform: Amharic (the verb stem) and Oromo (the causative suffix) and Northern Mao (the 2PL imperative suffix).

(9.120) í-té nà-nà ha-kí-^lá
 3SG-SBJ here-OBJ AFF-AFF-come-DECL
 ‘S/he came here.’

(9.121) í-té nà-nà tí-ná ha-kí-sìs-á
 3SG-SBJ here-OBJ 1SG-OBJ AFF-come-CAUSE-DECL
 ‘S/he made me come here.’

Example (9.121) appears to be interpreted only as a case of indirect causation, presumably because the verb ‘bring’ (/ha-wos-kj-á/, cf. example 9.130, below) is used to indicate direct causation in a situation like this and thus pre-empts ‘come’ with the morphological causative from operating in this function. In (9.122), however, the causative interpretation can be direct or indirect. My consultants have offered both in their Amharic translations (Amharic indicates direct vs. indirect causation by different morphological forms).

(9.122) tí-ŋ no:k-iʃ mì-mìs-nà p’iʃ-na
 1SG-GEN mother-SBJ eat:INF-thing-OBJ child-OBJ

 ha-mí-sìs-á
 AFF-eat-CAUSE-DECL
 ‘My mother made a child eat food.’
 OR ‘My mother fed a child food.’

Example (9.123) illustrates the non-causative form, with only one object.

(9.123) tí-ŋ no:k-iʃ mì-mìs-nà ha-mí-^lá
 1SG-GEN mother-SBJ eat:INF-thing-OBJ AFF-eat-DECL
 ‘My mother ate food.’

In every case where I have checked, speakers say that the periphrastic causative construction (cf. section 12.4) is preferable to the /-sis/ morphological causative. The

periphrastic causative can also be used to express both direct and indirect causation.

9.8. Verbal Compounding

Most verbal compounding in Northern Mao can be divided into two categories: 1) those which form aspectual constructions (cf. section 10.2.2) and 2) those which form directional constructions. Both types are productive and can involve a wide array of lexical verb stems to which a (now somewhat grammaticalized) verb stem (i.e. a member of a small closed class) is compounded. The possible historical relationship between verb serialization and verbal compounding is discussed in Chapter XII (section 12.6). Section 9.8, concludes with a discussion of a few non-productive lexicalized verbal compounds which do not fit into either of the two categories mentioned above. The two categories of compounds and the few instances of compounds which do not fit are all discussed below.

9.8.1. Verbal Compounding in Aspectual Constructions

In section 10.2.2, I discuss three realis aspectual constructions which exhibit two verb stems that are always immediately adjacent: the perfect (section 10.2.2.5), completive (section 10.2.2.6) and durative (section 10.2.2.7). Because these are illustrated in Chapter X, I will only briefly discuss them here. I refer to these constructions as *compounded* verb stems because the lexical verb stems themselves are augmented through the addition of another erstwhile verb stem which has come to communicate aspectual distinctions. That said, the positioning of the perfect and completive marking (from the verb stems ‘have’ and ‘finish’, respectively) at the right edge of the lexical verb, and the positioning of durative marker (from the verb stem ‘sit’) at the left edge of the lexical verb suggest that serialization played a role in the formation

of the compounds. I will take up this issue further in the discussion of the durative, below (cf. sections 10.2.2 and 12.6).

The perfect is formed via compounding of the verb stem ‘have’ /kòt’/ to the right edge of a lexical verb. Example (9.24) shows the use of the lexical verb ‘have’ in a transitive construction.

- (9.124) íʃ p’íʃ-ìʃ ʃapków-nà ha-kòt’-á
 DEF child-SBJ shoe-OBJ AFF-have-DECL
 ‘The child has a shoe/shoes.’

In (9.125), the verb stem ‘have’ is compounded to the verb ‘hit’, forming a perfect. The compounded verb stem is followed by the reciprocal derivational suffix.

- (9.125) íʃ p’íʃ-wol-iʃ ha-héz-kòt’-mùnd-and-á
 DEF child-PL-SBJ AFF-hit-PF-RECP-DECL
 ‘The children have hit one another.’

The completive involves compounding of the verb stem ‘finish’ /ts’e:l/ to the right edge of a lexical verb. In (9.126), the verb ‘finish’ is used as a lexical verb in a transitive construction.

- (9.126) íʃ p’íʃ-ìʃ hádèm-nà ha-ts’e:l-á
 DEF child-SBJ work:INF-OBJ AFF-finish-DECL
 ‘The child finished (his/her) work.’

In (9.127), however, the verb stem /ts’e:l/ is compounded to the the lexical verb ‘work’.

- (9.127) íʃ p’íʃ-ìʃ ha-hadèm-ts’e:l-á
 DEF child-SBJ AFF-work-COMPL-DECL
 ‘The child finished working.’

The durative aspect involves the compounding of the verb ‘sit’ /kò/ to the left

edge of a lexical verb; this is in contrast to the position of the ‘have’ and ‘finish’ verb stems above, which each join the lexical verb stem on the right edge. Example (9.128) below illustrates the verb ‘sit’ in an intransitive construction.

- (9.128) íʃ p’íʃ-íʃ dón-èt ha-kòw-á
 DEF child-SBJ stool-LOC AFF-sit-DECL
 ‘The child sat on a stool.’

Example (9.129) illustrates the verb stem ‘sit’ as a durative marker compounded to the left edge of the lexical verb ‘run’, which is itself followed by the applicative suffix.

- (9.129) íʃ p’íʃ-íʃ ha-kò-jets’-tà-á
 DEF child-SBJ AFF-DUR-run-APPL-DECL
 ‘The child ran for a while (for another).’
 (This can mean either looking for someone or on the behalf of
 someone, as in a race.)

The position of the durative at the left edge of the lexical verb while the perfect and completive markers are at the right edge is suggestive of verb serialization. The example (9.129) is perhaps derived from something like ‘the child sat, running’ (cf. section 10.2.2.7). Alternatively, for the completive, we can say that one would *work* and then *finish*, for instance.

In each instance of these aspectual compounds above, derivational suffixes are positioned after the augmented (compounded) verb stem (cf. sections 10.2.2). Today, these *aspectual* verb stems, which come from the lexical verbs ‘have’, ‘finish’ and ‘sit’, are highly productive means of indicating the perfect, completive and durative aspects, respectively. Thus, I do not use lexical glosses but grammatical glosses for these stems.

9.8.2. Directionals

Forms historically related to the verbs ‘come’ and ‘go’ serve as directional suffixes for indicating cislocative /-kj/ (TOWARD) and translocative /-j/ (AWAY) movement (cf. section 12.6 for a discussion of serialization in the formation of the directionals). The cislocative directional /-kj/ indicates movement toward the deictic center while the translocative directional marker /-j/ indicates movement away from the deictic center.¹⁷¹ In the examples below, each is used with the verb /ha-wos-á/, which I translate as ‘take’ but which unlike the English verb ‘take’ does not appear to imply any directionality itself.

(9.130) ha-wos-kj-á
AFF-take-TOWARD-DECL
‘S/he brought (it).’

(9.131) ha-wos-j-á
AFF-take-AWAY-DECL
‘S/he took (it) away.’

These suffixes have the forms /-ki/ and /-i/ when they occur before a consonant. When the full vowel is realized, the tone of the suffix vowel is M (9.132-9.133).

(9.132) wos-ki-gàŋ ha-wó:l-^lá
take-TOWARD-COMP AFF-want-DECL
‘S/he wants to bring (it).’

¹⁷¹ Most typically, the deictic center is the speaker.

- (9.133) *wos-i-gàʃ* *ha-wó:l-↓á*
 take-AWAY-COMP AFF-want-DECL
 ‘S/he wants to take (it) away.’

As noted above, each of these directionals is the result of grammaticalization from a movement verb. The cislocative /-kj/ (‘TOWARD’) is from /ha-kí-↓á/ ‘come’, which itself is actually pronounced as [hakjá] in the realis form. In conjugations where the verb stem is followed by a morpheme beginning with a vowel, the verb stem’s vowel is reduced to an approximant. For instance, on the basic realis verb, the verb stem is simply [kj] and its H tone is realized as a fall from H to M on the declarative suffix. This is the only verb in the language which exhibits a reduction of its stem vowel to an approximant. Phonologically similar verbs like /ha-mí-↓á/ ‘eat’ and /ha-pí-↓á/ ‘kill’ do not exhibit this reduction of the stem vowel to the [j] approximant. In the irrealis verb forms (i.e. future forms, negatives and counterfactuals) and nominalized forms (i.e. essentially all other conjugations of ‘come’), the full [í] vowel (with H tone) is present. Perhaps the verb ‘come’, in the realis form, has undergone analogical changes based on the cislocative directional that it itself spawned at an earlier time. Clearly the shape of the verb stem on the realis verb is [kj], which is identical to the shape of the cislocative directional.

The translocative /-j/ is from /ha-hí-↓á/ ‘go’.¹⁷² This is apparently an old form of the verb ‘go’ which is most frequently attested in irregular imperative and jussive forms

¹⁷² This verb /ha-hí-↓á/ appears to have historically included a [pʰ] at the end of the stem /*ha-hípʰ-↓á/. The irregular imperative forms (cf. section 10.4.3.1) consistently show [pʰ] as part of the stem, though it is lost on the verb in all other conjugations. Interestingly, the glottalization (from the old ejective [pʰ]) is still observable on consonants which follow the /hí/ ‘go’ stem: as in the /ha-hí-kʰ-à-t-bíʃ-á/ AFF-go-FUT-1SG-NPST:AUX-DECL ‘I will go’, where the [g] of the FUT /-gà/ becomes [kʰ] after this stem. This glottalization is also observable on the complementizer /-gàʃ/, where the [g] is pronounced as [kʰ] after /hí/, and the relativizer /-(i)t/, where the [t] > [tʰ] after /hí/: /hí-kʰ-àʃ ha-wó:l-↓á/ go-COMP AFF-want-DECL ‘S/he wants to go’ and /hí-tʰ-es-íʃ ha-wí:ʃ-↓á/ go-REL person-SBJ AFF-return-DECL ‘The person who left returned.’

today (cf. section 10.4.3). Some speakers, however, use /hí/ for ‘go’ in declarative utterances. The vast majority of the time, however, a different verb ‘go’ is used today, with the stem /hój/ ~ /hów/.¹⁷³ This verb most frequently (but not always) occurs with the translocative directional as well (9.134).

(9.134) ha-hój-j-^lá ~ ha-hów-j-^lá
 AFF-go-AWAY-DECL
 ‘S/he went away.’

It is clear that the directional suffixes can join the main lexical verb stem as compounds; derivational marking occurs to the right of the augmented verb stem (9.135-9.136).

(9.135) wos-kj-ek’-á
 take-TOWARD-PASS-DECL
 ‘S/he was brought.’

(9.136) wos-i-ek’-á
 take-AWAY-PASS-DECL
 ‘S/he was taken away.’

Unlike the compounded verb stems in the aspectual constructions (section 9.8.1), the directional suffixes do not always immediately follow the main lexical verb stem. The translocative directional is frequently found following the applicative /-tà/ suffix (9.137-9.138).

¹⁷³ Alternations between [j] and [w] are commonly attested in the Mao languages (Fleming 1988:39).

(9.137) ha-no:m-ek'-tà-j-ti-and-w-á
AFF-trade-PASS-APPL-AWAY-PF-NSG-HRSY-DECL
'They have been traded away (to someone) (they say).'
(speaking of sister-exchange for marriage)

(9.138) wós-tà-j-ti-á-gà-hì-bìf-á
take:INF-APPL-PF-NEG-FUT-2SG-NFUT:AUX-DECL
'You will not take it (for someone).'

The applicative is clearly derived from the verb 'give' (cf. section 9.7.2); today the translocative directional, at least, can follow either the main lexical verb or the grammaticalized 'give' (applicative).

Like the compounding in the aspectual constructions (section 9.8.1), the directionals likely developed through serialization. For instance, in (9.139), the order of morphology is 'take' + TOWARD ('come') + APPL ('give').

(9.139) ha-wos-ki-tà-á
AFF-take-TOWARD-APPL-DECL
'S/he brought (it) (for someone).'

But the translocative can occur before or after the applicative (9.140-9.141).

(9.140) ha-wos-tà-j-á
AFF-take-APPL-AWAY-DECL
'S/he took away (it) (for someone).'

(9.141) ha-wos-i-tà-á
AFF-take-AWAY-APPL-DECL
'S/he took away (it) (for someone).'

According to my consultants, (9.140) and (9.141) mean the same thing today. Perhaps at one time a difference in meaning was indicated, where the predication in (9.140)

highlighted giving something away to someone and the predication in (9.141) highlighted the taking of something (away from the deictic center) on the behalf of someone else. I cannot say with any certainty.

9.8.3. Other Verbal Compounds

Apart from the aspectual constructions (section 9.8.1) and the directionals (section 9.8.2) very few verbal compounds have been identified. In (9.142), two verb stems ‘think’ and ‘find’ are joined to form a new verb. This is likely the result of serialization which led to a new compound (cf. section 12.6).

(9.142) ɨʃ-nà ha-tí-gó:m-[↓]se:m-á
 3SG-OBJ AFF-1SG-think-find:INF-DECL
 ‘I remember her/him.’

Interestingly, the verb stem ‘find’ appears to be in the non-finite form.¹⁷⁴ I have not found other verbal compounds where the second of the verb stems is in the infinitive form.

Another compound which is frequently used is illustrated in (9.143).

(9.143) ɨʃ es-ɨʃ ha-é:ɲ-[↓]màŋk’-á
 DEF person-SBJ AFF-take.heart-be.sweet-DECL
 ‘The person is happy.’

The root /e:ɲ/ may be used as a noun /e:ɲe/ ‘heart’, where the tone is M, or as a verb /ha-é:ɲ-[↓]á/ AFF-take.heart-DECL (which is frequently used to mean ‘be courageous’ or ‘be encouraged’) where the tone is H on the verb stem.¹⁷⁵ In (9.143), the H tone suggests

¹⁷⁴ The finite verb exhibits a H tone (/ha-sé:m-[↓]á/ AFF-find-DECL), while the infinitive form exhibits the MH nominal tone class pattern (/se:mé/ find:INF). Both the M tone of the stem ‘find’ and the following H tone of the declarative suffix are downstepped one level.

¹⁷⁵ The H tone on ‘take.heart’ produces a downstep of the M tone on the following verb ‘be.sweet’ /ha-maŋk’-á/. The declarative suffix is, of course, downstepped as well.

that the finite verb stem ‘take.heart’ is used. The form in (9.143) does not appear to be an example of noun-incorporation. In fact, I have not identified any instances of noun-incorporation thus far in Northern Mao.

Finally, the verb stem /hùŋgùl/ ‘drop; throw away’ is found in a variety of compounds, with verbs such as ‘erase/wipe out,’ ‘hoe,’ ‘buy,’ ‘spit,’ and ‘release’ (9.144-9.144-9.148). In all instances, the stem /hùŋgùl/ is in the second position (after the lexical stem). In some cases, the form /-ùŋgùl/ appears to exhibit directional-like functions, such as movement away from the deictic center (i.e. as in translocatives); this can be seen in (9.144), where /-ùŋgùl/ compounded with ‘buy’ means ‘sell’ (i.e. away from the deictic center). In other uses, the form sometimes expresses a downward direction. In (9.145) and possibly (9.146), this downward direction is literal. In other instances, it may be that negative connotations of certain compounded verbs (9.147-9.148) may be due to a metaphoric extension of this ‘downward’ movement.

(9.144) fén-ùŋgùl-á
buy-drop-DECL
‘sell’

(9.145) ts’ur-ùŋgùl-á
spit-drop-DECL
‘spit (on the ground)’

(9.146) kénz-ùŋgùl-á
hoe-drop-DECL
‘pull weeds’

(9.147) haràb-ùᅅgùl-á
erase-drop-DECL
'destroy; obliterate'

(9.148) pàs-ùᅅgùl-á
release-drop-DECL
'divorce'

I do not include /-ùᅅgùl/ as a directional because it is not highly grammaticalized and is certainly not productive. The examples above are the only instances where I have found the form in compounds.

CHAPTER X

FINAL VERBS

Northern Mao has final, non-final and subordinate verbs. This chapter examines final verbs. I begin with a language-specific definition for *final verb* (section 10.1), and then discuss tense, aspect and modality (TAM) (section 10.2). The TAM discussion includes the basic non-future vs. future tense split, the wide array of aspectual constructions which use the realis verb, the irrealis aspectual constructions and counterfactual constructions. In section 10.3, I discuss the various auxiliary elements found in final verb constructions as well as the related copular and existential forms. In section 10.4, I discuss various utterance-types (speech acts), including declarative, interrogative, imperative and jussive. Chapter X concludes with an illustration of the ways in which final verbs are negated (section 10.5).

This chapter does not deal with dependent verb forms such as non-final (medial) verbs in clause chains or verbs in subordinate clauses. These are discussed in chapters XII and XIII, respectively.

10.1. Defining the Northern Mao Final Verb

Final verbs in Northern Mao are the most finite verb forms; in their canonical position, they are found at the ends of sentences. Affirmative final verbs require finite verb stems which (for monosyllabic stems) carry either a H, M or L tone (cf. section 9.2).¹⁷⁶ Finite verb stems are not words themselves and are never uttered by speakers

¹⁷⁶ As noted throughout Chapter IV, the infinitive verb stem may be used as a noun. The infinitive can also serve as a verb stem in the imperative and jussive utterance types (cf. sections 10.4.3-10.4.6) and negative verb forms (cf. section 10.5).

without additional morphology. Negative final verbs are formed with the infinitive verb stem (cf. section 9.2) and may thus be considered less finite than the affirmative final verbs.

Affirmative final verbs may take either the realis or irrealis form, each of which is marked by the item-arrangement of the verbal word itself (cf. section 9.1). Negative final verbs take only the irrealis form. Final verbs require marking for subject as well as for the utterance type of the sentence (e.g. declarative, interrogatives, and the various imperative and jussive forms).¹⁷⁷ Final verbs may be marked for future tense, requiring the irrealis form and the future tense marker /-gà/ (cf. sections 9.1 and 10.2.1). Non-future tense may be expressed by the realis verb form itself in the affirmative; there is no non-future tense marker. Negative non-future tense is expressed with the irrealis verb form and the absence of the future suffix /-gà/. So, while non-future tense is not always morphologically marked, the non-future vs. future tense distinction is always expressed on final verbs. In some instances, tense is marked by auxiliary elements, which are today phonologically bound to the verb, or by final copular verb forms (cf. sections 10.3.1 and 10.3.2). There is no object marking on any verb type in Northern Mao.

Unlike final verbs, non-final verbs are not fully finite.¹⁷⁸ While affirmative non-final verbs are formed with the finite verb stem, they are never marked for tense. Non-final verbs do not always carry subject markers. When the subjects are the same (i.e. in a

¹⁷⁷ The 3rd person form of the realis declarative verb does not carry a subject prefix. As this subject is the only one unmarked, we may consider the 3rd person in the realis declarative as marked with zero.

¹⁷⁸ Non-final verbs are the topic of Chapter XII and are mentioned briefly here only to underscore the relevance of a final vs. non-final verb categorization.

same-subject clause chain), subject marking is not required on non-final verbs, though in some pragmatic contexts, subject marking may be used. When the subject of the non-final clause is different from the subject in the following clause, the subject is obligatorily marked. Non-final verbs also differ from final verbs in that they do not carry markers for utterance type; rather, they carry a suffix indicating the type of clause chain they head (e.g. same-subject, different-subject or temporally integrated, where there is some degree of temporal overlap between the two adjacent clauses). Negative non-final verbs, like other negatives, are formed with infinitive verb stems.

Table 10.1 highlights several important differences, between final and non-final verbs in affirmative declarative or interrogative utterances.¹⁷⁹ The + symbol indicates that a given morphological category is attested for the verb type (i.e. final or non-final). The - symbol indicates that the morphological category is not relevant (i.e. never attested) for that verb type.

Table 10.1. Affirmative Final vs. Affirmative Non-Final Verbs
in Declarative and Interrogative Utterances

	Finite Verb Stem	Realis Verb Form	Subject Marking	Irrealis Verb Form	Tense Marking	Utterance Type
Final Verbs	+	+	+	+	+	+
Non-Final Verbs	+	+	(+)	-	-	-

The (+) symbol indicates that subject marking is not always attested on non-final verbs; in same-subject clause chains, for instance, subject marking is optional (i.e. perhaps

¹⁷⁹ Final verbs in imperative and jussive utterances are non-prototypical: they don't consistently make use of the realis vs. irrealis opposition (sections 9.1 and 10.4.3); they don't carry tense marking of any kind (section 10.4.3); and they use the finite stem vs. infinitive stem oppositions in a variety of patterns not found elsewhere in the language (section 9.2).

pragmatically governed). The gist of the comparison in Table 10.1 is that non-final verbs take fewer morphological classes than final verbs. Final verbs are more finite (taking both tense and utterance type marking).

Subordinate verbs are in some cases less finite than non-final verbs. In many cases, these are nominalized verbs which take the infinitive verb stem. Subordinate verbs are discussed in Chapter XIII.

10.2. Tense, Aspect, and Modality

Final verbs may, but need not, mark tense, aspect and modality (TAM). Markers of TAM intersect with one another in a variety of ways in Northern Mao. The categories realis and irrealis, traditionally labeled as modality (Palmer 1986), are sometimes used as base forms for the expression of non-future (the realis) and future (the irrealis) tense (cf. section 9.1, where the basic realis-irrealis opposition is discussed). The future tense is also marked with /-gà/ while the non-future tense is morphologically unmarked. As noted in Fig. 9.1 (section 9.1), the irrealis verb form is also used for negative non-future tense in the declarative and interrogative utterance types (I prefer the term *utterance type* for categories which are sometimes called ‘mood’, cf. Palmer 1986).¹⁸⁰ The realis verb form interacts with and forms the basis of many aspectual constructions in Northern Mao; the irrealis is used only for perfect aspect in the future tense. In this section (and its sub-

¹⁸⁰ The speech acts traditionally labeled mood (i.e. declarative, interrogative, imperative, and jussive) are called utterance types in this grammar. This is inspired by terminological choices among some Omoticists (e.g. the forthcoming proceedings of the ‘Omotic Utterance Type, Mood and Attitude Markers, and Linguistic Typology’ conference, organized by Azeb Amha and Maarten Mous and held at Leiden University (October 23-25, 2008)). The expression of aspect is relevant to these utterance types as some aspectual distinctions are possible only in declarative and interrogative utterances and not, for instance, in the imperative or jussive forms. Utterance types are illustrated in section 10.4, below.

sections), we will consider the expression of various distinctions in tense, aspect, and mode which surface in the final verb.

While section 9.1 illustrates the basic realis-irrealis verb form opposition in the most general and widespread terms, this section (10.2) focuses on the expression of TAM on realis and irrealis verb construction. We will examine the realis non-future tense and irrealis future tense (section 10.2.1), realis aspectual constructions (section 10.2.2), the irrealis aspectual constructions (section 10.2.3), and the irrealis counterfactual constructions (section 10.2.4). I use declarative utterances to illustrate the complete set of tense and aspect distinctions in the realis and irrealis, as these allow all distinctions which I have identified to be expressed.¹⁸¹

The reader may wonder at my inclusion of counterfactual constructions as part of tense, aspect and modality (section 10.2.4) while other forms which are traditionally associated with mood (e.g. declarative, interrogative, imperative, etc.) are discussed as utterance types (i.e. speech acts) (cf. section 10.4). Some of the utterance types may take either the realis or irrealis verb forms (e.g. the declarative and interrogative) while other utterance types are independent from the realis /irrealis distinction (e.g. imperatives and jussives). The irrealis counterfactuals do not fit as utterance types. They fit best as a modal subset of the irrealis category itself. And as such, they are addressed in this section which treats tense, aspect, and modality as intersecting systems.

¹⁸¹ Negative verbal constructions, which alternate relevant to aspect-modality, tense and utterance type, are illustrated in section 10.5. This section (10.2) focuses only on expressions of tense, aspect and modality in affirmative realis and irrealis declarative verbs.

10.2.1. The Non-Future vs. Future Tense

The most basic morphological tense split in Northern Mao is non-future vs. future.¹⁸² The realis verb form is used for all affirmative non-future tense expressions. The irrealis verb form is used for all future tense expressions as well as all negative or counterfactual non-future tense expressions (cf. Fig. 9.1, section 9.1).

Non-future tense is not morphologically marked on the realis verb. The final realis verb form always by default expresses non-future tense (my realis verb form corresponds to Girma Mengistu's past tense construction 2007:45). The realis verb form may be specified for either past or non-past progressive aspect (Table 10.2, below). That is, while the realis verb expresses non-future tense, the use of auxiliaries can allow for further specification as past or non-past. Generally speaking, verbs of activity are interpreted as past events (10.1-10.2) while verbs of cognition may be interpreted as past or present states (10.3-10.4).¹⁸³

- (10.1) ha-tí-jé:ts'↓-á
AFF-1SG-run-DECL
'I ran.' (in the past)

¹⁸² Past, present and future meanings are expressed by auxiliary elements as well as by copular forms (cf. section 10.3).

¹⁸³ Curiously, in a few instances, I've found the realis activity verb expressing something like 'what one typically does.' It is not clear to me if this use is related to a present tense reading of an activity verb in a particular construction or if the reading is an independent function of the realis verb. In example (10.21, below), the realis verb is used to express that after making injera, one typically eats it. The verb form is the simple (basic) realis, not the habitual aspect. I have found very few cases like this, where a realis activity verb is used for a typically expected activity.

(10.2) kwalla ha-tí-jé:ts' -l-á
yesterday AFF-1SG-run-DECL
'I ran yesterday.'

(10.3) kwalla hí-k'əŋ ha-tí-wó:l-l-á
yesterday go-PURP AFF-1SG-want-DECL
'Yesterday, I wanted to go.'

(10.4) tóló hí-k'əŋ ha-tí-wó:l-l-á
now go-PURP AFF-1SG-want-DECL
'Now, I want to go.'

While the final realis verb form generally expresses non-future tense, not all non-future tense expressions are formed with the realis verb form. On the negative irrealis verb, for instance, the absence of the future tense suffix /-gà/, implies non-future tense (cf. sections 9.2, 10.5.1 and 10.5.2).

(10.5) ki-á-tí-bíŋ-á Irrealis Non-Future
come:INF-NEG-1SG-NPST:AUX-DECL
'I did not come.'

(10.6) ki-á-gà-tí-bíŋ-á Irrealis Future
come:INF-NEG-FUT-1SG-NPST:AUX-DECL
'I will not come.'

The future tense suffix /-gà/ is always present on affirmative irrealis verbs (cf. sections 10.2.3 and 10.2.4). Counterfactuals, which are marked morphologically as future tense, do not express actual future meaning, however. The irrealis counterfactuals, while they exhibit the future tense suffix, also take either a past or non-past auxiliary, indicating the actual temporal meaning of the construction (cf. section 10.2.4). The presence of the future tense marker on counterfactuals is likely a relic of its grammaticalization pathway

(cf. section 9.5).

10.2.2. Realis (Non-Future) Aspectual Constructions

The realis verb exhibits a much larger array of aspectual distinctions than does the irrealis verb. Table 10.2 illustrates three realis verbal constructions (the simple construction, the historical two-stem construction, and the reduplication construction) which are used to achieve a total of nine different aspectual distinctions, all within the non-future tense domain.

The basic realis, perfect,¹⁸⁴ and past habitual aspects are expressed with the simple construction (rows 1-3, Table 10.2). The perfect suffix /-ti/ (row 2) and the past habitual suffix /-òw/ (row 3) are also positioned after any derivational suffixes (cf. section 9.1.1). Since the progressive aspect requires two verb stems (a lexical verb and an auxiliary), it is grouped with the historical two-stem constructions. But unlike the other historical two-stem constructions, the auxiliaries in the progressive are phonologically free from the lexical verb. The other aspects which are expressed with the historical two-stem construction (rows 5-7) involve a grammaticalized verb which has been compounded to the lexical verb stem, perhaps through serialization. The grammaticalized verb /kòt'/, from 'have/put', expresses perfect aspect (row 5, Table 10.2). The grammaticalized verb /ts'e:l/, from 'finish', expresses completive aspect (row 6, Table 10.2). Each of these follows the lexical verb in the compounded verb stem. The grammaticalized verb /kò/, from 'sit/stay', expresses the durative. Because these

¹⁸⁴ There are two ways to express perfect aspect in the realis verb. One may use the /-ti/ PF suffix in the simple construction (section 10.2.2.2) or the /-kòt'/ form, which is grammaticalized from the verb 'have' and compounded with a lexical verb (an instantiation of the historical two-stem construction) (section 10.2.2.5).

grammaticalized verbs are productively used to express these aspects, I have elected to gloss them with grammatical glosses rather than the lexical gloss corresponding to their historical lexical source (Table 10.2).

Table 10.2. Realis Aspectual Constructions

		Morphology	Example	
Simple Construction	1. Realis (basic)	marked by the use of subject prefixes and the lack of the FUT suffix	ha-jé:ts'- ¹ á AFF-run-DECL 'S/he ran.'	
	2. Perfect	/-ti/ PF	ha-jé:ts'-ti-á AFF-run-PF-DECL 'S/he has run.'	
	3. Past Habitual	/-òw/ HAB	ha-jé:ts'-òw-á AFF-run-HAB-DECL 'S/he used to run.'	
Historical Two-Stem Constructions	4. Progressive	Present /bij/ NPST:AUX (from the verb 'exist')	ha-jé:ts' bij-á AFF-run NPST:AUX-DECL 'S/he is running.'	
		Past /-(i)t/ REL + /bitè/ PST:AUX (/bitè/ is from the verb 'exist')	ha-jé:ts'-it bitè AFF-run-REL PST:AUX 'S/he was running.'	
	Adjacent Verb Stem Construction	5. Perfect	/-kòt'/ PF (from the verb 'have/put')	íj kjat'-nà DEF house-OBJ ha-kí-kòt'-á AFF-come-PF-DECL 'S/he has come to the house.'
		6. Completive	/-ts'e:l/ COMPL (from the verb 'finish')	ha-jé:ts'-ts'e:l-á AFF-run-COMPL-DECL 'S/he finished running.'
		7. Durative	/kò-/ (from the verb 'sit/stay')	ha-kò-je:ts'-á AFF-DUR-run-DECL 'S/he was running (for a while).'
Reduplication Construction	8. Iterative / Continuative	full stem reduplication	ha-jé:ts'-jé:ts'- ¹ á AFF-run-run-DECL 'S/he ran and ran.'	
	9. Non-Past Habitual	Iterative/Continuative Construction + /bij/ NPST:AUX	ha-jé:ts'-jé:ts' AFF-run-run bij-á NPST:AUX-DECL 'S/he is always running.'	

The grammaticalized and compounded verb stems in the historical two-stem constructions (Table 10.2) are not included in the position class chart in section 9.1.1 because they are augmentations of the finite verb stem itself. That is, these

grammaticalized verb stems, which have become compounded with the lexical verbs as aspectual markers, precede any derivational marking. Section 12.6 discusses the likely relationship between verb serialization and compounding.

The iterative/continuative (row 8, Table 10.2) and non-past habitual (row 9, Table 10.2) each involve the reduplication of the verb stem (i.e. the ‘smaller’ verb stem, not including derivational markers, as discussed in sections 3.6 and 9.1.1). The non-past habitual aspect construction may be seen as the combination of the iterative/continuative and the non-past progressive.

Each of these verb forms is further illustrated and discussed in the relevant subsections below.

10.2.2.1. Realis (Non-Future) Basic Form

The basic form of the realis verb (row 1, Table 10.2) does not itself express any clearly identifiable aspectual meaning, but I include it here because it is the base upon which other realis aspectual distinctions are constructed. As noted in section 9.3, the realis basic verb form is the citation form of the verb.

10.2.2.2. Perfect Formed with /-ti/

Perfect aspect can be expressed by the /-ti/ PF suffix. The suffix is positioned after any derivational and directional morphology and before the non-singular suffix (cf. Table 9.1, section 9.1.1). In the exchange in (10.7), the answer to ‘Did you eat?’ is given in the perfect, i.e. a past event with particular relevance to the time of speech.

(10.7) hì-mí-à:
2SG-eat-INTR
'Did you eat?'

e: ha-tí-mí-ti-á
yes AFF-1SG-eat-PF-DECL
'Yes. I have eaten.'

In (10.8), the negative imperative in the first line ('don't be afraid!') is based on the present relevance of the past event predicated in the second line.

(10.8) án-ì-i:ns-nè
NEG-2SG-be.afraid-NPST:AUX

ma:r-mìs-ol-ìf ha-ak-ti-wand-á
grass-thing-PL-SBJ AFF-eat-PF-NSG-DECL
'Don't be afraid! The wild animals have already eaten.'

In (10.9), the perfect form (what Comrie terms the 'perfect of result' (1976:56)) implies that the person who came is still present at the time of speech, while the realis verb without the perfect suffix (10.10) does not make such an implication.

(10.9) es-ìf ha-kí-ti-á
person-SBJ AFF-come-PF-DECL
'A person has come.' (implication of presence)

(10.10) es-ìf ha-kí-¹á
person-SBJ AFF-come-DECL
'A person came.' (no implication of presence)

Section 10.2.2.5 illustrates another means of expressing perfect aspect in Northern Mao: the /-kòt'/ perfect marker which has been grammaticalized from the verb 'have'.

10.2.2.3. Past Habitual

Like the perfect aspect, the past habitual aspect is marked by a suffix on the basic form of the realis verb (i.e. the simple construction): /-òw/ HAB. The past habitual expresses a span of habitual behavior which is fully contained in the past (10.11).

- (10.11) bàmbàs-ét ha-tí-hadèm-òw-á
Bambassi-LOC AFF-1SG-work-HAB-DECL
'I used to work in Bambassi.'

10.2.2.4. Progressive

The progressive aspect requires auxiliary verbs to specify past vs. non-past within the more general non-future tense expressed by the realis verb.

I call the form which uses the non-past auxiliary /bij/ the “present progressive” (10.12)¹⁸⁵ and the form which uses the past auxiliary /bitè/ the “past progressive” (10.13).

- (10.12) to:lo ha-tí-mí bij-á
now AFF-1SG-eat NPST:AUX-DECL
'I am eating now.'

- (10.13) hí-kí-èt ha-tí-mí-t bitè
3SG-come-TI:NF AFF-1SG-eat-REL PST:AUX-DECL
'I was eating when s/he came.'

The lack of tone spreading onto the auxiliaries shows that they are not phonologically bound in the progressive construction (cf. section 3.2.3). The lexical verb in the past progressive must be relativized (through the addition of the /-(i)t/ REL) before the /bitè/

¹⁸⁵ The present progressive construction specifies the present tense by using the realis form (i.e. non-future) combined with the non-past auxiliary.

past auxiliary. The auxiliaries themselves and their grammaticalization from the existential verb are discussed in section 10.3.1. Girma Mengistu's (2007:44) simple present tense construction corresponds to my present progressive.

10.2.2.5. Perfect Formed with /-kòt'/

Instead of the /-ti/ suffix above (section 10.2.2.2), perfect aspect may alternatively be expressed with the form /-kòt'/, which has been grammaticalized from the verb 'have/put' (/ha-kòt'-á/). This construction, like the progressive, is also part of the historical two-stem construction. Unlike the progressive construction, however, the /-kòt'/ perfect (as well as the completive and the durative aspectual constructions) involve grammaticalized verb stems which are compounded to the lexical verb.¹⁸⁶

Examples (10.14-10.16) illustrate the /-kòt'/ perfect construction. In most examples in my texts, the /-kòt'/ perfect is used with transitive verbs, though, as illustrated in Table 10.2, it can be used with intransitives.

(10.14) jéf kop-èt nogdów-nà ha-tí-int'-kòt'-á
 DIST road-LOC lion-OBJ AFF-1SG-see-PF-DECL
 'I have seen a lion on that road.'

(10.15) án-ì-i:ns-nè
 NEG-2SG-be.afraid-NPST:AUX

mar-mìs-ol-ij ha-ak-kot'-wand-á
 grass-thing-PL-SBJ AFF-eat-PF-NSG-DECL
 'Don't be afraid! The wild animals have already eaten.'

¹⁸⁶ The two verb stems (i.e the lexical and the grammatical) are always immediately adjacent to one another but are found in either order (compare the perfect and completive with the durative in Table 10.1).

Apart from the use of the /-kòt'/ perfect, example (10.15) is identical to (10.8) which uses the /-ti/ PF suffix to express the perfect aspect. There is no difference in meaning.

In (10.16), below, both the /-kòt'/ and /-ti/ perfects are used: /-kòt'/ is on a relativized verb followed by the instrumental suffix (in the first line); /-ti/ occurs on a non-past counterfactual verb. Together, the instrumental relative clause and a final counterfactual form the hypothetical conditional construction (cf. section 13.4.2).

(10.16) bà:b-kol-té¹⁸⁷ íʃ-kol-àld-kòt'-t-án ham so:nts'-ìʃ
 father-PL-SBJ 3-PL-know-PF-REL-INS 1PL child-SBJ

ha-àld-ín es-ìʃ hí-kám-t mìs-nà
 AFF-know-SS:NF person-SBJ 3SG-find-REL thing-OBJ

ham-té-n ha-kám-ti-gà-m-ntè
 1PL-SBJ-CONJ AFF-find-PF-FUT-3-HYP:AUX

‘If our fathers had studied, our children would have studied and we would have found the thing that others found.’

(text 08.03)

Examples (10.17-10.18) illustrate use of the lexical verb ‘have’ in a transitive construction.

(10.17) go:m-nà ham-kòt'-á
 plan-OBJ 1PL-have-DECL

‘We have a plan.’

(text 08.21)

¹⁸⁷ This use of the /-té/ subject case marker on a non-pronominal is very unusual. In my texts, I have encountered only a few uses of /-té/ SBJ on kinship terms: /bà:b-kol-té/ father-PL-SBJ and /kà:k-kol-té/ grandfather-PL-SBJ. On pronouns and kinship terms, the /-té/ subject case marker is only found when the nominal is plural (cf. sections 5.1 and 8.3.1.1).

- (10.18) àlkítáb-nà ha-tí-kòt'-á
 book-OBJ AFF-1SG-have-DECL
 'I have a book.'

The verb 'have' can also be used with a sense of 'put' when the clause contains a locative postpositional phrase (10.19).

- (10.19) àlkítáb-nà k'éts'-kéz-èt ha-ti-kòt'-á
 book-OBJ land-top-LOC AFF-1SG-put-DECL
 'I put a book on the ground.'

The sentence in (10.19) can also be understood as 'I have a book (which is) on the ground,' though speakers have suggested to me that this reading is secondary and they prefer to translate the verb /kòt'/ as 'put' when a locative postposition is used.

It is also common to compound /kòt'/ 'put/have' with 'leave'.¹⁸⁸ The complex verb stem can be followed by the /-ti/ perfect marker.

- (10.20) àlkítáb-nà k'éts'-kéz-èt k'íl-kòt'-iti-á
 book-OBJ land-top-LOC leave-put-PF-DECL
 'S/he has left a book on the ground.'

Various uses of the form /kòt'/ 'have' in my texts attest to the pathway which led to its grammaticalization as a perfect marker. In (10.21), the verb /kòt'/ is used twice. In the first instance (line 2), it is a free non-final verb, but with bleached semantics. This semantically-bleached non-final use of /kòt'/ is commonly used to emphasize a sequence and is best translated as 'after' (a clearly pragmatic function). The second instance of

¹⁸⁸ The use of 'put' in (10.20) could also be considered a serial construction. It is not clear that the meaning is conventionalized, and I do not know if speakers consider the 'leaving' and the 'putting' as separate events. One might expect the opposite order in a serial construction (e.g. putting the book down before leaving).

/kòt'/ (line 3) is as a bound form, as part of another non-final verb. In this second instance, /-kòt'/ functions more like a marker of perfect aspect.

(10.21) pák-ìŋ hí-bíʃ-ʃín kjákím-há:ts' -àn
 injera-GEN 3SG-EXIST-COND be.cold:INF-water-INS

á:m-in **kòt'**-ín kwak'ín
 ferment-SS:NF have-SS:NF knead-SS:NF

ʃér-**kòt'**-ín pàk-ín ham-mi-á
 leaven-PF-SS:NF cook.injera-SS:NF 1PL-eat-DECL

‘If (the dough) is for injera, after we ferment it with cold water,
 we knead it and after we have leavened it, we cook the injera
 and we eat it.’

(text 19.05-06)

Interestingly, while perfect aspect can be expressed on future tense irrealis verb forms (section 10.2.3.3), only the /-ti/ PF suffix can be used. I have found no examples of the /-kòt'/ form used with the future tense verbs and all examples, where I tried were rejected by speakers.

10.2.2.6. Completive

The completive aspect is achieved by compounding the verb stem /ts'e:l/ ‘finish’ with a lexical verb stem.

(10.22) ha-tí-mí-ts'e:l-á
 AFF-1SG-eat-finish-DECL
 ‘I finished eating.’

(10.23) kwalla ha-hadèm-tš'e:l-á
yesterday AFF-work-finish-DECL
'I finished work yesterday.'

10.2.2.7. Durative

It is also possible to mark events as durative, where the event or situation is shown to last for a certain period of time. Comrie juxtaposes “durativity” against “punctuality” (1976:41ff) and suggests that these are sometimes aspectual qualities inherent to particular verbs in particular languages. In this grammar, however, I use the term to refer to a particular morphological construction. The durative in Northern Mao, then, is on the same level as other aspectual constructions and is not simply a function of a particular verb’s semantics--though a verb’s semantic content almost certainly plays a role in its ability to be used in the durative construction (i.e. meeting selectional restrictions of the construction). Curiously, the durative construction in Northern Mao is distinct from the progressive (section 10.2.2.4) and the iterative/continuative constructions (section 10.2.2.8) and can even be used in conjunction with the progressive construction (cf. examples 10.26 and 10.27, below).

Like the completive and past habitual constructions above, the durative is formed by compounding (perhaps through historical serialization). In the durative, the root /kò-/ DUR (likely a grammaticalized form from /kòw/ ‘sit/stay’) immediately precedes the lexical verb root.¹⁸⁹

¹⁸⁹ A low register spread rule affects H or M roots following /kò-/, where low register spreads to the following root, resulting in H > M and M > L, respectively (cf. section 3.2.2). The final declarative /-á/ maintains its H tone, effectively showing the process to be one of spread and not downstep (cf. section 3.2.1).

(10.24) kwalla ha-tí-kò-mi-á
 yesterday AFF-1SG-DUR-eat-DECL
 ‘I ate for a while.’

(10.25) p’ij-kuw-ij ha-kò-je:ts’-and-á
 child-DU-SBJ AFF-DUR-run-NSG-DECL
 ‘The two children ran for a while.’

This erstwhile ‘sit/stay’ has undergone semantic bleaching and no longer maintains the meaning of ‘sit’ in the mind of the speaker (unlike /ts’e:l/ in the completive construction above, where the lexical meaning ‘finish’ is maintained). The durative can be used with activities that do not in any way involve the act of ‘sitting’ (10.25).¹⁹⁰

It is possible to use the durative marker with the past progressive construction. The use of the /kò-/ DUR, however, requires that the auxiliary be reduplicated in a compound (10.26). The construction also requires a temporal adverbial. This combination expresses that an event’s duration is not simply for a ‘certain period of time’ but for the entire length of time specified by the adverbial.

(10.26) tí-ʃ kwalla
 1SG-SBJ yesterday

 ha-tí-kò-je:ts’-it bit-bítè
 AFF-1SG-DUR-run-REL PST:AUX-PST:AUX.
 ‘I was running all day yesterday.’

¹⁹⁰ This grammaticalized use of ‘sit’ is perhaps quite common. It is found in Maa (Doris Payne, personal communication) and is also used in my dialect of American English: ‘I was just sitting there swimming, when she crossed into my lane.’

- (10.27) íʃ es-íʃ dur-èt
 DEF person-SBJ year-LOC
 ha-kò-hàdèm-t bit-bítè
 AFF-DUR-work-REL PST:AUX-PST:AUX
 ‘The person was working all year.’

By contrast, the past progressive without the durative and reduplicated auxiliary makes no implication about the event’s duration lasting for the entire length of time specified by the adverbial (10.28).

- (10.28) kwalla ha-tí-jéts’-ìt bitè
 yesterday AFF-1SG-run-REL PST:AUX
 ‘I was running yesterday.’

Interestingly, durative aspect can also be expressed by the non-final verb /kó-on/, which I gloss as DUR-SS:NF.

- (10.29) ì:m-íʃ hí-òs-íʃ kó-on
 cow-SBJ 3SG-disappear-DS:NF DUR-SS:NF
 ha-tí-wó:l-^lá
 AFF-1SG-want-DECL
 ‘The cattle disappeared, and I searched for them for a while.’

This non-final verb /kó-on/ appears to be a backformation of the bound /kò-/ form: 1) unlike other non-final verbs, this verb has no lexical meaning and can only be glossed as ‘durative’ DUR; 2) there is no corresponding final verb /ha-kó-^lá/; 3) as noted above, the likely source for the /kò-/ durative is the lexical verb ‘sit’. The tone of the non-final verb is H, however, not the expected L associated with the finite root ‘sit’.¹⁹¹ Presumably, this

¹⁹¹ As noted in section 2.5.3, finite verb stems with L tone roots correspond to either the LH, H2, or HL2 class nominal (infinitive) melodies. The verb ‘sit’ corresponds to a H2 class infinitive. Perhaps the

allows the non-final durative to maintain its distinction from the lexical verb ‘sit’ /kòw-in/ (10.30 and 10.31).¹⁹²

(10.30) kòw-ín tí-mí-^lá
 sit-SS:NF 1SG-eat-DECL
 ‘I sat and ate.’

(10.31) kó-on tí-mí-^lá
 DUR-SS:NF 1SG-eat-DECL
 ‘I ate for a while.’

It could also be that the durative has been grammaticalized from the iterative/continuative construction (cf. section 10.2.2.8, below, where the verb stem is reduplicated). But in the case of ‘sit’, the particular semantics of the verb suggest a continuous (rather than iterative) state; a state which is not unlike durativity (i.e. maintaining a seated position rather than sitting down repeatedly).

(10.32) ha-kòw-kòw-á	>	ha-kò-kòw-á
AFF-sit-sit-DECL		AFF-DUR-sit-DECL
‘I sat for a while.’		

10.2.2.8. Iterative/Continuative

Reduplicaton of the simple verb stem (i.e. root with its tone, cf. section 3.6) is used to indicate either iterativity or continuous activity. The distinction between the iterative or continuative interpretation appears to involve the particular semantic content

H tone on the durative non-final corresponds to the H tone of the infinitive of ‘sit’. But it is admitted that non-final verbs are elsewhere finite, and require the verbal melody.

¹⁹² In the /kó-on/ backformation, the same-subject non-final marker /-in/ becomes [-on] (phonetically a long [o:] vowel with a fall from H to M) while the same-subject non-final suffix on the lexical verb ‘sit’ maintains the /-in/ form after the [w] (/kòw-in/) and is clearly two syllables.

of the verb. For instance, in (10.33), the punctual nature of ‘coughing’ leads to the interpretation of event iterativity, while the reduplication of the verb root in (10.34) can mean that the child kept on eating or it could mean a series of distinct events, i.e. eating lots of different foods in succession.

(10.33) íʃ m̀nts’-ìʃ ha-òns-òns-á
 DEF woman-SBJ AFF-cough-cough-DECL
 ‘The woman coughed and coughed.’

(10.34) p’íʃ-íʃ kʃat’-nà jé:ts’-tit-ín ha-mí-mí-á
 child-SBJ house-OBJ run-PF-SS:NF AFF-eat-eat-DECL
 ‘After the child ran home, s/he ate and ate.’

In (10.35), however, the event structure is portrayed as a series of distinct events each day.

(10.35) mukés-aw-èt ha-tí-mí-mí-á
 every-day-LOC AFF-1SG-eat-eat-DECL
 ‘I eat every day.’

The iterative/continuative reduplication construction can also be used for predicating natural events which are continually occurring at expected intervals (10.36-10.37).

(10.36) awto:k-ìʃ aw-èt ha-pòz-pòz-á
 sun-SBJ day-LOC AFF-shine-shine-DECL
 ‘The sun shines in daytime.’

(10.37) sá:p-èt á:ns-íʃ ha-pòn-pòn-á
 night-LOC moon-SBJ AFF-go.out-go.out-DECL
 ‘The moon comes out at night.’

If one uses the general future irrealis verb in place of the verb in (10.37), the meaning

becomes a particular future event, not one which is iterative or continually re-occurring (10.38).

- (10.38) sá:p-èt á:ns-íʃ ha-pòn-gà-m-bìʃ-á
night-LOC moon-SBJ AFF-go.out-FUT-3-DECL
‘The moon will come out at night.’

10.2.2.9. Non-Past Habitual

It is also possible to use verb stem reduplication (i.e. the iterative/continuative construction) along with the non-past auxiliary /biʃ/ (i.e. the present progressive construction) to express events which are habitual and ongoing.

- (10.39) ha-tí-jé:ts’-jé:ts’ biʃ-á
AFF-1SG-run-run NPST:AUX-DECL
‘I am always running.’
Literally, ‘I am running and running.’

- (10.40) íʃ mùnts’-ìʃ p’íʃ-na ha-wó:l-wó:l biʃ-á
DEF woman-SBJ child-OBJ AFF-want-want NPST:AUX-DECL
‘The woman is always looking around for (her) child.’

10.2.3. Irrealis Aspectual Constructions

Unlike the realis verb, the irrealis verb form may be used to express only three aspectual distinctions: the general future, certain/immediate future and future perfect. The first two distinctions identify the speaker’s attitude toward a future event as either occupying an unspecified future (the general future) or as part of a certain or imminent future (the certain/immediate future).¹⁹³ All final irrealis affirmative declarative verbs

¹⁹³ There is no widespread system of attitudinal markers in Northern Mao. Utterances marked as hearsay are considered a subset of the declarative utterance type (section 10.4.1.2) while I have included the general and certain/immediate future forms as part of the irrealis aspectual constructions, grouping them

include the future tense suffix /-gà/ (Table 10.3).

Table 10.3. Irrealis Aspectual Constructions

	Irrealis Constructions	Markers	Example
1	General Future	/-bìf/ NPST:AUX	háts'á ha-hadèm-gà-m-bìf-á tomorrow AFF-work-FUT-3-NPST:AUX-DECL 'S/he will work tomorrow.'
2	Certain/ Immediate Future	/-n/ NPST:AUX	nà-àt here-LOC ha-bìf-gà-t-n-á AFF-EXIST-FUT-1SG-NPST:AUX-DECL 'I will be here (for sure).'
3	Future Perfect	/-ti/ PF and /-n/ NPST:AUX	háts'á tomorrow ha-pò:n-ti-gà-t-n-á AFF-arrive-PF-FUT-1SG-NPST:AUX-DECL 'I will have arrived by tomorrow.'

These irrealis aspectual constructions are marked distinctly through the use of the particular bound auxiliary form required by the construction and /-ti/ in the case of the perfect aspect. Column 2 of Table 10.3 highlights these auxiliaries, and they are discussed in section 10.3.1, below.

10.2.3.1. General Future

The general irrealis declarative has been described briefly in section 9.1.2. The meaning of this construction is essentially an unspecified future, with no commitment on the part of the speaker as to the certainty of the event.

(10.41) *nà-àt ha-bìf-gà-m-bìf-á*
 here-LOC AFF-EXIST-FUT-3-NPST:AUX-DECL
 'S/he will be here.'

with the future perfect aspect.

- (10.42) háts'à ha-kí-gà-t-bíʃ-á
 tomorrow AFF-come-FUT-1SG-NPST:AUX-DECL
 'I will come tomorrow.'

When the subject is 3rd person, speakers sometimes reduce the /-bíʃ/ auxiliary to [bʃ] in hyperarticulated speech. I have not observed this with other person subjects.

10.2.3.2. Certain/Immediate Future

While the general future (row 1 of Table 10.3) is used for events which are regarded as part of an uncertain future, the certain/immediate future (row 2) with the auxiliary /-n/ is used to mark events as either in the realm of certainty or imminence (and frequently both). Structurally, the certain/immediate future construction differs from the general future only in the choice of auxiliary verb.

- (10.43) tó:ló nó:k-in tòs-gà-t-n-á
 now begin-SS:NF speak-FUT-1SG-NPST:AUX-DECL
 'And now I will begin speaking'
 (spoken at the beginning of a discourse).'
 (text 26.05)

- (10.44) háts'à ha-kí-gà-t-n-á
 tomorrow HA-come-FUT-1SG-NPST:AUX-DECL
 'I will come tomorrow.' (with certainty)

In natural texts, the vast majority of examples of the non-past auxiliary /-n/ (which is used with the certain/immediate future) co-occur with 1SG subjects, as may be expected, but it is clearly possible to use it with other subjects.

- (10.45) ki:m-na tjam-gà-m-n-à
 money-OBJ count-FUT-3-NPST:AUX-DECL
 ‘He will count the money.’
 (said with certainty regarding someone who was paid for work)

10.2.3.3. Perfect Aspect

While realis verbs can express the perfect with either the /-ti/ (section 10.2.2.2) or /-kòt’/ (section 10.2.2.5), the irrealis verb only takes the /-ti/ form. The irrealis perfect construction (row 3 of Table 10.3) is most typically (if not always) used with the irrealis of certainty/immediacy. While speakers have accepted formations of the perfect with the general irrealis construction, these have not been observed in natural, unelicited speech.

- (10.46) ki-tó hí-bíʃ-iʃ
 come:INF-NEG:NF 3SG-EXIST-DS:NF
- tí-ʃ pònd-ti-gà-t-ná
 1SG-SBJ arrive-PF-FUT-1SG-AUX
 ‘I will have arrived before he comes.’
 (Literally, ‘Without his coming, I will have arrived.’)

Example (10.47) shows that, for some speakers at least, the perfect can also be used on the non-past irrealis counterfactual. This is the only example in my texts of a counterfactual verb form expressing perfect aspect.

(10.47) bà:b-kol-té íʃ-kol-àld-kòt'-án
father-PL-SBJ 3-PL-know-PF-COND

ham so:nts'-ìʃ-ín ha-àld-án
1PL child-SBJ-CONJ AFF-know-COND

es-ìʃ hí-kám-t mìs-nà ham-té-n
person-SBJ 3SG-find-REL thing-OBJ 1PL-SBJ-CONJ

ha-kám-ti-gà-m-ntè
AFF-find-PF-FUT-3-HYP:AUX

‘If our fathers had studied and our children studied, we would
have found the thing (knowledge) that others found.’

(text 08.03)

The general future, certain/immediate future and future perfect are the only aspects which are expressed through grammaticalized morphology on the irrealis verb. It is also possible to express a future progressive meaning with irrealis verbs, but progressive aspect is not morphologically grammaticalized on irrealis verbs. Rather, it is handled periphrastically through the use of clause chains.

In (10.48), there are three clauses. First, a temporally-integrated clause chain (cf. section 12.2.3), marked with /-et/, on the non-final verb, indicates an event (the arrival of a friend) during whose duration the event of the second clause chain (eating) is to take place. The final future existential marks the whole set of events as taking place in the future.

(10.48) háts'à tí-ŋ ʰma:gèw-ìʃ hí-kí-èt
tomorrow 1SG-GEN friend-SBJ 3SG-come-TI:NF

tí-ʃ mí-èt bíʃ-gà-t-bíʃ-á
1SG-SBJ eat-TI:NF EXIST-FUT-1SG-NPST:AUX-DECL
‘Tomorrow, when my friend arrives, I will be eating.’

The temporally-integrated clause chain marker /-et/ is derived from the locative postposition /-et/ (cf. section 12.2.3).

While the realis verbs (section 10.2.2) exhibit an array of aspectual distinctions, the irrealis verb exhibits far fewer aspectual distinctions. Progressive, completive, habitual and iterative-continuative aspects have not been attested as grammaticalized forms in the irrealis data gathered thus far. Completive appears to be inherently a realis category. Perhaps the other aspects are not grammaticalized on the irrealis verb because irrealis itself is limited to the realm of the imagination and is not used to express actual events.

10.2.4. Irrealis Counterfactual Constructions

There are two irrealis counterfactual constructions: the simple counterfactual and the conditional counterfactual. These constructions mark an event as contra-reality (i.e. an event which has not occurred). The simple counterfactual can be used as a main clause verb without the requirement of an adverbial clause. The conditional counterfactual is only attested on main clause verbs following hypothetical conditional clauses (section 13.4.2). Like the irrealis aspectual constructions, the counterfactual constructions require auxiliary verbs in addition to the irrealis future form of the lexical verb. The simple counterfactual construction may not carry negative marking. Thus, it is semantically

negative and morphologically affirmative. The simple counterfactual may take the affirmative /ha-/ prefix (Table 10.4). The hypothetical conditional counterfactual may or may not exhibit negative marking. In either instance, the meaning is counterfactual. When morphologically affirmative, the /ha-/ affirmative prefix is optional. As expected, it is prohibited on the morphologically negative conditional counterfactual. Table 10.4 illustrates one example of each type of irrealis counterfactual construction.

Table 10.4. Irrealis Counterfactual Constructions

Irrealis Constructions	Markers	Example
Simple Counterfactual	/-bitè/ PST:AUX	kwalla ha-hadèm-gà-t-bitè yesterday AFF-work-FUT-1S-PST:AUX 'I was gonna work yesterday (but didn't).'
Hypothetical Conditional Counterfactual	/-ntè/ HYP:AUX	mì-mìs-ìf hí-bí-t-an eat-thing-SBJ 3SG-EXIST-REL-INS ha-mí-gà-tí-ntè AFF-eat-FUT-1SG-HYP:AUX 'If there were food, I would have eaten'

Mithun notes that cross-linguistically counterfactuals and conditionals are frequently expressed with irrealis forms (1995:384). She also mentions that counterfactuals are often cited as the best evidence for an irrealis category in a particular language.

I now continue with more examples of the simple counterfactual construction. In (10.49), the first sentence (line 1) carries no negative marking. The final verb here (in line 1) is a counterfactual. The second sentence offers further explanation for the counterfactual statement in line (1) and exhibits a negative marker on the final verb.

(10.49) háts'à ha-jé:ts'-gà-t-bitè (sentence 1)
tomorrow AFF-run-FUT-1SG-PST:AUX

tí-ŋ ʔtug mangk'-it àr-èt
1SG-GEN leg/foot hurt:INF-REL reason-LOC

jè:ts'-á-gà-t-bíj-á (sentence 2)
run:INF-NEG-FUT-1SG-NPST:AUX-DECL

'I was going to run tomorrow. (But) because of my hurt leg, I
won't run.'

Examples (10.50-10.52) provide additional examples of the simple counterfactual construction. The temporal setting of these counterfactuals is marked by adverbials like 'today' or 'yesterday' (compare 10.50 to 10.52).

(10.50) háts'à ha-hadèm-gà-t-bitè
tomorrow AFF-work-FUT-1SG-PST:AUX

gjá: àn-ín tí-k'íl-j-ʔá.
very be.tired-SS:NF 1SG-leave-AWAY-DECL

'I was going to work tomorrow. (But) being very tired, I won't.'

(10.51) ha-mí-gà-m-bitè
AFF-eat-FUT-1PL-PST:AUX
'We were going to eat (but we didn't).'

(10.52) kwalla ha-jé:ts'-gà-t-bitè
yesterday AFF-run-FUT-1SG- PST:AUX
'I was going to run yesterday (but I didn't).'

The form in (10.52) is somewhat similar to the past progressive form provided in (10.53). The past progressive (section 10.2.2.4) is formed with a relativized realis verb and the past auxiliary /bitè/.

- (10.53) kwalla ha-tí-jé:ts' -ìt bitè Past Progressive
 yesterday AFF-1SG-run-REL PST:AUX
 'I was running yesterday.'

The counterfactual in (10.52), however, is distinct from the progressive verb by the use of the irrealis verbal form (and its subject suffixes), the future tense suffix and the lack of relativization of the lexical verb which precedes the auxiliary.

The hypothetical conditional counterfactual, which is only found on main verbs when they follow the hypothetical conditional (marked with /-t-an/ REL-INS on the subordinate verb) also marks an event as counterfactual (10.54-10.57). The hypothetical conditional counterfactual construction is illustrated in section 13.4.2 where the hypothetical conditional adverbial clause is discussed.

- (10.54) í-té pák-nà ha-í-mí-t-an
 3SG-SBJ injera-OBJ AFF-3SG-eat-REL-INS

 háts'à íj-nà ha-ǰén-tà-gà-tí-ntè
 tomorrow 3SG-OBJ AFF-buy-APPL-FUT-1SG-HYP:AUX
 'If s/he had eaten injera, I would buy her/him some
 tomorrow.'

- (10.55) ha-tí-kí-t-an tí-ná í-té
 AFF-1SG-come-REL-INS 1SG-OBJ 3SG-SBJ

 ha-int'-ti-g-é:-ntè
 3SG-SBJ AFF-see-PF-FUT-3-HYP:AUX
 'If I had come, s/he would have seen me.'

(10.56) ha-tí-àld-ìt-án íŋ-nà
AFF-1SG-know-REL-INS 3SG-OBJ

ha-mé:nt-ti-gà-tí-ntè
AFF-tell-PF-FUT-1SG-HYP:AUX
'If I had known, I would have told him.'

In (10.57), the hypothetical conditional counterfactual exhibits morphological negative marking.¹⁹⁴

(10.57) ha-tí-àld-ìt-án íŋ-nà
AFF-1SG-know-REL-INS 3SG-OBJ

mè:nt-á-gà-tí-ntè
tell:INF-NEG-FUT-1SG-HYP:AUX
'If I had known, I would not tell him.'
(again, no telling happened)

Other conditionals do not require any special verb form in the main clause (cf. section 13.4.2).

As noted in sections 9.1 and 9.5, the counterfactual constructions have been formed with the irrealis future verb, though with different auxiliary elements. There is no single consistent counterfactual marker which can be identified on the simple and conditional counterfactual forms (Table 10.4). It appears, rather, that the combination of the irrealis verb form, the future tense suffix /-gà/ and the choice of auxiliary verb mark these constructions as contra-reality.

¹⁹⁴ My consultants do not allow the use of the /-ti/ perfect aspect suffix on negative conditional counterfactual verbs. The reason for this is not clear; section 9.2 shows that the /-ti/ perfect can be used with non-counterfactual main verbs.

It seems likely that the final conditional counterfactual verb should be seen as part of the hypothetical conditional construction itself. Certainly, the final counterfactual verb form never occurs outside the larger hypothetical conditional construction. For this reason, the final counterfactual verb is also discussed in section 13.4.2. The hypothetical counterfactual construction's final verb form is illustrated in this section on the grounds that it is a final verb which expresses a counterfactual meaning, although it is a final verb which requires a particular preceding subordinate structure.

The two counterfactual constructions (Table 10.4) require different auxiliary verbs not found in the irrealis aspectual constructions (Table 10.3): the past auxiliary /-bitè/ (PST:AUX) and the so-called hypothetical auxiliary /-ntè/ (HYP:AUX). As noted in section 10.2.2.4, the past auxiliary /bitè/ is formed from the existential verb and appears to be identical in form to the relativized existential (cf. section 10.3.1); this auxiliary is used in the simple counterfactual. In the hypothetical conditional counterfactual, the auxiliary /-ntè/ is used. Like /-bitè/, the form /-ntè/ carries the sequence [tè] which is identical to the relativizer /-(i)t/ with the terminal vowel /e/ (cf. the discussion below in section 10.3.1).

It seems clear, however, that these counterfactuals do not behave like relativized verbs. I present two arguments against a relative clause analysis. First, the counterfactual verbs don't follow the same morphological patterns as relative clauses (and in fact, most dependent verbs). Second, apart from the [tè] ending, the counterfactual verbs appear to be finite final verbs. Each argument is discussed below.

Let me briefly discuss the morphological pattern of relativized verbs (and other

dependent verbs). Relativized verbs (both non-future and future) use a verb form very similar to (and almost certainly related to) the realis verb form as a base. Subjects, when they are marked on affirmative, non-future dependent verbs, are marked by prefixes (cf. section 9.4.2), not suffixes (as is the case with the irrealis verb, cf. section 9.4.1). And in relative clauses, even the future relative clause follows the ‘realis’ subject-prefixing pattern. The subject prefixes required on relativized verbs and on most affirmative, non-future dependent verbs (including non-final/medial verbs) are not, however, identical to the set of subject prefixes found on realis verbs. Dependent verbs exhibit the addition of the special 3rd person forms (cf. section 9.4.2 and example 10.58, below), while on realis verbs, there is no subject prefix for 3rd person final verbs (cf. section 9.4.1).

(10.58) hí-kí-gàm-b-t
 3SG-come-FUT-NPST:AUX-REL
 ‘that s/he will come’

But the final counterfactual verbs discussed above do not follow this dependent verb pattern. Rather than using the realis verb form as the base, they use the irrealis verb form with the future tense suffix. And the final counterfactual verbs do not use the same special 3rd person subject marking found on dependent verbs. Most subject marking on the counterfactual verbs matches the same subject suffixes found on final irrealis verbs which carry the future tense suffix (cf. section 9.4.1). In the simple counterfactual, for instance, 3rd person is marked with the expected /-m`/ (10.59).

(10.59) ha-tòs-gà-m-bìtè
 AFF-speak-FUT-3-PST:AUX
 ‘S/he was going to speak (but didn’t).’

And in (10.60), the 1SG suffix /-t/ is used (with the epenthetic vowel [i]) in a non-past counterfactual. Again, this is the expected form for subject marking on final irrealis future verbs (cf. section 9.4.1).

- (10.60) tí-ʃ nà-àt ha-tí-bí-t-an
 1SG-SBJ here-LOC AFF-1SG-EXIST-REL-INS
- ha-tòs-ti-gà-tí-ntè
 AFF-speak-PF-FUT-1SG-HYP:AUX
 ‘If I (emphasis) had been here, I would have spoken.’

In the hypothetical conditional counterfactual, however, 3rd person is marked uniquely. As seen in example (10.55), the 3rd person is marked by a vowel change following the future tense marker: /-gà/ FUT > /g-è:/ FUT-3. In the dual and the plural 3rd person forms, the /-and/ NSG suffix follows the verb stem; these forms also carry the 3rd person /-è:/ vocalic marking after the future tense suffix. I have found no other construction in the language which uses the /-è:/ form as a marker for 3rd person. The 2SG on the irrealis future verbs (cf. section 9.4.1) is expressed with a similar form, but the [e] vowel is short.

The point here is that the counterfactual constructions in Table 10.4 appear to be based on the irrealis future verb (cf. section 9.5), rather than following the dependent verb pattern which includes relativized verbs. The future relative clause above does not follow the same form as found on the counterfactual constructions in Table 10.4. Example (10.58), rather, follows the dependent verb pattern while the counterfactual constructions follow the final irrealis future verb pattern, despite the fact that they end with a form identical to the relativizer + terminal vowel.

The second point here is that the final counterfactual verbs appear to pattern syntactically like other finite final verbs (i.e. not like relativized verbs, which are themselves nominalizations). The counterfactual verbs exhibit tense, aspect and modality marking, the same subject markers (for most persons) as other final irrealis future verbs (cf. section 9.4.1), and they occur in final position; these features are commonly attested on finite verbs in Northern Mao (cf. sections 9.1.1, 9.4.1 and 10.1).¹⁹⁵ Relativized verbs do not typically function as main clause verbs in Northern Mao. There is no reason to assume that these counterfactual constructions are (today, at least) relativized or nominalized forms. See the discussion of the sequence [tè] in section 10.3.1.

10.3. Auxiliary Elements and Related Copular and Existential Forms

I use the term *auxiliary element* because these forms appear to be derived from copulas and existentials which functioned at one time as auxiliaries following lexical verbs. Today, however all of them can occur as bound elements on final verbs (and most of them only occur as bound elements). Auxiliary elements can be found on both realis and irrealis verb forms. The most basic tense distinction in Northern Mao is the non-future vs. future tense split (section 10.2.1). The basic realis verb, which always expresses a non-future tense, may further specify the tense through the use of auxiliary elements (as it does on the past and present progressive forms, as in section 10.2.2.4). Final irrealis verbs, on the other hand, always require an auxiliary verb (sections 9.1.2, 9.1.3 and 10.2.3). In the discussion below, we turn first to the various types of auxiliary

¹⁹⁵ Curiously, the counterfactual verbs do not take utterance type markers, as do other final verbs, however, one might consider analyzing the [tè] sequence itself as the counterfactual marker. This would be problematic, however. Clearly the [tè] sequence is present on the /bitè/ auxiliary in the past progressive and clearly this form is derived from the relativizer /-(i)t/ plus the terminal vowel /e/ (cf. section 10.3.1)

elements (section 10.3.1) and then discuss the related copular and existential forms which are still able to function as main (i.e. non-auxiliary) final verbs (section 10.3.2).

10.3.1. Auxiliary Elements

Seven auxiliary forms are attested across clausal constructions in Northern Mao.

These are listed in Table 10.5 with glosses.

Table 10.5. Northern Mao Auxiliary Elements

Auxiliary Verb	Constructions of Use (on Final Verbs)	Examples in Tables	Tense Function	Gloss
(-)bij̥	1. Present Progressive	10.2	Present	NPST:AUX
	2. General Future	10.3	Future	
	3. Negative non-3 rd person Non-Future	10.10	Non-Future	
(-)bitè	1. Past Progressive	10.2	Past	PST:AUX
	2. Simple Counterfactual	10.4	Past	
-n	Certain/Immediate Future	10.3	Future	NPST:AUX
-ntè	Hypothetical Conditional Counterfactual	10.4	NA	HYP:AUX
-nè	1. Affirmative 3 rd person Jussive	10.7	Future	NPST:AUX
	2. Impersonal Jussive	10.7	Future	
	3. Negative 3 rd person Jussive	10.13	Future	
	4. Negative Polite (Hortative) Imperative	10.13	Future	
-e:z	Negative non-3 rd person Non-Future Declarative	10.10	Non-Future	NFUT:AUX
-jà	Negative 3 rd person Non-Future Declarative	10.10	Non-Future	NFUT:AUX

The glosses for the auxiliary elements in Table 10.5 represent my attempt to capture distributional generalizations for these forms, mainly relative to tense. The clear exception to using tense-based glosses involves the /-ntè/ auxiliary which I have glossed as a hypothetical auxiliary (HYP:AUX) because this particular form is only found on final counterfactual verbs in the hypothetical conditional construction and while the future tense suffix does appear on the verb form, there is really no relevant temporal meaning, as the form is hypothetical/counterfactual. I will return to a discussion of the

glosses after we examine each of the forms.

First, it is necessary to further explain the use of the term *auxiliary* for what are mostly bound forms. I have chosen to call these forms auxiliaries on the following grounds: 1) all but one (/e:z/ NFUT:AUX) can also function as a copula or an existential main verb (cf. section 10.3.2); 2) the functions of some of these forms (e.g. /bɨf/ and /bitè/ in the progressive, section 10.2.2.4) are clearly typical of auxiliaries in other languages; and 3) while all the auxiliaries are bound forms, except in the progressive constructions,¹⁹⁶ the forms are still largely recognizable as existential or copular forms. One may expect that given time, however, these may continue to reduce to the point of being tense suffixes.

Two of the auxiliary forms in Northern Mao are related to the existential verb /ha-bɨf-[↓]á/ AFF-EXIST-DECL. The first is formed simply from the infinitive stem of the existential /bɨf/ which is toneless (cf. section 3.2.3). This auxiliary is used in the present progressive construction (section 10.2.2.4), where it is phonologically free, and in the general future construction (section 10.2.3.1), where it is phonologically bound.¹⁹⁷

The second auxiliary formed from the existential verb is /bitè/. The /bitè/ auxiliary requires relativization (nominalization) of the preceding lexical verb in the past progressive construction, where it is phonologically free (section 10.2.2.4). This auxiliary is used in the simple counterfactual construction, where it is phonologically bound to the

¹⁹⁶ The form /bɨf/ is phonologically bound in the general future construction (section 10.2.3.1) but is free in the present progressive (section 10.2.2.4). The form /bitè/ is phonologically bound in the simple counterfactual (section 10.2.4.1), but not in the past progressive (section 10.2.2.4).

¹⁹⁷ The non-past auxiliary /bɨf/ is sometimes reduced to [b], as in the future relative clause (section 13.2.1), or [bʃ], as in the (irrealis) general future verb form with 3rd person subjects (section 10.2.3.1).

preceding lexical verb (section 10.2.4.1). As is the case with the other existential auxiliary, the form is toneless on the [i] vowel and, thus, suggests that this is the infinitive form of the verb stem (cf. section 3.2.3). The /bitè/ auxiliary is identical in form to the relativized existential verb. In fact, this form can function as an existential relative clause. The [ʃ] is lost off the existential verb stem when the existential is relativized (10.61).¹⁹⁸ Apart from the /-biʃ/ and /-bitè/ auxiliaries, the general future and the simple counterfactual are identical in morphological structure (cf. Tables 10.3 and 10.4).

(10.61) bi-t es-ìʃ ha-mí-^lá
 EXIST:INF-REL person-SBJ AFF-eat-DECL
 ‘The person who was (here) ate.’

When /bitè/ functions as an auxiliary (as in the past progressive or the simple counterfactual) or when it serves as the past copular form (section 10.3.2), I do not label the verb stem as an existential infinitive nor parse the relativizer from the verb stem. This is because, synchronically, the form is simply a past auxiliary in its auxiliary function (see also the following discussion of the /-ntè/ auxiliary). The past auxiliary function of /bitè/ is likely related to its use as a past copular form, which may even be inflected for subject (cf. section 10.3.2, below).

Three other auxiliaries, /-n/, /-ntè/ and /-nè/, appear to be related to one another, perhaps derived from an old copula, as seen in (10.62)

¹⁹⁸ The terminal vowel /e/ is a phrasal affix on the right edge of noun phrases but only in certain contexts (see section 8.2 for the details of its distribution), and does not occur on the right edge of relative clauses which modify nouns.

(10.62) wè:ŋk' nè
 be.open:INF be.NPST
 ‘It is open.’

This /nè/ copula is found in only a few stative expressions in texts, where infinitive verb forms precede it. It does not conjugate for tense or aspect; the past form for the same stative construction (as in 10.62) requires the past auxiliary/copula /bitè/ in place of /nè/ (10.63).

(10.63) wè:ŋk' bitè
 be.open:INF be.PST
 ‘It was open.’

The non-past auxiliary /-n/ is used in the certain/immediate future (Table 10.3). As discussed in section 10.2.4, the /-ntè/ auxiliary occurs in the hypothetical conditional counterfactual construction. The /-ntè/ auxiliary appears to be related to the /-n/ auxiliary, though, like /-bitè/, the sequence [tè] is identical in shape to the relativizer /-(i)t/ plus the terminal vowel /e/ and appears to have been added to the /-n/ auxiliary. Unlike /bitè/, however, the form /-ntè/ cannot function as a relative clause (cf. section 10.2.4) and is not in fact attested in any other construction in the language. It is not clear if the [tè] sequence was added to the /-n/ auxiliary by analogical extension based on the past irrealis counterfactual auxiliary pattern. Alternatively, it could be that the relativizer was derived from a past copula form and that this earlier copular form, rather than the relativizer, was the source for the [tè] sequence on these two auxiliaries. I cannot say with any certainty. I have elected to use synchronic glosses which do not parse off the relativizer or terminal vowel for these forms. And since the /-ntè/ is found only in the hypothetical conditional counterfactual construction, I simply gloss the form as HYP:AUX.

The other auxiliary which may be related to the /nè/ copula and the other ‘n’ auxiliary forms is the /-nè/ form which appears on a variety of imperative and jussive forms: the affirmative 3rd person jussive, impersonal jussive, the negative 3rd person jussive and the negative polite (hortative) imperative construction (see Tables 10.7 and 10.13, below). I have glossed this as an auxiliary based largely on the obvious morphological resemblance to the /nè/ copula and the other ‘n’ auxiliaries.

There is also the non-future auxiliary form /-é:z/, (NFUT:AUX), which can be used as an alternate form to /-bif/ in the negative non-3rd person non-future forms (Table 10.7). No difference in meaning has been observed and in all cases where attempted, the forms have been interchangeable. No other construction uses /-e:z/.

The last auxiliary to discuss is the non-future /-jà/ (NFUT:AUX), used in the negative 3rd person non-future construction (Table 10.7). While /-e:z/ is used for the non-3rd person subjects, /-jà/ follows a /-wé/ negative marker when the subject of the verb is 3rd person. The /-jà/ form is quite clearly of a copular origin, as it can be used in a separate copular construction with present meaning, though normally no copula is used when the meaning is present (see sections 10.3.2 and 11.1.2, for more detail).

As noted immediately below Table 10.5, I have attempted to analyze the tense functions of each of these auxiliaries in particular constructions. In order to be specific with reference to each construction, I have had to use a variety of labels, including present, future, non-future and past. Clearly, as discussed in section 10.2.1, non-future and future tense are expressed by either the lack of or the presence of the /-gà/ future tense suffix. Auxiliary elements are not the only or even the primary indicators of tense in

Northern Mao. That said, I have tried to use glosses that capture whatever distributional generalizations can be made for a given auxiliary form. The non-past auxiliary /-biʃ/ indicates present meaning in the present progressive, but is also found on the negative non-future verb form and on the general future. Thus, for /-biʃ/, I use the non-past gloss as this is not necessarily contradicted by its use on verbs which express present, non-future and future meaning.

The realis verb cannot express the future and thus when the non-past auxiliary /-biʃ/ occurs on a realis verb, it indicates the time of speech. The past auxiliary /bitè/, then, is left to indicate past in the past realis progressive; this form also indicates past in the past irrealis counterfactual construction.

The ‘n’ auxiliaries (/ -n/, /-ntè / and /-nè/) all occur on verb constructions which can take the future tense suffix. The analysis of /-n/ and /-nè/ as non-past auxiliaries is based on the fact that 1) on the irrealis verb, /-n/ is found with the certain/immediate future form and that 2) the copular form /nè/ be.NPST is present in meaning (i.e not future). The /-ntè/ form, however, while it co-occurs with the future suffix on the counterfactual verb, the meaning of the hypothetical conditional counterfactual is not really relevant to a tense setting (cf. section 10.2.4.2).

Both the /-e:z/ and /-jà/ auxiliaries are analyzed as non-future auxiliaries because they occur on negative (irrealis) non-future verbs. Again, the expression of non-future is also indicated by the lack of the future tense suffix /-gà/ (cf. section 10.2.1).

10.3.2. Copular Forms and Tense

There are three different final verb forms found in copular predication

constructions (such as equative, locative and attributive predication, cf. section 11.1.2): /jà/ be.NPST, /bitè/ be.PST, and the future existential involving the verb stem /bí/. The copular forms, however, are final verb forms themselves and do not attach to other lexical verbs as do auxiliaries. The use of the particular copular form is determinable by tense function. When the meaning is ‘present,’ no copula verb is needed (10.64). Speakers do sometimes use the /jà/ copula (10.65), as mentioned in section 10.3.1, though in all cases tested, this can be dropped with no change in meaning. When the meaning is ‘past,’ the /bitè/ form, which serves as the past auxiliary in the progressive construction, is used (10.66). When the meaning is ‘future,’ the (irrealis) general future (cf. section 10.2.3.1) form of the existential is used for the copular function (10.67).

Present Meaning (without copula)

(10.64) í-té àld-mé:nt-es-è
 3SG-SBJ know:INF-tell:INF-person-TV
 ‘S/he is a teacher.’

Present Meaning (with copula)

(10.65) í-té àld-mé:nt-es jà
 3SG-SBJ know:INF-tell:INF-person be.NPST
 ‘S/he is a teacher.’

Past Meaning

(10.66) í-té àld-mé:nt-es bitè
 3SG-SBJ know:INF-tell:INF-person be.PST
 ‘S/he was a teacher.’

Future Meaning

(10.67) í-té àld-mé:nt-es
3SG-SBJ know:INF-tell:INF-person

ha-bíʃ-gà-m-bíʃ-á
AFF-EXIST-FUT-3-EXIST:INF-DECL
'S/he will be a teacher.'

The copula /jà/ is frozen. It is not inflected for person or number of subject or for tense / aspect. Pronominal subjects must be expressed with free pronouns (10.68).

(10.68) ham-té sáwèsawè jà
1PL-SBJ equal be.NPST
'We (PL) are equal.'

It is possible to express the person and number of the subject with the copular form /bitè/, but this requires the use of the relativized existential to carry the subject marker and /bitè/ follows (10.69).

(10.69) sáwèsawè ham-bi-t bitè
equal 1PL-EXIST-REL be.PST
'We (PL) were equal.'

If the verbal subject marker simply attaches to /bitè/, the interpretation is that of a non-past relative clause (10.70).

(10.70) íʃ hadèm-es-wol-íʃ nà-àt ham-bi-t-è
DEF work:INF-person-PL-SBJ here-LOC 1PL-EXIST-REL-TV
'The workers are we who are here.'

When a subject is dual or plural 3rd person, the /jà/ copula is uninflected (10.71). The copular form /bitè/, however, requires the use of the relativized existential (just as in (10.69)) to carry the non-singular (NSG) suffix /-and/ (10.72).

(10.71) íʃ es-kuw-iʃ sáwèsawè jà
 DEF person-DU-SBJ equal be.NPST
 ‘The two people are equal.’

(10.72) íʃ es-kuw-iʃ sáwèsawè bíʃ-and-t bitè
 DEF person-DU-SBJ equal EXIST-NSG-REL be.PST
 ‘The two people were equal.’

The future meaning is expressed with the fully-inflected irrealis existential verb (10.73).

(10.73) íʃ es-kuw-iʃ sáwèsawè
 DEF person-DU-SBJ equal

 ha-bíʃ-and-gà-m-bìʃ-á
 AFF-EXIST-NSG-FUT-3-NPST:AUX
 ‘The two people will be equal.’

While there is not always an identifiable morphological form which indicates tense on each verb form, tense is certainly relevant to the choice of copular form. That is the /jà/ copula (or lack of copula) in the present form and the /bitè/ (and use of the existential) in the past form is clearly dependent upon the intended temporal setting in reference to the point of speech. The general future form of the existential is the only one of these copular elements which clearly exhibits a tense marker.

10.4. Utterance Type Markers

I use the term *utterance type* for different types of speech acts which are marked on the final verb in Northern Mao. These include declarative, interrogative, imperative and jussive as well as various subtypes. As noted in section 9.1, the realis and irrealis categories intersect and interact with the declarative and interrogative utterance types. The indication of different utterance types or speech acts is usually marked at the right

edge of the utterance but is relevant to the finiteness of the verb stem (cf. section 9.2): the declarative (both neutral and hearsay declarative) and interrogative may take either the finite realis or finite irrealis verb stem, depending on the tense, aspect and modality of the utterance; the imperative and jussive forms take only the infinitive verb stem. Additionally, the impersonal jussive and the polite (hortative) imperative also require an impersonal prefix /há-/ IMPR.¹⁹⁹ Each of these utterance types is discussed with illustrative examples below. The complete set of utterance type markers and the verb/verb stem types with which they occur are provided in Table 10.6.

Table 10.6. Utterance Type / Speech Act Markers

Utterance Type		Verb/Verb Stem Type(s) with Marker(s)	Marker Gloss
Declarative	Neutral	Finite Realis/Irrealis Verb + -á	DECL
	Hearsay	Finite Realis/Irrealis Verb + -w-á	HRSY-DECL
Polar Interrogative		ha- Finite Realis/Irrealis Verb + -â: ~ -à:	AFF + INTR
Content Interrogative		Finite Realis/Irrealis Verb + -â:	INTR
Imperative		Infinitive Verb Stem + -í Infinitive Verb Stem + -wá Infinitive Verb Stem + -wà	2SG:IMP 2DU:IMP 2PL:IMP
Jussive		Infinitive Verb Stem + -t-i-nè Finite Realis/Irrealis Verb + -tà	JUSS-3-NPST:AUX JUSS
Impersonal Jussive		há- + Infinitive Verb Stem + -tínè	IMPR + JUSS-3-NPST:AUX
Polite (Hortative) Imperative		há- + Infinitive Verb Stem + -í há- + Infinitive Verb Stem + -wá há- + Infinitive Verb Stem + -wà	IMPR + 2SG:IMP IMPR + 2DU:IMP IMPR + 2PL:IMP

Some utterance types require the full realis or irrealis verbal word, with an utterance suffix (i.e. the declarative, polar interrogative and content interrogative utterances, Table 10.6). Other utterance types, like most of the imperative and jussive forms, are constructed with either an infinitive or finite verb stem and other morphology and do not pattern like either the realis or irrealis verbal words.

¹⁹⁹ It is not clear if this /há-/ IMPR prefix is related historically to the M-toned /ha-/ affirmative verbal prefix discussed in section 9.6.

I illustrate the final verbs within each utterance type in the subsections below. For the imperative and jussive utterance types, I also discuss a number of frequently used irregular verb forms.

10.4.1. Declarative

Final verbs in declarative utterances are most typically marked with a final /-á/.²⁰⁰ The declarative suffix is found on most realis and irrealis verbs in statements of fact (be they affirmative or negative). There are exceptions, however. First, the present and past copular constructions do not include the declarative suffix (illustrated below in section 10.4.1.1 and also in section 11.1.2). The declarative suffix is also not found on the irrealis counterfactuals. As noted in section 10.2.4, counterfactuals may themselves be considered a unique sort of utterance.

There are two types of declarative utterances: those which are neutral with respect to source of information in the proposition (section 10.4.1.1) and those which are marked as hearsay (section 10.4.1.2). Each is illustrated below.

10.4.1.1. Neutral Declarative

The so-called neutral declarative exhibits only the declarative suffix at the end of the final verb (i.e. the utterance, in canonical order) (10.74-10.75).

(10.74) kà:l-la ha-tí-mí-^lá
 porridge-OBJ AFF-1SG-eat-DECL
 ‘I ate porridge.’

²⁰⁰ In Ahland 2009, the /ha-/ prefix was analyzed as the marker of declarative. The reader is directed to section 9.6 for a discussion of the distribution of the /ha-/ prefix. Throughout this grammar the /ha-/ is analyzed as an affirmative prefix and is no longer considered a marker of declarative.

(10.75) háts'à àsúg-nà ha-kí-gà-m-biʃ-á
 tomorrow market-OBJ HA-come-FUT-1PL-EXIST:INF-DECL
 ‘We will come to market tomorrow.’

As illustrated in section 11.1.2, three copular constructions do not require verbs in the present meaning: the equative/proper inclusion, attributive, and locative predications. These constructions do require verbs for past and future meanings. In the present and past forms, there is no declarative marking, despite the fact that these constructions can be seen as statements of fact, fitting well within the declarative category (cf. the copular constructions in examples 10.64-10.67, above). The reason for the lack of declarative marking is that in the present, no verb is required (10.64), and in the past, the past copula verb /bitè/ is used (10.66). The final /e/ vowel on /bitè/ is a reflex of the terminal vowel left over from its source as a relativized existential (cf. sections 10.2.2.4 and 10.3.2). In the future form of this copular construction, however, the final verb is a fully finite irrealis future existential and carries the expected declarative /-á/ (10.67).

10.4.1.2. Hearsay Declarative

While Northern Mao does not have a grammaticalized evidential system,²⁰¹ speakers do use a hearsay (HRSY) marker, /-w/, reduced from the verb ‘say’ /wí:/, to indicate the source of the proposition is reported speech and not eyewitness experience. The hearsay category appears to be a subset of the declarative utterance type, as it is only found on declarative utterances and the declarative suffix follows the /-w/ HRSY marker (cf. section 9.1.1).

²⁰¹ The certain/immediate future form (section 10.2.3.2) indicates the speaker’s attitude toward a future event, but it is not an evidential marker because it is not concerned with the source of the information.

Example (10.76) is from a speaker's recollection of a conversation where hearsay was used naturally. Each speaker is indicated as 'person one' or 'person two.'

person one

(10.76) kja:ns-asaʔàt bòlé hi-biʃ-à:
six-time Bole 2SG-EXIST-INTR
“‘Were you in Bole at six o'clock (noon)?’”

person two

nú:n-é tí-ʃ kja:ns-asaʔàt tí-ʃ mèkànis-et
how-TV 1SG-SBJ six-time 1SG-SBJ mekanissa-LOC

tí-biʃ-^lá

1SG-EXIST-DECL

“‘How? At six (noon), I was in Mekanissa (a different area of Addis Ababa).’”

person one (recasting his proposition)

kja:ns-asaʔàt bòlé hi-biʃ-w-^lá
six-time Bole 2SG-EXIST-HRSY-DECL
‘You were in Bole at six (they said).’

Hearsay may be used with realis (10.77) or irrealis (10.79) declarative verbs but is not found outside the declarative.

(10.77) rá:m-ìʃ ha-pò:n-w-á
Ram-SBJ AFF-go.out-HRSY-DECL
‘Rama left (they say).’

(10.78) rá:m-ìʃ ha-pò:n-á
Ram-SBJ HA-go.out-DECL
‘Rama left.’

(10.79) rá-m-ìʃ ha-pò:n-gà-m-bìʃ-w-á
 Ram-SBJ AFF-go.out-FUT-3-NPST:AUX-HRSY-DECL
 ‘Rama will leave (they say).’

(10.80) rá-m-ìʃ ha-pò:n-gà-m-bìʃ-á
 Ram-SBJ AFF-go.out-FUT-3-NPST:AUX-DECL
 ‘Rama will leave.’

When a verb marked with /-w/ HRSY carries a first person subject, the meaning is understood as contra-expectation and emphatic (10.81). The /-w/’s co-occurrence with the first person subject is rare.

(10.81) tí-ʃ tí-kí-w-á
 1SG-SBJ 1SG-come-HRSY-DECL
 ‘I DID come.’

10.4.2. Interrogative

Interrogatives in Northern Mao may be divided into polar interrogatives (yes/no questions) and content interrogatives (those which require interrogative pronouns or other question words, cf. section 5.4). While there are differences between the two types, each is marked with a final /-à:/ interrogative marker. Of particular interest here is the fact that the formal realis and irrealis distinction is maintained throughout the interrogatives, allowing a functional distinction between non-future and future temporality. Mithun notes that “interrogation and negation have no effect on reality classification in many languages” (1995:385). Perhaps the reason for this is that realis and irrealis categories tend to become linked to the expression of tense and aspectual categories and these tense and aspectual categories need to be able to be expressed in interrogative as well as in declarative utterances. The realis verb item-arrangement is used for questions involving

the past or present, while the irrealis item-arrangement and future suffix /-gà/ is used for questions of the future. I have not observed any counterfactual constructions used in questions.

10.4.2.1. Polar Interrogatives

Polar interrogatives in Northern Mao are formed distinctly from content interrogatives. Unlike content interrogatives, the polar interrogative requires the /ha-/ affirmative prefix²⁰² on the realis or irrealis verb. The interrogative marker /-à:/ is suffixed to the verb (10.82-10.83), or the final nominal where no verb is required, as in the copular locative construction (10.84).

(10.82) ɨʃ m̀nts'-ɨʃ hì-àn ha-hój-à:
DEF woman-SBJ 2SG-COM AFF-go-INTR
'Did the woman go with you?'

(10.83) ʃak'-ná ha-pí-and-gà-m-bìʃ-à:
goat-OBJ AFF-kill-NSG-FUT-3-NPST:AUX-INTR
'Will they kill a goat?'

(10.84) àlfiŋgéŋ-ɨʃ àlkítáb-kez-èt-à:
cup-SBJ book-top-LOC-INTR
'Is the cup on the top of the book?'

It appears that polar interrogatives may be seen formally as interrogative constructions mapped onto affirmative declarative constructions. There are two reasons to suggest this. First, verbs in affirmative declarative utterances also exhibit the /ha-/ affirmative prefix (optionally). In polar interrogatives though the /ha-/ is usually required (perhaps because

²⁰² Section 9.6.3 provides a full discussion of the distribution of the /ha-/ prefix relative to utterance types.

its lack would render a verb identical in form to a content interrogative). Interestingly, some speakers do drop the /ha-/ affirmative prefix when the expected answer is not affirmative (10.85-10.86) and require the /ha-/ when the affirmative is expected (10.87). Others have rejected (10.85-10.86) as unacceptable forms, unless the /ha-/ AFF is present on the verb form. Because my consultants were not in agreement about the grammaticality of (10.85 and 10.86), I mark each example with a question mark.

(10.85) ? tí-ŋ ʼob-ìʃ tí-ŋ bàg-nà húp'-à:
 1SG-GEN brother-SBJ 1SG-GEN sheep-OBJ steal-INTR
 'Did my brother steal my sheep?' (incredulous)

(10.86) ? àm-íʃ húp'-à:
 mother-SBJ steal-INTR
 'Did mother steal (it)?' (incredulous)

(10.87) hup'-es-ìʃ ha-húp'-à:
 steal:INF-person-SBJ AFF-steal-INTR
 'Did a thief steal (it)?' (affirmative answer is expected)

The second reason for suggesting that polar interrogatives involve an interrogative structure over the declarative is that the declarative marker /-á/ appears to surface in tonal perturbances in slow speech (10.88). The declarative marker is preserved in these polar interrogatives in slow, careful speech. Its realization is heard in a falling tone on the final interrogative marker (cf. section 3.2.4). I use the colon in the grammatical gloss to indicate that the declarative and interrogative marker are fused on a single segment.

- (10.88) íʃ es-íʃ ki:m-na ha-tjam-â:
 DEF person-SBJ money-OBJ AFF-count-DECL:INTR
 ‘Did the person count the money?’ (Slow Speech)

This tonal perturbation is never attested in the content interrogatives.

Polar tag questions are formed with the question particle /ʃâ:/, glossed as Q, which historically may have been the existential verb /bíʃ/ followed by the /-â:/ interrogative marker. This particle follows a fully-formed declarative clause.

- (10.89) íʃ p’íʃ-íʃ ha-hó-j-^lá ʃâ:
 DEF child-SBJ AFF-go-away-DECL Q
 ‘The child left, right?’

10.4.2.2. Content Interrogatives

Content interrogatives require the use of interrogative pronouns (section 5.4.1) or other non-pronominal question words (section 5.4.2) as well as the interrogative utterance marker /-â:/. Unlike in polar interrogatives, where the answer appears to be an expected affirmative, the /ha-/ affirmative prefix is prohibited in the content interrogative (10.91, below).

The basic interrogative pronouns are /kí-/ ‘who’ (animate) and /kó-/ ‘what’ (inanimate) which carry the case of the questioned element (cf. section 5.4.1).

- (10.90) kí-íʃ tí-ŋ kà:l-là mí-â:
 who-SBJ 1SG-GEN porridge-OBJ eat-INTR
 ‘Who ate my porridge?’

- (10.91) * kí-íʃ tí-ŋ kà:l-là ha-mí-â:
 who-SBJ 1SG-GEN porridge-OBJ AFF-eat-INTR

(10.92) jàsín-ìʃ kó-ná gwol-gà-m-bìʃ-à:
 Yasin-SBJ what-OBJ slaughter-FUT-3-NPST:AUX-INTR
 ‘What will Yasin slaughter?’

The interrogative pronouns may occur in the position of the questioned element (10.90-10.91 and 10.93-10.94) or in the first position (10.95).

(10.93) ki:m-na kí-ná tí-tà-à:
 money-OBJ who-OBJ 1SG-give-INTR
 ‘I gave the money to whom?’

(10.94) àlkitáb-kez-èt ko-ʃ bíʃ-à:
 book-top-LOC what-SBJ EXIST-INTR
 ‘What is there on the top of the book?’

(10.95) kí-ná tí-ʃ ki:m-na tí-tà-à:
 who-OBJ 1SG-SBJ money-OBJ 1SG-give-INTR
 ‘Whom did I give the money to?’

When obliques are questioned, the interrogative pronouns or question words are typically not found in first position; they remain in the position on the questioned element.

(10.96) í-té àlfiŋgéŋ-nà hind-ét tèkèl-à:
 3SG-SBJ cup-OBJ where-LOC put-INTR
 ‘Where did s/he put the cup?’

The interrogative marker /-à:/ may be related to the /jà/ (be.NPST) copula which is sometimes used with present meaning in copular constructions (section 10.3.2) and which also serves as the auxiliary element on the negative 3rd person declarative (section 10.5.1). In instances where no verb is present and the interrogative marker attaches to a nominal, the /jà/ form appears to be phonologically bound to the nominal and its L tone is

replaced by the nominal's final tone. In this interrogative function, I gloss the /-ja/ as a question particle (Q).²⁰³

(10.97) kǐ-jǎ?
who-Q
'Who is it?'

Example (10.98) is a cleft construction. No copula is needed after the clefted (first position) element when the meaning is present (section 11.1.3). Yet, the /ja/ form is exhibited. It appears that its function has changed from a copula to a question marker.

(10.98) kǐ-jǎ wi-t-ìʃ-é
who-Q say-REL-SBJ-TV
'‘Who is it?’ that s/he said.'

The equative construction also does not normally require a copula, though the /jà/ copula can be used (section 11.1.2.1). The /-ja/ in (10.99) is, however, required in the interrogative equative copular construction.

(10.99) íʃ-kol-té kǐ-kol-ja
3-PL-SBJ who-PL-Q
'Who are they?'

Perhaps most interesting of all is example (10.100). In this instance, the past copular form /bitè/ is used to indicate past meaning in the copular construction. Certainly no other copula is needed. The form /bitè/ clearly serves as a copula in the declarative copular constructions (cf. example 10.66, above and also section 11.1.2). Again, the /-ja/ form serves only to indicate a question. It does not indicate the present tense of its source (cf.

²⁰³ The only clear counter-example, where /-à:/ instead of /-jà/ attaches to a nominal, is provided in the polar question example in (10.84), where the /-à:/ follows a postpositional phrase.

sections 10.3.1).

(10.100) íŷ-kol-té kí-kol bit-jà
 3-PL-SBJ who-PL be.PST-Q
 ‘Who were they?’

10.4.3. Imperative and Jussive

Imperative utterances are used for commands involving 2nd person subjects, while the jussive utterance is used for commands, wishes, blessings and curses involving 1st person or 3rd person subjects. Before getting into the specifics of the various imperative and jussive forms and their functions, I will give a brief overview of the constructions. Some of these forms relate to one another and should be considered as part of a system, while others are clearly derived from a different grammaticalization pathway (Table 10.7).

Table 10.7. Affirmative Imperative and Jussive Forms

Imperative / Jussive Constructions		Essential Morphology	Example
Imperative		Infinitive Verb Stem + an imperative suffix: -í -wá OR -wà 2SG:IMP -2DU:IMP -2PL:IMP	hez-í hit:INF-2SG:IMP ‘Hit (it)!’
3 rd Person Jussive		Finite Verb Stem + -t-í-nè -JUSS-3-NPST:AUX	héz-t-í-nè hit-JUSS-3-NPST:AUX ‘Let her/him hit (it).’
1 st Person Jussives	1 DU/PL	Realis Verb + -tà -JUSS	han-héz-tà 1DU-hit-JUSS ‘Let us (DU) hit (it).’
	1SG	Irrealis Verb + -tà -JUSS	héz-gà-t-tá hit-FUT-1SG-JUSS ‘Let me hit (it).’ / ‘Shall I hit it?’
Impersonal Jussive		há- + Infinitive Verb Stem IMPR- + -t-í-nè -JUSS-3-NPST:AUX	há-hez-t-í-nè IMPR-hit:INF-JUSS-3-NPST:AUX ‘Let it hit (it).’
Polite (Hortative) Imperative		há- + Infinitive Verb Stem IMPR- + imperative suffix (i.e. há- + imperative verb)	há-hez-í IMPR-hit:INF-2SG:IMP ‘Hit (it)!’ (polite)

The data in Table 10.7 allow for the following generalizations. The imperative

and polite (hortative) imperative are related: each requires the infinitive verb stem followed by one of the fusional (subject + imperative) suffixes. In fact, the only difference between the two is that the polite imperative requires the impersonal /há-/ prefix before the imperative verb form.

The 3rd person jussive and the impersonal jussive bear some similarity to one another: each ends with the suffixes /-t-í-nè/ JUSS-3-NPST:AUX. The 3rd person jussive, however, requires the finite verb stem while the impersonal jussive requires the infinitive verb stem.

The impersonal jussive and polite (hortative) imperative both share the required /há-/ impersonal prefix as well as the use of the infinitive verb stem. The jussive and imperative suffixes differentiate the impersonal jussive and the polite imperative forms from one another.

Finally, we can say that the 1st person jussive forms are most divergent. These are made up of either a realis (for the 1DU or 1PL) or irrealis (for the 1SG) verb with the jussive suffix /-tà/. I suspect that the /-tà/ found at the end of 1st person jussives is related to the /-t/ JUSS suffix found on the 3rd person jussive and the impersonal jussive. While the morphological construction of these forms suggests some degrees of derivational relationship historically, the forms today do not form a straightforward synchronic system. I now turn to the individual forms and their functions.

10.4.3.1. Imperative

Final verbs in imperative utterances are formed with the infinitive verb stem followed by either the -í 2SG, -wá 2DU or -wà 2PL suffixes (cf. Girma Mengistu

2007:49). The affirmative prefix is prohibited on imperative verbs. The realis and irrealis opposition is not relevant to the imperative verbs.

(10.101) ki:m-na tjám-í finite verb /ha-tjam-á/
 money-OBJ count:INF-2SG:IMP
 ‘Count the money!’

(10.102) íř dù:l-ná pì-wá finite verb /ha-pí-á/
 DEF hyena-OBJ kill:INF-2DU:IMP
 ‘You two kill the hyena!’

(10.103) hádèm-wà finite verb /ha-hadèm-á/
 work:INF-2PL:IMP
 ‘All of you work!’

There are a number of very commonly used irregular imperative forms which preserve older forms (Table 10.8).

Table 10.8. Frequently Used Irregular Imperatives

Gloss	Imperative Forms	Subject	Infinitive	Citation form of Verb
‘come’	hìŋkjá	2SG	ki-je	ha-kí-á [hakjâ]
	hìŋkí-wá / hìŋkí-wó	2DU		
	hìŋkí-wà	2PL		
‘go’	jâ?	2SG	hi-je / hoj-e	ha-hí-á / ha-hój-á ~ ha-hów-á
	hìp’-ó / hojhìp’-ó	2DU		
	hìp’-ò / hojhìp’-ò	2PL		
‘grab’	wó:s-í	2SG	wó:s-é	ha-wo:s-á
	wó:s-wá	2DU		
	wó:s-wà	2PL		
‘bring’	wó:s-kjà	2SG	wó:s-kj-é	ha-wo:s-kj-á
	wó:s- ^l ki-wó	2DU		
	wó:s- ^l ki-wà	2PL		
‘take’	wó:s-já	2SG	wó:s-j-jé	ha-wo:s-j-á
	wó:s- ^l hip’-ó	2DU		
	wó:s- ^l hip’-ò	2PL		

These include the verbs ‘come’, ‘go’, ‘bring’ and ‘take’. As noted in section 9.8.2, the verbs ‘come’ and ‘go’ have been grammaticalized as the cislocative and translocative directionals. The verbs ‘bring’ and ‘take’ are formed by the verb ‘grab’ plus the cislocative /-kj/ or translocative /-j/ directional. The verb ‘grab’ itself does not exhibit any irregular imperative forms but because it serves as the base for the verbs ‘bring’ and ‘take’, which do exhibit irregularities, it is included in Table 10.8.

As mentioned in section 9.8.2, two different verb stems can be used for ‘go’: /hí/ and /hój ~ hów/ today. It may be that these verb stems come from the same source. Certainly both the /hí/ and /hój/ forms are recognizable in some of the irregular imperative forms. Perhaps the /hów/ stem shape was historically derived from /híp’/ > /híw/ > /hów/. I can’t say for sure. Regardless, the verb ‘go’ and its grammaticalized relative, the translocative directional /-j/ show particularly interesting allomorphy in Table 10.8. An ejective [p’] and its debuccalized reflex [ʔ] are found in the 2DU and 2PL forms of ‘go’ and ‘take’ and also the /jàʔ/ go.2SG:IMP. Most probably, the /p’/ was older, debuccalized to [ʔ] and was then lost altogether in the realis forms of the verb. Interestingly, a glottalization reflex found in the irrealis form of ‘go’ does surface in a glottalization perturbation in the irrealis verb, where the [g] of the future suffix is glottalized (and devoiced), being pronounced as [k’] when it immediately follows the ‘go’ verb stem.

(10.104) ha-hí-k’a-t-bíʃ-á
 AFF-go-FUT-1SG-NPST:AUX-DECL
 ‘I will go.’

10.4.3.2. 3rd Person Jussive

Northern Mao exhibits a jussive (JUSS) utterance type. As noted in the introduction to section 10.4.3, these utterances are commands (often expressing wishes, blessings or curses) with 3rd or 1st person subjects (i.e. the person subjects not covered by the imperative). While the jussive category in Northern Mao is functionally identifiable; it is not structurally uniform. The structures used to indicate the jussive suggest different pathways of grammaticalization: with one suffix reserved for 3rd person and another for 1st person. There is also an impersonal jussive form, which requires an additional impersonal prefix (cf. section 10.4.3.4, below). I begin with an illustration of the 3rd person jussive and then move on to the 1st person jussive.

The 3rd person jussive follows the pattern of the imperative in two ways: it requires the infinitive verb stem and prohibits the affirmative prefix. The 3rd person jussive exhibits a jussive suffix /-t/ followed by the 3rd person subject marker /-í/ and an auxiliary /-nè/ NPST:AUX. These suffixes either directly follow the infinitive verb stem (in the case of a 3SG subject) or the infinitive verb stem plus the non-singular suffix (in the case of a dual or plural subject) (10.106-10.108). Baye Yimam (2006:197) and Girma Mengistu (2007:49-50) analyze the /-tína/ string as a single jussive morpheme, in the Bambassi and Diddessa varieties, respectively.

(10.105) ki:m-na tjám-t-í-nè
 money-OBJ count:INF-JUSS-3-NPST:AUX
 ‘Let him/her count the money.’

(10.106) ki:m-na tǰám-and-t-í-nè
money-OBJ count:INF-NSG-JUSS-3-NPST:AUX
'Let them (DU/PL) count the money.'

(10.107) p'íʃ-kuw-iʃ kól-and-t-í-nè
child-DU-SBJ speak:INF-NSG-JUSS-3-NPST:AUX
'Let (the) children (DU) speak.'

(10.108) p'íʃ-wol-iʃ kól-and-t-í-nè
child-PL-SBJ speak:INF-NSG-JUSS-3-NPST:AUX
'Let (the) children (PL) speak.'

The /-nè/ auxiliary is found in the affirmative and negative forms of the 3rd person jussive and the polite (hortative) imperative (section 10.4.3.5) (cf. section 10.5.3 for the negative forms). I strongly suspect /-nè/ is historically related to the /nè/ copula or the /-na/ auxiliary element (cf. ex. 10.62 and the discussion in section 10.3.1) and have glossed it as NPST:AUX, accordingly.²⁰⁴

10.4.3.3. 1st Person Jussive

There is a unique jussive construction for 1st person dual and plural subjects. This form carries the same subject prefixes found on realis verbs (/han' -/ 1DU and ham` -/ 1PL) and exhibits a finite verb stem—a clear divergence from the use of the infinitive verb stem used for other verbs in the imperative and jussive utterance types. The 1st dual and plural jussive carries a suffix /-tà/ JUSS. Perhaps the final vowel after the /-t/ JUSS suffix is related to the declarative suffix or perhaps it is an utterance-final requirement, like the terminal vowel found on nouns (cf. section 8.2).

²⁰⁴ Perhaps the /-t/ JUSS suffix is historically related to the /-t/ relativizer followed by the /i-/ 3rd person subject prefix at the beginning of the /-nè/ auxiliary.

(10.109) tó:ló han-jé:ts'-tà finite verb /ha-jé:ts'-^lá/
 now 1DU-run-JUSS
 'Let us (DU) run now.'

(10.110) ham-ò:s-tà finite verb /ha-ò:s-á/
 1PL-be.lost-JUSS
 'Let's (PL) be lost (left behind).'

The 1st singular jussive is formed with the future irrealis verb (finite verb stem + future tense marker + 1SG subject suffix) followed by the /-tà/ jussive. Following the 1SG subject marker, the L tone of the /-tà/ suffix is predictably replaced with the H tone of the 1SG suffix /-t'/ (cf. section 9.4.1) and takes the form [tá]. The 1st singular jussive can function like a jussive, though it can also be interpreted as a question in at least some instances.

(10.111) bàmbàs-ná hój-gà-t-tá finite verb /ha-hój-^lá/
 Bambassi-OBJ go-FUT-1SG-JUSS
 'Let me go to Bambassi.' / 'Shall I go to Bambassi?'²⁰⁵

In (10.112), the 1st singular jussive form clearly functions as a jussive in force without any hint of an interrogative. In the text where this is found, the speaker, a boy, says "Let me go water the cattle and then come" to his father and then immediately leaves without waiting for an answer.

²⁰⁵ Occasionally, the 1st singular jussive, when it is intended as a question, will carry the low toned /-à:/ interrogative utterance suffix instead of the H toned [tá]. But most frequently the function of the form, as a jussive or an interrogative, is determined by context alone.

(10.112) ì:mná harts' kás-in kí-gà-t-tá
 cow-OBJ water water-SS:NF come-FUT-1SG-JUSS
 ‘Let me go water the cattle and then come.’
 (text 26.12)

The same set of irregular imperatives discussed in Table 10.8 also exhibit some irregularities as jussives (Table 10.9).

Again, as with the irregular imperatives in Table 10.8, all the verbs except for ‘grab’ (i.e. without the directionals) exhibit irregular conjugations (Table 10.9).

Table 10.9. Frequently Used Irregular Jussives

Gloss	Jussive Forms	Subject	Infinitive	Citation form of Verb
‘come’	kí-gà-t-tá	1SG	ki-je	ha-kí- [↓] á [hakjá]
	hán-kí-tà	1DU		
	ham-ki-tà	1PL		
	ki-tínè	3SG		
	ki-wánd-tinè	3DU/PL		
‘go’	hój-k’à-t-tá	1SG	hi-je / hoj-e	ha-hí- [↓] á / ha-hój- [↓] á ~ ha-hów- [↓] á
	hán-hój-t’à	1DU		
	ham-hoj-t’à	1PL		
	hoj-t’ínè	3SG		
	hoj-wánd-tine	3DU/PL		
‘grab’	wó:s-gà-t-tá	1SG	wó:s-é	ha-wo:s-á
	hán-wo:s-tà	1DU		
	ham-wo:s-tà	1PL		
	wó:s-tínè	3SG		
	wó:s-ánd-tinè	3DU/PL		
‘bring’	wó:s-ki-gà-t-tá	1SG	wó:s-kj-é	ha-wo:s-kj- [↓] á
	hán-wo:s-ki-tà	1DU		
	ham-wo:s-ki-tà	1PL		
	wó:s-ki- [↓] tínè	3SG		
	wó:s-ki- [↓] wánd-tinè	3DU/PL		
‘take’	wó:s-i-k’à-t-tá	1SG	wó:s-j-jé	ha-wo:s-j- [↓] á
	hán-wo:s-i-t’à	1DU		
	ham-wo:s-i-t’à	1PL		
	wó:s-i-t’i [↓] nè	3SG		
	wó:s-i-wánd- [↓] tinè	3DU/PL		

In Table 10.8., the jussive set for the verb ‘come’ exhibits only a tonal irregularity in the non-singular marker /-(w)and/ which unpredictably carries a H tone; this same phenomenon is observed on the other verbs in this set (in Table 10.9). In declarative and interrogative utterances, the non-singular suffix always carries a M tone (see section 3.2.1.1).

Throughout Table 10.9, the verb stems following the 1PL /ham̀-/ prefix are lowered from H to M. This is not an irregularity; even realis verbs carrying this prefix exhibit this partial assimilation to the 1PL prefix (cf. section 3.2.2). While the verb ‘go’ may be expressed with the two stems /hí/ and /hój~hów/ (cf. Table 10.8, above), only the stem /hój/ is used in the jussive forms.

As seen with the imperative, glottalization (and devoicing, where applicable) occurs on all stops which occur immediately following the verb stem ‘go’, as a lexical verb or as its grammaticalized relative, the /-j/ translocative directional. The glottalization is a relic left from the older [pʰ] which was the final consonant on the verb stem ‘go’ (cf. the irregular imperative forms where the [pʰ] is preserved in some instances, Table 10.8). This glottalization is observable in Table 10.9 on jussives forms of the verb ‘go’ as well as ‘take’, where the translocative directional is used.

Downsteps in tone occur after the directionals (‘bring’ and ‘take’) in the 3rd person. These are not consistent, however: while the downstep occurs following the directional in ‘bring’ and the 3rd DU and PL of ‘take’, it occurs inside the jussive suffix in the 3rd singular jussive of ‘take’. This is the only example I have found of a L tone being downstepped directly. Normally L tones, when they are adjacent to a downstepping

environment (i.e. a floating l register, section 3.2.1), merge with the l register and no downstep is produced. It is not clear at this point why this is the case, but the data have been checked multiple times.

10.4.3.4. Impersonal Jussive

There is an impersonal jussive which has only been found used with non-human subjects (in the 3rd person). This utterance type, like other jussives, expresses commands or wishes (including blessings or curses). The impersonal jussive is formed with the infinitive verb stem followed by the same set of suffixes found on the 3rd person jussive (section 10.4.3.2): /-t/ JUSS + /-í/ 3 + /-nè/ NPST:AUX. The impersonal jussive also exhibits an impersonal prefix, /há-/ IMPR. The impersonal prefix impacts the tone of the infinitive verb stem. The infinitive stems exhibit the construct melodies of their noun tone class (cf. sections 3.3.1 and 4.3). This use of the construct noun melody on an infinitive verb stem adds to the evidence that nominalization played a role in the grammaticalization of the impersonal jussive (and most likely other verb forms which require infinitive verb stems as well). Perhaps the /há-/ was once a modifier in a modifier-head relationship with the infinitive (nominal) verb stem; in fact the construct melody is only found on head nominals when they are modified (apart from the impersonal jussive, that is) (cf. section 4.3).

The impersonal jussive construction in example (10.113) exhibits the verb ‘rain’. The finite verb stem is /pát’/ (the citation form is /ha-pát’-[↓]á/) while the infinitive verb stem is /pàt’/ (a member of the L tone class). The stem in (10.113), however is clearly M. This M tone corresponds to the construct melodies exhibited on head nominals when they

are preceded by a modifier (L tone class nouns exhibit ML construct melodies, cf. section 3.3.1).

(10.113) umbot-íʃ há-patʹ-t-í-nè
rain-SBJ IMPR-rain:INF-JUSS-3-NPST:AUX
‘Let it rain.’
Literally, ‘Let rain rain.’

In example (10.114), the infinitive verb stem ‘arrive’ is a member of the H2 tone class /pó:n-é/, which carries a H tone in citation form and a L tone in the construct form (cf. section 3.2.2). In (10.114), the verb stem clearly carries a L tone.

(10.114) tí-ŋ ðìgán-íʃ hì-ga:b
1SG-GEN greeting-SBJ 2SG-place

há-pò:n-t-í-nè
IMPR-arrive:INF- JUSS-3-NPST:AUX
‘May my greetings arrive at your place.’
(taken from a personal letter)

The impersonal jussive has only been found when the subject is non-human. Thus, in hortative texts, where the speaker is attempting to persuade or exhort the listeners, only the 3rd jussive form is used, not the impersonal form.

10.4.3.5. Polite (Hortative) Imperative

The polite (hortative) imperative also involves the /há-/ impersonal prefix. In this case the prefix’s function is not ‘impersonal’ but ‘polite’, softening the command (perhaps via a metaphoric extension from ‘impersonal’ to ‘distant/polite’--cf. the discussion below) and rendering it appropriate for formal hortative functions. For the sake of consistency in glossing, I use the IMPR ‘impersonal’ gloss for the /há-/ prefix on

the polite imperative as well. The polite imperative is almost exclusively used in hortative speeches where the command is not intended to be carried out immediately (thus the impersonal nature of the 3rd person function relates metaphorically to the temporal and distal/polite nature of this imperative form).

The polite imperative is built off the imperative forms (section 10.4.3.1), with the addition of the /há-/ prefix and the use of the construct melody on the verb stem, as also occurs on the impersonal jussive (cf. section 10.4.3.4).

(10.115) ham-damb-na há-àld-í
 1PL-culture/traditions-OBJ IMPR-know:INF-2:IMP
 ‘Know our culture.’ (polite)

In (10.115), ‘know’ happens to be in the LH infinitival tone class, which when modified (i.e. in the construct form), the stem exhibits a L tone, showing no change in melody.²⁰⁶

In (10.116) below, however, the verb ‘tell’ is illustrated with its finite stem (marked with a H tone) in the realis form. In (10.117), the L-toned infinitive stem (a L class infinitive) is used in an imperative verb. In (10.118), the verb stem exhibits a M tone, the construct melody associated with L class nominals (cf. section 3.2.2).

(10.116) tí-nà ha-mé:nt-^lá realis verb (finite stem)
 1SG-OBJ AFF-tell-DECL
 ‘He/she told me.’

²⁰⁶ When the final tone is H on the infinitive verb stem’s melody and the following tone-bearing unit carries a tone, the H tone is lost and is not realized at all.

(10.117) tí-nà m̀è:nt-wá imperative (infinitive stem)
 1SG-OBJ tell:INF-2DU:IMP
 ‘You two tell me!’

(10.118) tí-nà há-me:nt-wá polite imperative
 1SG-OBJ IMPR-tell:INF-2DU:IMP
 ‘You (DU) tell me.’ (polite)

10.5. Negative Final Verb Forms

Negative verb constructions in Northern Mao are formed in several different ways. All negative verb constructions share an absolute prohibition on the use of the affirmative /ha-/ prefix. Final negative verbs carry one of the following negative markers: /-á/, /-wé/ or /-wí/, /áf-/ and /án-/. The vast majority of these constructions also require the non-finite verb stem. Only the negative 3rd person jussive and the negative polite (hortative) imperative constructions require the use of the finite verb stem on a negative final verb (section 10.5.3).

10.5.1. Negative Declarative Forms

I will begin our exploration of negative final verb forms with the declarative utterance type. As noted briefly in section 9.1.3, negative final verbs in the declarative (and the interrogative, as well) utterance type are formed with the irrealis verb form. They also require the infinitive verb stem when negative (cf. section 9.2). First, I will illustrate the negative neutral declarative forms (section 10.5.1.1) and then the negative hearsay forms (section 10.5.1.2).

10.5.1.1. Negative Neutral Declarative Forms

There are five distinct negative declarative constructions. These are illustrated below, with markers relevant to the particular construction type listed in column 2 and

followed by an interlinearized example in column 3 (Table 10.10).

As noted in the discussion of position classes in section 9.1.3, all derivational marking or other aspectual markers precedes the negative suffixes /-á/ and /-wé/. All of these negative forms require the use of the infinitival verb stem . The item-arrangement of the morphology (infinitive stem + negative marker + subject marker + auxiliary element + declarative suffix) suggests that this form, like the irrealis verb and its /-gà/ future tense suffix (section 9.5), was at one time a nominalized subordinate structure, followed by a finite existential or copular verb. Perhaps the negative markers themselves derive from subordinating morphology. At this point, I cannot say with any certainty.

Table 10.10. Negative Declarative Forms

	Negative Declarative Construction	Essential Morphology	Example
1	Non-Future (non 3 rd person) (1)	-á...-bif -NEG...-NPST:AUX	hez-á-tí-bif-á hit:INF-NEG-1SG-NPST:AUX-DECL 'I did not hit (it).'
2	Non-Future (non 3 rd person) (2)	-á...-e:z -NEG...-NFUT:AUX	hez-á-t-é:z-á hit:INF-NEG-1SG-NFUT:AUX-DECL 'I did not hit (it).'
3	Non-Future (3 rd person)	-wé-jà -NEG-NFUT:AUX	hez-and-wé-jà hit:INF-NSG-NEG-NFUT:AUX 'They (DU/PL) didn't hit (it).'
4	Future	-á-gà...-bif -NEG-FUT...-NPST:AUX	hez-á-gà-tí-bif-á hit:INF-NEG-FUT-1SG-NPST:AUX-DECL 'I will not hit (it).'
5	Future of Certainty/Immediacy	-á-gà...-n -NEG-FUT...-NPST:AUX	hez-á-gà-t-n-á hit:INF-NEG-FUT-1SG-NPST:AUX-DECL 'I will not hit (it) (for sure).'

There are two declarative non-future negative constructions for non-3rd person subjects (Table 10.10). These are interchangeable in terms of use. The glosses of the auxiliary elements, however, are not the same. This is the result of my attempt to gloss auxiliary elements in a manner than covers all their uses in various constructions (cf.

section 10.3.1). In the negative declarative verb forms, this breaks down, however. Both the /-biʃ/ and /-e:z/ auxiliary elements may be used for negating past or present events. Perhaps the /-biʃ/ would be better glossed as a non-future auxiliary on the negatives. The non-future tense, of course, is indicated by the lack of the /-gà/ future tense marker on these forms.

While all the examples in Table 10.10, include a negative suffix, the examples in rows (2) and (3) also exhibit other morphology not found on the corresponding affirmative verb forms. The /-e:z/ auxiliary is found only on the negative non-3rd person non-future declarative form (cf. section 10.3.1). There is a unique negative form for the declarative non-future negative verbs with 3rd person subjects (row 3)²⁰⁷; this negative marker /-wé/ may be related to the non-final negative marker /-wó/ (cf. section 12.3). There are two negative declarative future forms: one for negating the general future verb (the negative future declarative) and the other for negating the certain/immediate future verb (the negative certain/immediate future declarative).

The copular constructions (section 11.1.2) exhibit interesting patterns of negation. In some constructions, negation is handled by suppletion, where a lexically negative verb is used in place of a non-negative verb. For instance, the existential verb can be negated by using the form /ha-pà:j-á/ which appears to be a lexically-negative existential verb (10.119). In this function, the verb /ha-pà:j-á/ is a lexical negative and as a result does not take negative morphology in this function.

²⁰⁷ I have encountered a few examples of this verb form serving as a negative future across all persons, with a surprising lack of subject marking on the verb. This appears to be very rare (encountered so far only in elicitation). The only negative future 3rd person verb forms that I have encountered in natural discourse are the negative future declarative which utilizes the future tense marker (row 4 in Table 10.10).

(10.119) kʒat'-iʃ jéʃ-ét ha-pà:j-á
house-SBJ DIST-LOC AFF-NEG.EXIST-DECL
'There is no house.'

It may be that the lexically-negative existential /pà:j/ has been derived from a verb meaning 'disappear', or something similar. One speaker used a morphologically negated form of this verb (in ex. 10.120) to express the meaning 'did not disappear.' I have not found the morphologically affirmative /ha-pà:j-á/ to be used for 'disappear', however. The verb stem /ò:s/ is used for that.

(10.120) iʃ ki:m-iʃ pá:j-wé-jà
DEF money-SBJ disappear:INF-NEG-NFUT:AUX
'The money did not disappear.'

Interestingly, all uses of /pà:j/ as a lexically-negative existential which I have observed thus far involve only 3rd person subjects. I do not know if this is simply the result of limited data.

It is also possible to negate the existential verb with the same morphological pattern identified for other negative declaratives (in Table 10.10, above). For instance, the existential verb /biʃ/ (10.121) may take the morphological negative suffix, with the infinitive verb stem, and form the negative 3rd person declarative form of the existential: /biʃ-wé-jà/ (10.122).

(10.121) kʒat'-iʃ jéʃ-ét ha-biʃ-á
house-SBJ DIST-LOC AFF-EXIST-DECL
'There is a house there.'

(10.122) *kjat'-iʃ jéʃ-ét biʃ-wé-jà*
 house-SBJ DIST-LOC EXIST:INF-NEG-NFUT:AUX
 'There is no house there.'

Existential verbs with non-3rd person subjects also follow the negative declarative patterns (as in Table 10.9).

(10.123) *nà-àt biʃ-á-hì-èz-¹á*
 here-LOC EXIST:INF-NEG-2SG-NFUT:AUX-DECL
 'You were not here.'

(10.124) *háts'à biʃ-á-gà-t-bíʃ-á*
 tomorrow EXIST:INF-NEG-FUT-1SG-NPST:AUX-DECL
 'I will not be here tomorrow.'

The negative copula used for present tense in equative, proper inclusion, attributive and locative is also a suppletive form. For affirmative present tense, no copula is required (though the frozen /jà/ may be used) in these copular constructions (section 11.1.2). The zero or /jà/ copulas can be negated with the infinitive (i.e. nominal) form of the lexically-negative existential (/pà:j/ NEG.EXIST > /pá:j-à/ NEG.EXIST:INF-TV, where the infinitive form carries the terminal vowel (section 8.2)).²⁰⁸ While this form is clearly a nominal form (as indicated by the HL2 noun tone class and the terminal vowel), I use the verbal gloss NEG.be.NPST to better indicate its syntactic function as a negative copula.²⁰⁹

²⁰⁸ This infinitive stem carries the terminal vowel, which in this case undergoes vowel harmony with the stem vowel and is pronounced as [a] rather than [e]. As noted in section 8.2, this is a relatively common phenomenon, where nouns with [a] vowels, especially long [a] vowels produce a change on the suffix /kà:l-e/ > [kà:l-a] porridge-TV. The vowel [a] is the only vowel which triggers this effect.

²⁰⁹ As noted in (section 10.3.1), I do the same with /bitè/ be.PST copula, which is also clearly involves nominalization in its history.

Examples (10.127-10.130) illustrate four copular constructions in the negative present form, where the zero (or /jà/ copula) is negated with /pá:jà/, which is not inflected for person (subject) or number. In (10.127), the subject is 1st person singular while the subject is 3rd person plural in (10.128). The same form is used as the negative copula.

(10.127) tí-ʃ jàsín pá:jà
 1SG-SBJ Yasin NEG.be.NPST
 ‘I am not Yasin.’

(10.128) ɪʃ-kol-ɪʃ àld-mé:nt-es-wol pá:jà
 3-PL-SBJ know:INF-tell:INF-person-PL NEG.be.NPST
 ‘They are not teachers.’

(10.129) jàsín-ɪʃ nà-àt pá:jà
 Yasin-SBJ here-LOC NEG.be.NPST
 ‘Yasin is not here.’

(10.130) jàsín-ɪʃ kəm-ít pá:jà
 Yasin-SBJ be.big:INF-REL NEG.be.NPST
 ‘Yasin is not big.’

To indicate the negative past form in the copular constructions, speakers use the negative non-future existential to serve as a negative past copular form (10.131-10.132).

(10.131) ɪʃ p’ɪʃ-ɪʃ jàsín biʃ-wé-jà
 DEF child-SBJ Yasin NEG.be.NPST
 ‘The child is not Yasin.’

(10.132) íʃ-kol-ìʃ àld-mé:nt-es-wol
3-PL-SBJ know:INF-tell:INF-person-PL

biʃ-and-wé-jà
EXIST-NSG-NEG-NFUT:AUX
'They were not teachers.'

Finally, the negative future is expressed with the negative future existential
(10.133-10.134).

(10.133) íʃ p'íʃ-ìʃ jàsín biʃ-á-gà-m-bìʃ-á
DEF child-SBJ Yasin EXIST-NEG-FUT-3-NPST:AUX-DECL
'The child will not be Yasin.'

(10.134) íʃ-kol-ìʃ àld-mé:nt-es-wol
3-PL-SBJ know:INF-tell:INF-person

biʃ-and-á-gà-m-bìʃ-á
EXIST-NSG-NEG-FUT-3-NPST:AUX-DECL
'They will not be teachers.'

10.5.1.2. Negative Hearsay Declarative Forms

Negating the hearsay forms does not negate the hearsay status itself but only the lexical verb, as the free translations in Table 10.11 indicate. The negated event, then, is still interpreted as hearsay. As noted in section 10.4.1.2, hearsay is expressed as a modification of the declarative utterance type. Hearsay verbs always end with the declarative utterance suffix /-á/. As expected, the negative hearsay declarative forms (below, in Table 10.11) are very similar to the negative neutral declarative (Table 10.10, above).

Table 10.11. Negative Hearsay Forms

	Negative Hearsay Construction	Essential Morphology	Example
1	Non-Future (non 3 rd person) (1)	-á... -bif -NEG... -NPST:AUX	hez-á-hi-bif-w-á hit:INF-NEG-2SG-NPST:AUX-HRSY-DECL 'You did not hit (it) (hearsay).'
2	Non-Future (non 3 rd person) (2)	-á...-e:z -NEG... -NFUT:AUX	hez-á-h-e:z-w-á hit:INF-NEG-2SG-NFUT:AUX-HRSY-DECL 'You did not hit (it) (hearsay).'
3	Non-Future (3 rd person)	-wé -NEG	hez-wé-w- ^l á hit:INF-NEG-HRSY-DECL 'S/he did not hit (it) (hearsay).'
4	Future	-á-gà...-bif -NEG-FUT... -NPST:AUX	hez-á-gà-m-bif-w-á hit:INF-NEG-FUT-3-NPST:AUX-HRSY-DECL 'S/he will not hit (it) (hearsay).'

One important difference from the negative neutral declarative forms (in section 10.5.1.1), is that in negative 3rd person hearsay declarative forms, the non-future copula /-jà/ is not used. Example (10.135) illustrates the affirmative neutral and hearsay forms, while (10.136) illustrates the negative neutral and hearsay forms.

AFF Neutral	AFF Hearsay
(10.135) ha-mí- ^l á	ha-mí-w- ^l á
AFF-eat-DECL	AFF-eat-HRSY-DECL
‘S/he ate.’	‘S/he ate (they say).’
NEG Neutral	NEG Hearsay
(10.136) mì-wé-jà	mì-wé-w- ^l á
eat:INF-NEG-NFUT:AUX	eat:INF-NEG-HRSY-DECL
‘S/he didn’t eat.’	‘S/he didn’t eat (they say).’

I have not observed any hearsay marking on copular forms, though it can be used on existentials, as in (10.137).

(10.137) jéʃ-ét biʃ-á-hì-bìʃ-w-á
 DIST-LOC EXIST-NEG-2SG-NPST:AUX-HRSY-DECL
 ‘You were not there (they say).’

10.5.2. Negative Interrogative Forms

Negative interrogatives, like most other negative verb forms, use the infinitive stem. Unlike affirmative interrogatives, there is no difference between the polar and the content negative interrogatives, with respect to verbal morphology. No affirmative prefix can be used on negative polar interrogatives, as is required on affirmative polar interrogatives, for instance (section 10.4.2.1). As is the case with all negatives, the verb stem is in the infinitive form and there is no contour tone on the interrogative suffix in any of the negative interrogatives. The negative interrogative constructions are listed in Table 10.12.

Table 10.12. Negative Interrogative Forms

	Negative Interrogative Construction	Essential Morphology	Example
1	Non-Future (non 3 rd person)	-á... -biʃ -NEG...-NPST:AUX	hez-á-hì-bìʃ-à: hit:INF-NEG-2SG-NPST:AUX-INTR ‘Will you not hit (it)?’
2	Non-Future (non 3 rd person)	-á... -e:z -NEG...-NFUT:AUX	hez-á-h-e:z-à: hit:INF-NEG-2SG-NFUT:AUX-INTR ‘You didn’t eat?’
3	Non-Future (3 rd person)	-w̃ -NEG	hez-and-w-â: hit:INF-NSG-NEG-INTR ‘Will they not hit (it)?’
4	Future	-á... -biʃ -NEG...-NPST:AUX	hez-á-gà-t-bìʃ-à: hit:INF-NEG-FUT-1SG-NPST:AUX-INTR ‘Will I not hit (it)?’
5	Future of Certainty/Immediacy	-á... -n -NEG...-NPST:AUX falling tone in hyper	hez-á-gà-t-n-â: hit:INF-NEG-FUT-1S-NPST:AUX-INTR ‘Will I not hit (it) (incredulous)?’

In rows (3) and (5), contour tones are found on the interrogative utterance suffix. These are not from the same source. In the negative non-future 3rd person interrogative,

the contour on /-â:/ is derived from the H tone of the /-wé/ negative suffix which is reduced to /-w/ and immediately precedes the /-à:/ INTR marker (row 3 of Table 10.12 and ex. 10.138). No hint of the /-jà/ auxiliary, which is used in the corresponding affirmative form and which normally follows the /-wé/ NEG, is found on this verb.

- (10.138) íʃ ka:l-là mì-w-â:
 DEF porridge-OBJ eat:INF-NEG-INTR
 ‘Did he/she eat the porridge?’

The contour found on the negative certain/immediate future interrogative is from the 1st person marker which precedes the /-n/ auxiliary element.²¹⁰ It is not found when non-H toned subject markers are used (as in 10.139 and 10.140). It is found, however, when after the 1DU subject marker /-n’/, which does carry a H tone (10.141).

- (10.139) hez-á-gà-m-n-à:
 hit:INF-NEG-FUT-3-NPST:AUX-INTR
 ‘Will s/he not hit it?’ (incredulous)

- (10.140) háts’à mì-á-gà-w-n-à:
 tomorrow eat:INF-NEG-FUT-2PL-NPST:AUX-INTR
 ‘You all won’t eat tomorrow?’ (incredulous)

- (10.141) háts’à mì-á-gà-n-n-â:
 tomorrow eat:INF-NEG-FUT-1DU-NPST:AUX-INTR
 ‘We two won’t eat tomorrow?’ (incredulous)

The examples in Table 10.12 are all polar interrogatives. I have used polar

²¹⁰ My consultants suggest that the use of the /-n/ non-past auxiliary which is used with the certain/immediate future verb forms (cf. section 10.3.1) indicates incredulity in polar interrogative utterances. Unfortunately, I have not encountered the /-n/ auxiliary in negative interrogatives in natural discourse. In content interrogatives, the /-n/ auxiliary can be used to indicate certainty, as in example (10.143), where presumably, the addressee has already indicated that s/he will not eat something.

interrogatives there to save space in the table. Content interrogatives are formed in similar fashion but also require the use of interrogative pronouns or question words which can be marked for case, like in the affirmative interrogative utterances (10.142-10.143). When the subject is questioned, 3rd person marking is found on the verb (10.142).

(10.142) kɪ-ʃ kà:l-là mì-á-gà-m-bìʃ-à:
 who-SBJ porridge-OBJ eat:INF-NEG-FUT-3-NPST:AUX-INTR
 ‘Who will not eat porridge?’

(10.143) í-té kó-ná mì-á-g-è-m-n-à:
 3SG-SBJ what-OBJ eat:INF-FUT-2SG-NPST:AUX-INTR
 ‘What won’t you eat?’ (with certainty)

Unfortunately, I have not observed (and failed to elicit) negative interrogative copular constructions.

10.5.3. Negative Imperative and Jussive

As might be expected given their affirmative forms, the negative imperative and jussive verbs are not consistently formed with either the realis or irrealis verb forms. While there are six affirmative imperative and jussive constructions (section 10.4.3), there are only three constructions used to form the negative imperative and jussive verbs: the negative imperative, negative 3rd person jussive and negative polite (hortative) imperative. No negative form for the impersonal jussive has been found. Also, there is no grammaticalized form for the 1st person jussive. Rather, the negative certain/immediate future declarative verb form is used for the 1st person jussive function. The negative imperative and jussive constructions are illustrated in Table 10.13.

Table 10.13. Negative Imperative and Jussive Forms

Negative Imperative / Jussive Constructions	Essential Morphology	Example
Imperative	Infinitive Verb Stem + -áʃ + an imperative suffix -NEG (2SG/2DU/2PL)	hez-áʃ-í hit:INF-NEG-2SG:IMP 'Do not hit (it)!'
3 rd Person Jussive	án- + SBJ Prefix + Finite Verb Stem + -nè NEG- -NPST:AUX	án-í-héz-nè NEG-3SG-hit-NPST:AUX 'Let her/him not hit (it)!'
1 st Person Jussives	Use the Negative Certain/Immediate Future (Irrealis) Declarative	hez-á-gà-t-n-á hit:INF-NEG-FUT-1SG-NPST:AUX-DECL 'Let me not hit (it)!' / 'I won't hit it?'
Impersonal Jussive	No Negative Form Attested	
Polite (Hortative) Imperative	án- + SBJ Prefix + Finite Verb Stem + -nè NEG- -NPST:AUX	án-í-héz-nè NEG-2SG-hit-JUSS 'Do not hit (it).' (polite)

10.5.3.1. Negative Imperative

The imperative verbs require the infinitive stem for both affirmative and negative polarities. The negative imperative is formed by the infinitive verb stem followed by the negative marker /-áʃ/, which immediately follows the infinitive verb stem and which is followed by one of the three fusional subject markers for imperatives: /-í/ 2SG, /-wá/ 2DU or /-wà/ 2PL.

(10.144) jè:s'-áʃ-í
run:INF-NEG-2SG:IMP
'Don't run!'

(10.145) jè:s'-áʃ-wá
run:INF-NEG-2DU:IMP
'Don't you two run!'

(10.146) jè:s'-áʃ-wà
run:INF-NEG-2PL:IMP
'Don't you all run!'

When the verb stem contains an /o/ vowel, the /-áʃ/ negative suffix becomes [-óʃ] (10.147-10.148).

(10.147) kól-óʃ-í
speak:INF-NEG-2SG:IMP
'Don't speak!'

(10.148) ków-óʃ-í
sit:INF-NEG-2SG:IMP
'Don't sit!'

Other vowels don't trigger such a change (10.149-10.151).

(10.149) hup'-áf-í
steal:INF-NEG-2SG:IMP
'Don't steal (it)!'

(10.150) tjam-áf-í
count:INF-NEG-2SG:IMP
'Don't count (it)!'

(10.151) ín-áf-í
do:INF-NEG-2SG:IMP
'Don't do (it)!'.

10.5.3.2. Negative Jussive

The negative 3rd person jussive and negative polite (hortative) imperative require the finite verb stem (Table 10.13). The negative 3rd person jussive is formed with the prefix /án-/ followed by either /í-/ 3SG, /íʃkuw-/ 3DL or /íʃkol-/ 3PL subject prefixes, the finite verb stem and then the auxiliary /-nè/.

(10.152) án-í-tjam-nè
NEG-3-count-NPST:AUX
'Let him/her not count (it).'

(10.153) án-íʃ-kuw-kòw-nè
NEG-3-DU-sit-NPST:AUX
'Let those two not sit.'

(10.154) án-íʃ-kol-^lkol-nè
NEG-3-PL-speak-NPST:AUX
'Let them not speak.'

No negative form corresponding to the impersonal jussive has been found. The negative 3rd person jussive form appears to cover both the 3rd person and impersonal

functions. This is not much of a surprise given that the negative jussive form corresponds to the negative polite imperative discussed below (section 10.5.3.4).

10.5.3.3. Negative 1st Person Jussive

There is no grammaticalized structure which is reserved for negating the 1st person jussive form (Table 10.13). Rather, the negative certain/immediate future (irrealis) verb form is used for this function. In some instances, speakers do use a jussive form to translate the 1st person negative jussive into Amharic. But in Northern Mao, the form has not been allocated any unique grammatical structure.

(10.155) tǰám-á-gà-t-n-á
 count-NEG-FUT-1SG-NPST:AUX-DECL
 ‘I will not count (it).’ / ‘Let me not count (it).’

10.5.3.4. Negative Polite (Hortative) Imperative

The negative polite imperative form, which is typically used in hortative texts, is clearly related to the negative 3rd person jussive form discussed above (section 10.5.3.2). As is the case with the negative 3rd person jussive above, this form is not constructed from the infinitive verb stem. The negative polite imperative includes an /án-/ NEG prefix followed by unique subject markers: /i-/ 2SG, /áw-/ 2DU and /àw-/ 2PL. These forms are prefixed to the finite verb stem which is followed by the auxiliary /-nè/ NPST:AUX.

(10.156) ki:m-na án-ì-tǰam-nè
 money-OBJ NEG-2SG-count-NPST:AUX
 ‘Don’t count the money.’ (polite)

(10.157) án-áw-tjam-nè
NEG-2DU-count-NPST:AUX
'Don't you two count (it).' (polite)

(10.158) án-àw-tjam-nè
NEG-2PL-count-NPST:AUX
'Don't you all count (it).' (polite)

CHAPTER XI

SINGLE VERB CONSTRUCTIONS

Chapter XI explores the syntactic constructions which involve only one verb (i.e. a final verb). Constructions involving more than one verb, such as conjoined clauses, chained clauses or subordinate clauses are discussed in Chapters XII (chained clauses, with a brief note on conjoined clauses) and XIII (subordinate clauses). Chapter XI is organized into four parts. The first three sections deal with three over-arching constructions: the intransitive (section 11.1), transitive (section 11.2) and ditransitive constructions (section 11.3). Chapter XI concludes with an examination of labile verbs and the role of the construction in forming valence (section 11.4).

11.1. Intransitive Constructions

Northern Mao's intransitive constructions have a valence requiring one argument (the grammatical subject). The intransitive constructions can be divided into two basic types: lexical verb and existential constructions vs. copular constructions. I begin with an illustration of lexical verb and existential intransitive constructions (section 11.1.1) and then move on to copular constructions (section 11.1.2). Finally, I conclude the discussion of intransitives with an illustration of the cleft construction (section 11.1.3) and the comparative constructions (section 11.1.4). The cleft construction requires a word-order inversion where the predicate precedes the subject and two of the comparative constructions include morphological forms, found elsewhere in the language, in unique syntactic environments.

The discussion of intransitive constructions in section 11.1 does not include

intransitive constructions which have been derived via valence decreasing operations.

Valence decreasing operations, such as passive, reflexive and reciprocal morphological formations, are illustrated in section 9.7.1.

11.1.1. Lexical Verb and Existential Constructions

The intransitive lexical verb and existential construction involves one participant (the grammatical subject) and a final verb in a predication of an action, state or event.

The existential construction most typically, but not always, involves a location, as well.

The existential construction is illustrated in section 11.1.1.2. The existential is grouped with lexical verb intransitive constructions on the grounds that that these constructions always require an overt verb (as opposed to the copular constructions where constructions with ‘present’ meaning employ a zero copula, section 11.1.2).

When the single argument of an intransitive construction is expressed by a full noun phrase, it is marked with the subject case marker /-ìʃ/ (cf. section 8.3.1.1).

(11.1) rá:m-ìʃ ha-kí-gà-m-bìʃ-á
Rama-SBJ AFF-come-FUT-3-NPST:AUX-DECL
‘Rama will come.’

(11.2) dú:l-ìʃ ha-já:p-á
Duule-SBJ AFF-cry-DECL
‘Duule cried.’

(11.3) kwalla jàsín-ìʃ ha-pèk-á
yesterday Yasin-SBJ AFF-fall-DECL
‘Yasin fell yesterday.’

Pronominal subjects are most frequently expressed only by verbal morphology (as in 11.5). Free pronouns, when they do occur, also take subject case when serving as the

single argument of the intransitive construction. In (11.4) the 1SG pronoun takes the subject suffix.

- (11.4) tí-ʃ ha-kí-gà-t-bíʃ-á
1SG-SBJ AFF-come-FUT-1SG-NPST:AUX-DECL
'I came.'

In (11.5), the pronominal subject (1DU) is expressed only by the bound pronominal marking on the verb (cf. section 9.4.1). Most typically, the use of a free pronoun as a subject indicates some sort of contrastive focus or emphasis.

- (11.5) kwalla han-kí-¹á
yesterday 1DU-come-DECL
'Yesterday we (dual) came.'

11.1.1.1. Weather Constructions

Most verbs which can be used to communicate a weather event or state occur in intransitive constructions. Weather constructions deserve special mention in this discussion of intransitive constructions because 1) in some cases the choice of subject (i.e. participant) in the construction is not obvious to the non-native speaker and 2) a few weather predication constructions take only a non-referential 3SG subject which is marked by zero on the verb and which cannot be expressed with an overt noun phrase.

Examples (11.6-11.9) show weather predications which appear to require an overt subject noun phrase in order to communicate a weather event. Of these, examples (11.6-11.8) use verbs which can take a wide variety of subjects. For instance, if one simply says 'It (or s/he) will fall today,' the meaning of 'hail' is not invoked.²¹¹

²¹¹ The verb/sentence /ha-pèk-gà-m-bíʃ-á/ AFF-fall-FUT-3-NPST-AUX-DECL 'It/she/he will fall' does not mean 'hail'. In fact the interpretation normally involves a 3rd person personal subject such as 'she'

(11.6) as-ij ha-pèk-gà-m-bìf-á
 hail-SBJ AFF-fall-FUT-3-NPST:AUX-DECL
 ‘It will hail.’
 (Literally: ‘Hail will fall.’)

(11.7) aw-til-sis-ij ha-pò:z-á
 day-stomach-inside-SBJ AFF-be.light-DECL
 ‘It’s bright out.’ OR ‘It is clear out.’
 (Literally, ‘The inside of the sky (stomach of the day) is light.’)

(11.8) aw-to:k-ij ha-pò:z-á
 day-head-SBJ AFF-be.light-DECL
 ‘(The) sun is bright.’

Examples (11.7) and (11.8) each predicate bright or clear weather. There is a choice of subject though, which doesn’t affect the meaning and is likely pragmatically determined.²¹²

Example (11.9) is interesting in that the subject /umbot’e/ ‘rain’ appears to be required, according to the speakers I have asked, yet no other use/meaning has been found for the verb stem /pát’/,²¹³ I have not observed any other subject in use with this verb.

or ‘he’.

²¹² The use of ‘stomach’ in compounds (associative constructions) is a common means of referring to a part of something (e.g. /kús-tíl-è/ hand-stomach-TV ‘palm of hand’, /túg-tíl-è/ foot-stomach-TV ‘sole of foot’ and /aw-til-è/ day-stomach-TV ‘sky/the heavens.’)

²¹³ I have not yet found any other meaning for the verb stem /pát’/, though speakers have told me that one must say /umbot’e/ for the meaning of ‘rain’ to be clear. It is possible to use the verb ‘spit’ for ‘rain’ as well--also in an intransitive construction with the subject ‘rain’. A common one is ‘spit’: /umbot'-ij ha-fu:f-á/ rain-SBJ AFF-spit-DECL ‘It is sprinking/drizzling’ (i.e. a light rain).

(11.9) umbot-ij ha-pát'-á
rain-SBJ AFF-rain-DECL
'It rained.'

(Literally, 'Rain rained' but without a cognate subject.)

Example (11.10) uses a so-called cognate subject (a nominal form which is morphologically related to the verb form); the cognate subject is optional. Speakers often do not include the overt subject /fíwe/ 'wind' in natural speech.

(11.10) nà-aw-èt (fíw-ij) ha-fíw-á
PROX-day-LOC wind-SBJ AFF-be.windy-DECL
'It is windy today.'

Examples (11.11-11.14) illustrate the second type of intransitive weather predication: where the participant (i.e. the subject) is encoded as 3SG (zero-marked in the realis verb and marked as /-m`/ in the irrealis verb, cf. section 9.4.1). The subject may not be expressed by any overt noun phrase.

(11.11) nà-aw-èt gjá: ha-fáp-á
PROX-day-LOC very AFF-be.angry-DECL
'It is thundering today.'

(Without a personal subject, the interpretation is thunder; with a personal subject, the interpretation is 'be angry'.)

(11.12) kwalla ha-kjakim-á
yesterday AFF-be.cold-DECL
'It was cold yesterday.'

(11.13) nà-aw-èt ha-kar-á
PROX-day-LOC AFF-be. hot-DECL
'It is hot today.'

The verbs 'be cold' (in 11.12) and 'be hot' (in 11.13) can be used in both intransitive and

transitive constructions, with a variety of participants (cf. the discussion of labile verbs in section 11.4).

While the verb ‘be windy’ (11.10) uses a cognate subject, the verb ‘be cloudy’ (11.14) cannot be used with its cognate nominal form /ʃel-é/ ‘cloud’. No overt noun phrase subject is allowed.

(11.14) háts’à ha-ʃél-gà-m-bìʃ-á
 tomorrow AFF-be.cloudy-FUT-3-NPST:AUX-DECL
 ‘It will be cloudy tomorrow.’

(11.15) * ʃel-íʃ ha-ʃél-gà-m-bìʃ-á
 cloud-SBJ AFF-be.cloudy-FUT-3-NPST:AUX-DECL
 Intended: ‘It will be cloudy.’

One more weather-related intransitive example is worth noting. The verb ‘be dark’ is interesting (11.16). In all examples observed thus far, ‘be dark’ requires the nominal ‘night’ when used in a weather predication. The noun phrase ‘night’ may not, however, serve as the subject or even the object (11.17 and 11.18). Instead, the nominal ‘night’ occurs as a bare stem and is morphologically unmarked for case.

(11.16) tolo sáf ha-sa:f-á
 now night AFF-be.dark-DECL
 ‘It is dark now.’

(11.17) * tolo sáf-iʃ ha-sa:f-á
 now night-SBJ AFF-be.dark-DECL

(11.18) * tolo sáf-nà ha-sa:f-á
 now night-OBJ AFF-be.dark-DECL

The construction appears to be intransitive in that there is clearly no object. If the single participant is ‘weather’, what role does the noun phrase ‘night’ play in the construction? If ‘night’ is the participant, why is it not the subject of the construction?

11.1.1.2. Existential

The existential verb requires the intransitive construction. In some languages existential constructions are often (and for good reason) grouped with equative, proper inclusion, locative, attributive, and possessive constructions (which are together sometimes called “non-verbal predications”, cf. Hengeveld 1992).²¹⁴ In Northern Mao, however, the existential construction and the possessive construction, too, for that matter, are separated from the copular constructions (e.g. equative/proper inclusion, locative, and attributive constructions, section 11.1.2) because they always require a verb, regardless of tense. Copular constructions pattern differently, using an irregular copular paradigm, and may use a zero copula when the meaning is present (section 11.1.2).

The first element in the existential construction is the subject, which may be followed by a locative postposition (11.19).

(11.19) *nogdów-ìʃ k'óp-èt ha-bíʃ-ʼá*
lion-SBJ road/path-LOC AFF-EXIST-DECL
‘There is a lion on (the) road.’

For predications of existence which include specific locations, a locative postpositional phrase may be included either before or after the subject. This postpositional phrase may

²¹⁴ The term ‘non-verbal’ is not used for Northern Mao because equative, locative and attributive predications do require one of a set of irregular copular forms and may employ a zero copula, when the meaning is present (cf. section 11.1.2). I call these copular constructions.

(11.20) or may not (11.22) include a relational noun (cf. sections 4.5 and 8.3.2.1).

(11.20) kjat'-sis-et kà:l-ìʃ ha-bíʃ-^lá
house-inside-LOC porridge-SBJ AFF-EXIST-DECL
'There is porridge in the house.'

While most existential constructions do include a location, the existential construction can be used to predicate existence without specifying any location (11.21).

(11.21) aw-ìʃ ha-bíʃ-^lá
God-SBJ AFF-EXIST-DECL
'There is a God.'

11.1.2. Copular Constructions

Three distinct copular constructions are attested in Northern Mao: equative/proper inclusion, locative and attributive. As noted in section 11.1.1.2, existential and possessive predications are sometimes included with equative, proper inclusion, locative and attributive predications, as the set of the so-called “non-verbal” predications. In this grammar, the existential and possessive predications are discussed in sections 11.1.1.2 and 11.2 on the grounds that they are instantiations of the larger verbal intransitive and transitive constructions, respectively. Unlike the copular constructions discussed below, the existential and possessive constructions always require their respective overt verbs: the existential /bíʃ/ or the possessive /k'òt'/ ('have'). Copular constructions, on the other hand, make use of four different verb forms which serve as copular elements: a frozen copula /jà/, a zero copula, the past copula /bitè/ and the irrealis future existential (these are all illustrated throughout the discussion below).

Before examining each of the copular constructions, let me begin by outlining

what these constructions have in common. When the meaning is present, the frozen /jà/ copula²¹⁵ (cf. section 10.3.2) may be used, but no verb is required; a zero copula can be used. In fact, the use of the overt /jà/ copula appears to be quite rare. Outside of constructions with present meaning, however, verbs are required (this is a common pattern, Payne 1997:109). When the meaning is past, the past copula /bitè/ is used. And when the meaning is future, the irrealis future existential verb is used (either the general or certain/immediate future, cf. sections 10.2.3.1 and 10.2.3.2). The copular function of these verbs has been briefly illustrated in section 10.3.2.

Each of the copular constructions always includes a subject. Some pronominal subjects may or may not be expressed by a free pronoun when the meaning is past or future (because verbal marking can be used to indicate the person and number of the subject) but when the meaning is present, the free pronouns are required. This is because the copula /jà/ is frozen and unable to take subject marking. And most typically, there is no copula at all when the meaning is present.

The copular constructions also include predicated material. In the equative and proper inclusion construction, the predicated material is expressed by a noun phrase (a nominal predicate). In the locative predication, the predicated material is expressed by a locative postpositional phrase. In the attributive predication, the predicated material is most typically expressed by a relativized (nominalized) verb (i.e. a derived noun); Northern Mao does not have an adjective class *per se* (cf. section 4.7). In the

²¹⁵ The frozen copula /jà/ is perhaps best analyzed as a non-verb copular on the grounds that it cannot take subject marking or inflect for tense/aspect.

equative/proper inclusion and attributive constructions, the terminal vowel /e/ is found at the right edge of the predicated noun phrase when there is no overt verb, i.e. when the meaning is present and a zero copula is used (cf. section 8.2 for the discussion of the distribution of the terminal vowel). The terminal vowel is not found when the nominal predicate is followed by a verb (as in the past and future forms of the copular construction).

In the discussion below, I will illustrate each of the copular constructions. In order to avoid redundancy, I will discuss and illustrate the specifics of the three copular forms and their morphological patterns only in the equative and proper inclusion predication (section 11.1.2). These patterns obtain for all three types of copular constructions.

11.1.2.1. Equative and Proper Inclusion Predication

In Northern Mao, equative and proper inclusion predications use the same construction. Essentially, equative predications are of the type ‘X (the subject) is Y (the nominal predicate),’ and proper inclusion predications predicate that ‘X (the subject) is a member of the set Y (the nominal predicate)’. Because these two functions are expressed by a single construction, I will only use the term ‘equative’ when referring to the construction itself elsewhere in this grammar.

Examples (11.22-11.25) illustrate the equative construction with present meaning. In (11.22 and 11.23) the /jà/ copula is not used and the terminal vowel is present.

- (11.22) íʃ es-ìʃ tí-ŋ ˈap-è
 DEF person-SBJ 1SG-GEN maternal.uncle-TV
 ‘The man is my (maternal) uncle.’

(11.23) í-té tí-ŋ bà:b-è
 3SG-SBJ 1SG-GEN father-TV
 ‘He is my father.’

Examples (11.24-11.25) illustrate essentially the same construction but with the /jà/ copula.

(11.24) íʃ es-ìʃ tí-ŋ ʼap jà
 DEF person-SBJ 1SG-GEN maternal.uncle be.NPST
 ‘The man is my (maternal) uncle.’

(11.25) í-té tí-ŋ bà:b jà
 3SG-SBJ 1SG-GEN father be.NPST
 ‘He is my father.’

Examples (11.26-11.29) show that the same construction used for equative predication is used for predicating proper inclusion. Again no verb is required if the predication is temporally present in meaning, but the /jà/ copula may be used (11.28-11.29).

(11.26) jéʃ m̀nts’-ìʃ àld-só:nts’-è
 DIST woman-SBJ know:INF-child-TV
 ‘That woman is a student.’

(11.27) í-té hensíl-ʼes-è
 3-SBJ spear-person-TV
 ‘S/he is a soldier.’

(11.28) jéʃ m̀nts’-ìʃ àld-só:nts’ jà
 DIST woman-SBJ know:INF-child be.NPST
 ‘That woman is a student.’

- (11.29) í-té hensíl-[↓]es²¹⁶ jà
 3-SBJ spear-person be.NPST
 ‘S/he is a soldier.’

The past tense of the equative/proper inclusion predication construction requires the past copula /bitè/ (11.30-11.33).

- (11.30) íʃ es-ìʃ tí-ŋ [↓]ap bitè
 DEF person-SBJ 1SG-GEN maternal.uncle be.PST
 ‘The man was my (maternal) uncle.’

- (11.31) í-té tí-ŋ bà:b bitè
 3SG-SBJ 1SG-GEN father be.PST
 ‘He was my father.’

- (11.32) jéʃ m̀nts’-ìʃ àld-só:nts’ bitè
 DIST woman-SBJ know:INF-child be.PST
 ‘That woman was a student.’

- (11.33) í-té hensíl-[↓]es bitè
 3-SBJ spear-person be.PST
 ‘S/he was a soldier.’

The past copula /bitè/, in the final verb position, cannot itself be inflected for person or number of the subject; but it is possible to express person and number of the subject via a relativized existential (a related form, cf. sections 10.3.1 and 10.3.2) positioned immediately before the frozen /bitè/ copula (cf. example 10.69 and 10.72, as well as examples 11.34-11.35, below).

²¹⁶ This is an interesting compound in terms of tone and deserves mention. The noun-noun construction appears to be an associative construction (cf. section 4.4.1). However, associative constructions don’t normally allow downstep to occur, even in environments which would exhibit downstep in other constructions. Yet, I’ve checked and rechecked this word with speakers and it always involves the downstep. This is the only example I’ve found with a downstep in an associative construction.

(11.34) múts'à tí-bí-t hère-èt
 Muts'a 1SG-EXIST-REL time-LOC

p'ijf tí-bí-t bitè
 child 1SG-EXIST-REL be.PST
 'At the time I was in Muts'a, I was a child.'

(11.35) àld-mé:nt-es-wol-ijf nà-àt
 know:INF-tell:INF-person-PL-SBJ here-LOC

bíj-and-t bitè
 EXIST-NSG-REL be.PST
 'Teachers were here.'

The future meaning of the equative/proper inclusion predication construction is usually expressed with the irrealis general future verb (cf. section 10.2.3.1). Some speakers occasionally use the irrealis certain/immediate future verb for future copular constructions (cf. section 10.2.3.2).

(11.36) íj es-ijf fek
 DEF person-SBJ Sheikh

ha-bíj-gà-m-bìj-á
 AFF-EXIST-FUT-3-NPST:AUX-DECL
 'The man will be a Sheikh.'

(11.37) í-té tí-ŋ ʔma:gèw
 3SG-SBJ 1SG-GEN friend

ha-bíj-gà-m-bìj-á
 AFF-EXIST-FUT-3-NPST:AUX-DECL
 'He will be my friend.'

(11.38) jéʃ m̀nts'-ìʃ àld-sónts'
 DIST woman-SBJ know:INF-child

ha-bíʃ-gà-m-bìʃ-á
 AFF-EXIST-FUT-3-NPST:AUX-DECL
 'That woman will be a student.'

(11.39) í-té hensíl-↓es ha-bíʃ-gà-m-n-á
 3-SBJ spear-person AFF-EXIST-FUT-3-NPST:AUX-DECL
 'S/he will be a soldier.'

11.1.2.2. Locative Predication

The copular construction can be used to predicate location as well. Locative predication ususally includes a postpositional phrase marked with the postposition /-et(a)/ LOC (cf. section 8.3.2.1).²¹⁷ Examples (11.40-11.42) illustrate the present form of the construction. In (11.42), the non-past copula /jà/ is used rather than a zero.

(11.40) tí-ŋ ʔp'íʃ-ìʃ kjat'-ètà
 1SG-GEN child-SBJ house-LOC
 'My child is in (the) house.'

(11.41) múʃùl-ìʃ²¹⁸ kjat'-kez-ètà
 roof.point-SBJ house-top-LOC
 'A roof point is on the top of (the) house.'

(11.42) tí-ŋ ʔp'íʃ-ìʃ kjat'-èt jà
 1SG-GEN child-SBJ house-LOC be.NPST
 'My child is at home.'

²¹⁷ The postpositional phrase may or may not contain a relational noun (cf. section 4.5). There is no relational noun in example (11.40). The noun 'top' in (11.41) is a relational noun.

²¹⁸ A /múʃùlè/ is a beam which rises up through the center of a Mao round house and protrudes up several feet up above the roof. I have called this a 'roof point'.

Examples (11.43-11.44) illustrate the past form of the locative predication.

(11.43) kwalla tí-ŋ ʔp'íʃ-ìʃ kjat'-èt bitè
yesterday 1SG-GEN child-SBJ house-LOC be.PST
'My child was in (the) house yesterday.'

(11.44) múʃùl-ìʃ kjat'-kez-èt bitè
roof.point-SBJ house-top-LOC be.PST
'A roof point was on the top of (the) house.'

Examples (11.45-11.46) illustrate the future form of the locative predication.

(11.45) háts'à tí-ŋ ʔp'íʃ-ìʃ kjat'-èt
tomorrow 1SG-GEN child-SBJ house-LOC

ha-bíʃ-gà-m-bìʃ-á
AFF-EXIST-FUT-3-NPST:AUX-DECL
'My child will be in (the) house tomorrow.'

(11.46) múʃùl-ìʃ kjat'-kez-èt
roof.point-SBJ house-top-LOC

ha-bíʃ-gà-m-bìʃ-á
AFF-EXIST-FUT-3-NPST:AUX-DECL
'A roof point will be on the top of (the) house.'

11.1.2.3. Attributive Predication

The predication of attributive qualities (such as age, dimension, value or color) is also handled by a copular construction. Rather than adjectives,²¹⁹ the so-called attributive predication construction uses infinitive or relativized verb stems, both of which are

²¹⁹ I have not been able to identify a syntactic class of adjectives in Northern Mao.

nominalizations (cf. sections 4.1, 4.6.2 and 4.7), to express the attributive quality in a copular construction. In the examples below, I include one example of each (the infinitive and the relative verb).

Examples (11.47-11.48) illustrate the present form of the attributive predication construction. As was the case with the equative/proper inclusion examples, the terminal vowel shows up on the clause-final noun phrase (cf. section 8.2 as well as examples 11.26 and 11.28, above).

(11.47) hì-ŋ war-kuw-ìʃ k'ò:m-kuw-e
 2SG-GEN clothing-DU-SBJ be.old:INF-DU-TV
 ‘Your (SG) two pieces of clothing are old ones.’

(11.48) íʃ mùnts'-ìʃ kwats'-ít-è
 DEF woman-SBJ be.tall:INF-REL-TV
 ‘The woman is tall.’

Example (11.49) illustrates the use of the copula /jà/ in the present form of the attributive predication construction. No difference in meaning between (11.48) and (11.49) has been reported.

(11.49) íʃ mùnts'-ìʃ kwats'-ít jà
 DEF woman-SBJ be.tall:INF-REL be.NPST
 ‘The woman is tall.’

Examples (11.50-11.51) illustrate the use of /bitè/ to indicate past meaning in the attributive predication construction.

(11.50) hì-ŋ war-kuw-ìʃ k'ò:m-kuw bitè
 2SG-GEN clothing-DU-SBJ be.old:INF-DU be.PST
 ‘Your (SG) two pieces of clothing were old ones.’

(11.51) íʃ m̀nts'-ìʃ g̀:nt bitè
 DEF woman-SBJ be.richINF-REL be.PST
 'The woman was rich.'

Examples (11.52-11.53) illustrate the expression of future in the attributive predication construction.

(11.52) hì-ŋ war-kuw-ìʃ k'om-kuw
 2SG-GEN clothing-DU-SBJ be.old:INF-DU

 ha-bíʃ-g̀-à-m-bìʃ-á
 AFF-EXIST-FUT-3-NPST:AUX-DECL
 'Your (SG) two pieces of clothing will be old ones.'

(11.53) íʃ pa:lt'-ìʃ kwats'-ít
 DEF girl-SBJ be.tall:INF-REL

 ha-bíʃ-g̀-à-m-bìʃ-á
 AFF-EXIST-FUT-3-NPST:AUX-DECL
 'The girl will be tall.'

11.1.3. The Cleft Construction

Northern Mao's cleft construction is based on the copular construction (section 11.1.2) but the arguments of the construction are in reverse order. While we find the order subject...predicate in the copular construction, the order predicate...subject is found in the cleft construction. The predicated element (in first position) is the clefted element and is followed by one of the copular forms (i.e. either a zero copula or /jà/ for present meaning, /bitè/ for past meaning, or the future existential verb for future meaning). The subject of the cleft construction is a relativized (nominalized) verb which takes the subject case marker as well as the terminal vowel (cf. section 8.2).

Examples (11.54-11.56) illustrate a simple cleft construction with present meaning (i.e. no copula) (11.54), with past meaning (11.55), and with future meaning (11.56).

Cleft Construction: Present Meaning

(11.54) p'iʃ-e ki-t-iʃ-é
child-TV come:INF-REL-SBJ-TV
'It is a child who came.'

Cleft Construction: Past Meaning

(11.55) p'iʃ bitè ki-t-iʃ-é
child be.PST come:INF-REL-SBJ-TV
'It was a child who came.'

Cleft Construction: Future Meaning

(11.56) p'iʃ ha-bíʃ-gà-m-bìʃ-á
child AFF-EXIST-FUT-3-NPST:AUX-DECL

kí-gàm-t-iʃ-é
come-FUT-REL-SBJ-TV
'It will be a child who will come.'

Examples (11.57-11.59) illustrate copular constructional counterparts to the cleft constructions in (11.54-11.56).

Present Meaning

(11.57) ki-t-iʃ p'iʃ-e
come:INF-REL-SBJ child-TV
'Who came is a child.'

Past Meaning

- (11.58) ki-t-ìʃ p'íʃ bitè
 come:INF-REL-SBJ child be.PST
 ‘Who came was a child.’

Future Meaning

- (11.59) kí-gàm-t-ìʃ p'íʃ
 come:INF-REL-SBJ child

 ha-bíʃ-gà-m-bìʃ-á
 AFF-EXIST-FUT-3-NPST:AUX-DECL
 ‘Who will come will be a child.’

In short, then, the cleft construction is a copular construction where the predicate (the cleft) is in the utterance-initial position and the subject has been dislocated to the end of the utterance (11.54-11.55). This utterance-final (or clause-final) position triggers the appearance of the terminal vowel, which surfaces after the subject case marker (cf. section 8.3.3).²²⁰

Regardless of the complexity of the subject and predicate, the basic pattern in (11.54-11.56) holds. Examples (11.60) and (11.61) illustrate embedding in both the predicate and subject elements. In the predicate of (11.60) the genitive-marked pronoun modifies (i.e. determines) the noun phrase ‘friend’ and the full predicate noun phrase exhibits the terminal vowel when no copula is present (i.e. when the noun phrase is at the end of the predicate--i.e. the end of the main clause, cf. section 8.2). The relative clause which serves as the subject of the main clause is a relativization on the object ‘my friend’ and contains the subject of the relativized verb (marked as such) within the relative clause.

²²⁰ In section 8.2, footnote 140, I briefly discuss the only exception to the appearance of the terminal vowel after the subject case marker on the relativized verb (cf. example 5.18 in section 5.4.1).

Predicate

(11.60) [[tí-ŋ] ma:gèw-è]
1SG-GEN friend-TV

Subject

[[íʃ es-ìʃ] hí-héz-t-ìʃ-é]
DEF person-SBJ 3SG-come-REL-SBJ-TV
'It is my friend who(m) the person hit.'

Predicate

(11.61) [[tí-ŋ] ma:gèw bitè]
1SG-GEN friend be.PST

Subject

[[íʃ es-ìʃ] hí-héz-t-ìʃ-é]
DEF person-SBJ 3SG-come-REL-SBJ-TV
'It was my friend who(m) the person hit.'

More complicated cleft structures are illustrated in section 8.2, where the distribution of the terminal vowel is discussed.

11.1.4. The Comparative Constructions

Northern Mao has three comparative constructions: one which predicates two elements as equivalent with respect to a quality (the equivalent comparative construction) and two different syntactic constructions which predicate one element as having more of a quality than the other element (the non-equivalent comparative constructions). All three constructions exhibit the order Standard-Marker-Quality.

Examples (11.62-11.63) illustrate the equivalent comparative construction. This construction is based on the attributive predication (i.e copular construction, section 11.1.2.3) but exhibits important morpho-syntactic differences as well.

In the equivalent comparative construction, the “standard” noun phrase occurs in citation form (with the terminal vowel) and may be followed by the marker ‘like’.²²¹ The quality is expressed by a relativized verb.

	Standard	Marker	Quality
(11.62)	àm-né-l-ìʃ	tí-jé	bané kwáts’-ìt-è
	Amnella-SBJ	1SG-TV	like be.tall:INF-REL-TV
	‘Amnella is as tall as me.’		

The equivalent comparative construction may also be formed without the marker /bané/ ‘like’, as in (11.63 and 11.64). In this case, the terminal vowel on the standard noun phrase could be analyzed as an equivalent marker, itself.²²²

	Standard-Marker	Quality
(11.63)	àm-né-l-ìʃ	tí-jé kwáts’-ìt-è
	Amnella-SBJ	1SG-TV be.tall:INF-REL-TV
	‘Amnella is as tall as me.’	
(11.64)	àm-né-l-ìʃ	tí-jé kwáts’-ìt bitè
	Amnella-SBJ	1SG-TV be.tall:INF-REL be.PST
	‘Amnella was as tall as me.’	
	(Implies: ‘But now, I am taller.’)	

Non-equivalent comparative constructions can be formed in two different ways.

The first way uses a structure very similar to the equivalent comparative construction but

²²¹ The use of the terminal vowel on a noun phrase which is not at the end of a clause/utterance is a very marked pattern in Northern Mao (cf. the discussion of the terminal vowel in comparative constructions in section 8.2).

²²² Compare (11.63) to (11.65), where the standard in the corresponding non-equivalent comparative construction is marked with /-na/, the same morphological shape as the object case marker (cf. section 8.3.1.2).

with the marker /-na/ (on the standard noun phrase) showing that the subject of the construction exhibits more of the quality than the standard (11.65-11.66).

(11.65) kan-íʃ àndúr-ná kè̃m-ít-è
dog-SBJ cat-OBJ be.big:INF-REL-TV
‘The dog is bigger than the cat.’

(11.66) àmnél-ìʃ tí-ná kwàts’-ìt-è
Amnella-SBJ 1SG-OBJ be.tall:INF-REL-PRED
‘Amnella is taller than me.’

The marker /-na/ is very likely cognate with the object case marker (cf. section 8.3.1.2), but its function here is clearly not marking a syntactic object, given that the construction involves the larger intransitive copular construction.

Examples (11.67-11.68) illustrate the other means of expressing affirmative non-equivalent comparisons. In this construction, the locative postposition /-et/ serves as the marker on the standard noun phrase and the quality is expressed by a finite stative verb, as opposed to a relativized verb (as in 11.65 and 11.66).

(11.67) kan-íʃ àndúr-ét ha-kè̃m-á
dog-SBJ cat-LOC DECL-be.big-RL
‘The dog is bigger than the cat.’

(11.68) àmnél-ìʃ tí-jét ha-kwàts’-á
Amnella-SBJ 1SG-LOC AFF-be.tall-DECL
‘Amnella is taller than me.’

I have not found any evidence to suggest that there is a difference in meaning between the two non-equivalent comparative constructions.

11.2. The Transitive Construction

The Northern Mao transitive construction has a valence of two: requiring a grammatical subject and object. The valence for all transitive constructions is 2. The most frequent word order is subject-object-verb (SOV), though other orders are attested in certain pragmatic environments (see, for example, 11.72).

Any overt noun phrase subject is obligatorily marked with the /-iʃ/ subject marker (or one of its allomorphs, cf. section 8.3.1.1), and the verb is also marked with the corresponding bound pronominal marker (cf. section 9.4.1). The object is optionally marked with the /-na/ object case marker (or one of its allomorphs, cf. section 8.3.1.2).

Examples (11.69-11.71) below show both subject and object marking in the transitive construction. Pronominal subjects are only expressed with free pronouns when emphasis or some sort of focus is called for.

(11.69) lèlí-iʃ rám(-nà) ha-héz-[↓]á
Lelija-SBJ Rama-OBJ AFF-hit-DECL
'Lelija hit Rama.'

(11.70) múnts'-iʃ ʃó:ʃ(-nà) ha-pí-[↓]á
woman-SBJ snake-OBJ AFF-kill-DECL
'A woman killed a snake.'

(11.71) (tí-ʃ) hì(-nà) ha-tí-héz-[↓]á
1SG-SBJ 2SG-OBJ AFF-1SG-hit-DECL
'I hit you (SG).'

The examples above show the object case marker is optional (i.e. when the constituent order is SOV). The object case marker is required, however, when the object

precedes the subject (as occurs when the object is highly topical or under contrastive focus--marked below with bolded text) (cf. section 8.3.1.2).

(11.72) rá:m-nà lèlí-ìʃ ha-héz-^lá
 Rama-OBJ Lelija-NOM AFF-hit-DECL
 ‘Lelija hit **Rama**.’

(11.73) ʃó:ʃ-nà múnts’-ìʃ ha-pí-^lá
 snake-OBJ woman-SBJ AFF-kill-DECL
 ‘A woman killed a **snake**..’

Generally speaking, adverbial elements can be positioned before or after the subject, though before the subject appears to be most frequent. Adverbial elements have not been found separating the object from the verb,²²³ however, except when the object is in the first, most topical, position.

(11.74) kwalla múnts’-ìʃ ʃó:ʃ(-nà) ha-pí-^lá
 yesterday woman-SBJ snake-OBJ AFF-kill-DECL
 ‘A woman killed a snake yesterday.’

(11.75) múnts’-ìʃ kwalla ʃó:ʃ(-nà) ha-pí-^lá
 woman-SBJ yesterday snake-OBJ AFF-kill-DECL
 ‘A woman killed a snake yesterday.’

While there are two participants in every instance of the transitive construction (i.e. every construct), in some cases, with some verbs, the grammatical object is not always overtly included but only semantically implied. Perhaps a clear example is the verb ‘eat.’ In many languages, the verb can be used without specifically making mention

²²³ I have not explored native speakers’ grammaticality judgments regarding clauses where the object and verb have been separated by an adverbial.

of the particular food one is eating. Of course one could eat things other than food, but to not specify the object seems to imply the general notion ‘food.’ Interestingly, there are in fact four verbs for ‘eat’ in Northern Mao: /ak/ for eating meat, /pà:l/ for eating corn flour, a traveling food and snack, /k’á:j/ for eating crunchy things like k’olo, roasted barley, and /mí/ for eating staples like porridge /kà:lè/ or injera (a sourdough flatbread) and as a general term for all eating. The verb /mí/ is used when the type of food is unknown (as when questioning the object) or simply not pragmatically important. This verb is also used in the question ‘Have you eaten?’ /hì-mi-ti-à:/ 2SG-eat-PF-INTR. The object is not syntactically overt but, of course, some notion of food is implied, clearly. In this grammar, I consider this type of construct, where a transitive verb is used without its object (but with the implication of the object) as still within the range of a transitive construction. My inclusion of constructs like ‘eat’ without an object as transitive is relevant to two other analogous constructions.

As discussed in section 8.3.4, semantic goals in movement predications with the verb ‘go’ appear to be grammatical objects; they are marked with /-na/ (11.76).²²⁴

(11.76) bàmbàs(-ná) ha-tí-hów-^lá
 Bambassi-OBJ AFF-1SG-go-DECL
 ‘I went to Bambassi.’

The goal is not always present, but of course some location is at least typically implied with movement verbs (as in 11.77) and is very often identifiable from the discourse context itself.

²²⁴ Dimmendaal (2003:100) notes the prevalence of movement verbs in transitive constructions in Cushitic and Omotic languages (cf. section 8.3.4).

(11.77) kwalla ha-tí-hów-[↓]á
yesterday AFF-1SG-go-DECL
'I went (somewhere) yesterday.'

As goals-as-objects are discussed in detail in section 8.3.4, I will refrain from further comment here. But the issue of transitive constructions with objects which do not have to be syntactically realized does bear relevance to section 11.2.1, below.

11.2.1. Emotion Verb Constructions (Experiencer + Stimulus)

The predication of emotion typically involves a particular sub-type of the transitive construction. While the prototypical transitive construction (illustrated above in examples 11.69-11.75) involves a semantic agent acting on a semantic patient, the predication of emotion in Northern Mao frequently involves a semantic experiencer (mapped to the subject) and a semantic stimulus (mapped to the object). The predications of 'fear,' 'love (non-romantic),' 'love (romantic),' 'anger' and 'sadness' use the transitive construction.

Examples (11.78-11.79) illustrate the verb 'fear' with the object (the stimulus).

(11.78) nogdów(-nà) ha-tí-íns-[↓]á
lion-OBJ AFF-1SG-fear-DECL
'I am afraid of lions.'
(Literally: 'I fear a lion.')

(11.79) jéʃ nogdow(-nà) ha-tí-íns-[↓]á
DIST lion-OBJ AFF-1SG-fear-DECL
'I am afraid of that lion.'
(Speaking of a lion which had been seen in the area.)

In example (11.78), the 'lion' is non-specific. In (11.79), however, the speaker is thinking of a lion that has been reported in the area and about which many have been talking.

It is not always necessary, however, to include the semantic stimulus as an object in the construction. In example (11.80), for instance, the object (stimulus) of the speaker's fear is not included in the construction. But there appears to be an implication that something has caused the fear.

- (11.80) (tí-ʃ) ha-tí-íns-^lá
 1SG-SBJ AFF-1SG-fear-DECL
 'I am afraid (of something).'

Speakers have suggested that if the stimulus is not reported, it is natural to ask why one is afraid. Perhaps, example (11.80) is not really intransitive even though only one argument is overtly present in the construction. There are, however, clear examples where a verb may be used in either intransitive or transitive constructions (see section 11.4, below). Clearly, transitive constructions involving verbs like 'go' or 'eat' also at times do not include the object (cf. section 8.3.4). But the implication of the object (patient) is clear.

Examples (11.81-11.82) show the verbs for 'love' (non-romantic and romantic) in transitive constructions.

- (11.81) múnts'-ìʃ p'ìʃ(-na) ha-ka:m-á
 womanSBJ child-OBJ AFF-love-DECL
 'A woman loves a child.' (i.e. non-romantic love)

- (11.82) múnts'-ìʃ tí(-ná) ha-bàs-á
 womanSBJ 1SG-OBJ AFF-love-DECL
 'A woman loves me.' (i.e. romantic love)

I have not encountered the verbs for 'love' apart from clear transitive constructions with overt objects.

Examples (11.83-11.84) illustrate the verb for anger, which can be rendered into English as ‘be angry with,’ or ‘be angry that.’

- (11.83) tí-ŋ ma:gèw(-nà) ha-tí-ʃóp-¹á
 1SG-GEN friend-OBJ AFF-1SG-angry-DECL
 ‘I am angry with my friend.’
 (Literally: ‘I angry my friend.’)

- (11.84) í-té ha-j-kí-t(-nà) ha-tí-ʃóp-¹á
 3-SBJ AFF-3-come-REL-OBJ AFF-1SG-angry-DECL
 ‘I am angry that s/he came.’

The same verb, with no morphological marking to decrease the valence of the construction, can be used without specifying the stimulus which triggered the anger (11.85).

- (11.85) (tí-ʃ) ha-tí-ʃóp-¹á
 1SG-SBJ AFF-1SG-angry-DECL
 ‘I am angry (with someone/for some reason).’

As with the verb ‘fear’ (in example 11.81, above), the verb for anger appears to imply a stimulus, according to what my consultants have reported.

Examples (11.86-11.87) illustrate the verb for predicating sadness. This verb can be rendered into English as ‘be sad about.’ In (11.86), the verb’s object is overt (and is in initial position, requiring that the object case marker occur on the end of the whole clausal object complement). In (11.87), no overt object is included.

- (11.86) [bà:b-íʃ ha-j-hék’-ìt-nà] p’íʃ-íʃ ha-ha:p-á
 father-SBJ AFF-3-die-REL-OBJ child-SBJ AFF-sad-DECL
 ‘A child is sad that (his/her) father died.’

(11.87) (í-té) ha-ha:p-á
 3-SBJ AFF-sad-DECL
 ‘S/he is sad (about something).’

Of the emotion verbs I have encountered thus far, only the verb for predicating happiness (the compound verb /ha-é:ŋ-^lmaŋk’-á/, cf. section 9.8.3) appears to function just in an intransitive construction (11.88-11.90).

(11.88) íŋ es-ìŋ ha-é:ŋ-^lmaŋk’-á
 DEF person-SBJ AFF-take.heart-be.sweet-DECL
 ‘The person is happy.’

With this verb, the stimulus can be expressed through an adverbial reason clause (cf. section 13.4.1) (as in example 11.89). However, unlike the other emotion predications discussed above, the stimulus cannot be expressed via a transitive construction (11.90). Perhaps the prohibition of a transitive construction for this particular verb has to do with the verb’s own history as a complex (compounded) word, where two intransitive verbs ‘take heart’ and ‘be sweet’ have been joined, creating the verb ‘be happy’ today (cf. section 9.8.3).

(11.89) íŋ-ìŋ m̀unts’-ìŋ p’íŋ-na hí-p’íŋ-ìt
 3SG-GEN woman-SBJ child-OBJ 3SG-give.birth-REL

ar-et íŋ es-ìŋ ha-é:ŋ-^lmaŋk’-á
 reason-LOC DEF person-SBJ AFF-take.heart-be.sweet-DECL
 ‘Because his wife had a child, the man is happy.’

(11.90) * íŋ es-ìŋ p’íŋ-na ha-é:ŋ-^lmaŋk’-á
 DEF person-SBJ child-OBJ AFF-take.heart-be.sweet-DECL
 Intended: ‘The person is happy about/because of a child.’

11.2.2. The Possessive Construction

As noted in the introduction to section 11.2, the verbal predication of possession (i.e. of the type ‘John has a pencil’) is expressed via the transitive construction in Northern Mao. That is, the so-called possessive construction does not pattern structurally with the copular constructions such as equative, locative or attributive predications (as is sometimes the case in other languages, cf. Hengeveld 1992).

Northern Mao has a possession verb ‘have’ which is always used with the transitive construction and which can be fully inflected. Examples (11.91) and (11.92) exhibit the predication of possession through the transitive construction.

(11.91) tí-ʃ ʃapków(-nà) ha-tí-kòt’-á
 1SG-SBJ shoe-OBJ AFF-1SG-have-DECL
 ‘I have a shoe.’

(11.92) so:nts’-wol-iʃ nà ʃapkow-ol(-la)
 child-PL-SBJ PROX shoe-PL-OBJ

 ha-kòt’-and-á
 AFF-have-NSG-DECL
 ‘Children have these shoes.’

11.3. Ditransitive Constructions

The Northern Mao ditransitive construction can be defined as a transitive construction with a valence of three arguments, including a semantic agent, which serves as the subject, and two objects (a theme and a recipient). The order of arguments is subject-object₁-object₂-verb. In Northern Mao, only the verb /tà/ ‘give’ can function in a

ditransitive construction without undergoing a valence increasing operation.²²⁵

The ditransitive construction employs a double-object marking system. The theme and recipient may be found in either order; perhaps their relative ordering is pragmatically determined. The first object (object₁) is obligatorily marked for object case while the case marking of object₂ appears to be optional (just like canonically-positioned objects in the transitive construction, section 11.2). Thus, each object, whether the semantic recipient or the semantic theme, follows the same pattern in terms of word-order and morphological marking (i.e. there is a coherent object category which includes both objects of ditransitives).

Interpretation of which object is recipient and which is theme is achieved by reference to animacy and humanness, where the recipient is generally expected to be animate and most typically human. Examples (11.93) and (11.94) illustrate essentially the same sentence but with the order of the theme and recipient reversed. In each example, though, the first object is obligatorily marked with the object case marker /-na/ while the second object is optionally marked for object case.

	Agent	Recipient	Theme	
(11.93)	háts'à tomorrow	(tí-f) 1SG-SBJ	íʃ-nà 3SG-OBJ	ʃapków(-nà) shoe-OBJ

tà-gà-t-bíʃ-á
give-FUT-1SG-NPST:AUX-DECL
'I will give him/her shoes tomorrow.'

²²⁵ It is possible to increase the valence from a transitive to a ditransitive through the use of an applicative or either of the two causatives (cf. sections 9.7.2 and 12.4).

	Agent	Theme	Recipient
(11.94)	háts'à tomorrow	(tí-ʃ) shoe-OBJ	ʃapków-nà 3SG-OBJ

tà-gà-t-bíʃ-á
give-FUT-1SG-NPST:AUX-DECL
'I will give him/her shoes tomorrow.'

The same pattern is observable between examples (11.95) and (11.96). In these examples the recipient is the proper noun /rámà/ (a male name).

	Agent	Recipient	Theme
(11.95)	tí-ŋ 1SG-GEN	ma:gèw-ìʃ friend-SBJ	rám-nà Rama-OBJ
			ìim.nók-wol(-la) bovine.female-PL-OBJ

ha-tà-á
AFF-give-DECL
'My friend gave Rama cows.'

	Agent	Theme	Recipient
(11.96)	tí-ŋ 1SG-GEN	ma:gèw-ìʃ friend-SBJ	ìim.nók-wol-la bovine.female-PL-OBJ
			rám(-nà) Rama-OBJ

ha-tà-á
AFF-give-DECL
'My friend gave Rama cows.'

In examples (11.97) and (11.98) we can see that the potential for order reversal and the requirement of case marking on the first object obtains without respect to definiteness. Thus, it appears that the differential object marking has to do with the first and second position rather than some semantic or pragmatic feature of the object itself.

	Recipient	Theme	
(11.97)	íʃ p'íʃ-nà	ko:ʃ-mìs(-nà)	ha-tí-tà-á
	DEF child-OBJ	play:INF-thing-OBJ	AFF-1SG-give-DECL
	'I gave the child a toy.'		

	Theme	Recipient	
(11.98)	ko:ʃ-mìs-nà	íʃ p'íʃ(-nà)	ha-tí-tà-á
	play:INF-thing-OBJ	DEF child-OBJ	AFF-1SG-give-DECL
	'I gave the child a toy.'		

So, we can see from (11.93-11.98) that the first object (regardless of its semantic role or definite status), is marked with object case. The object₁ case marking requirement is further supported by ungrammaticality judgments if no object marking was included on the first object (for examples 11.99-11.101) and the fact that in some instances, when the object case marker is left off the first object, the two object noun phrases may be interpreted as parts of a single possessive construction (cf. section 4.4.3)--examples (11.101-11.102) illustrate the possessive construction interpretation.

	Agent	Theme	Recipient	
(11.99) *	(tí-ʃ)	ma:lt'	kan-ná	ha-tí-tà-á
	1SG-SBJ	bone	dog-OBJ	AFF-1SG-give-DECL

	Agent	Theme	Recipient	
(11.100) *	(tí-ʃ)	ma:lt'	kan	ha-tí-tà-á
	1SG-SBJ	bone	dog	AFF-1SG-give-DECL

	Agent	Theme	
(11.101)	(tí-ʃ)	[kan ma:lt']-nà	ha-tí-tà-á
	1SG-SBJ	dog bone-OBJ	AFF-1SG-give-DECL
	'I gave a dog's bone (to someone).'		

	Agent	Theme	
(11.102)	(tí-f)	[kan ma:lt']	ha-tí-tà-á
	1SG-SBJ	dog bone	AFF-1SG-give-DECL
		'I gave a dog's bone (to someone).'	

Examples (11.101-11.102) show that the string /kan ma:lt'/ is interpreted as a possessive construction (cf. section 4.4.3), where the first animate noun is a possessor and the second is the possessum. As the possessive construction requires an animate noun in the possessor position, so a similar reading of examples (11.99) and (11.101) is not possible. To further complicate the matter, downstep phenomena can occur within the possessive construction but not in the same manner between two noun phrase objects. So, only in very limited instances is a phenomenon like the possessive reading of (11.101-11.102) even possible. But the fact that it is possible, in some instances, may help to explain how the case marking requirement came to be on the first object but not the second. The possessor noun cannot take any case marker in the possessive construction and so the presence of the object case renders a possessive reading of the two objects impossible in the ditransitive construction.

The utterances in (11.99-11.100) are judged grammatical when the first object is marked for case, regardless of the marking of the second object (11.103). And the possessive reading of (11.101-11.102) is prevented in the properly marked ditransitive in example (11.104).

	Agent	Theme	Recipient
(11.103)	(tí-f)	ma:lt'-nà	kan(-ná) ha-tí-tà-á
	1SG-SBJ	bone-OBJ	dog-OBJ AFF-1SG-give-DECL
		'I gave a bone to a dog.'	

	Agent	Recipient	Theme	
(11.104)	(tí-f)	kan-ná	ma:lt'(-nà)	ha-tí-tà-á
	1SG-SBJ	dog-OBJ	bone-OBJ	AFF-1SG-give-DECL
	'I gave a bone to a dog.'			

In instances where only one object is animate or human, interpretation of what is theme and what is recipient appears to be unambiguous (as in the examples 11.93-11.104). However, where two animate objects are found, the interpretation is not clear and either object may be interpreted as the theme or recipient (11.105-11.106).

(11.105)	(tí-f)	ʃó:f-ná	àndúr	tí-tà-á
	1SG-SBJ	snake-OBJ	cat	1SG-give-DECL
	'I gave a snake to a cat. / I gave a cat to a snake.'			

(11.106)	(tí-f)	àndúr-ná	ʃó:f-ná	tí-tà-á
	1SG-SBJ	cat-OBJ	snake-OBJ	1SG-give-DECL
	'I gave a cat to a snake. / I gave a snake to a cat.'			

Since both theme-recipient and recipient-theme orders commonly occur, interpretation in these double-object / double-animate situations requires context to disambiguate. When the meaning of (11.105) or (11.106) is questioned, it becomes apparent that the interpretation of recipient-theme order is also possible. Speakers regard all these sorts of double-animate ditransitives as confusing.²²⁶

11.4. Labile Verbs, Valence, and Transitivity

While most Northern Mao verbs are only attested in intransitive or transitive constructions (and not in both construction types, unless having undergone some valence-

²²⁶ No examples of two inanimate objects have yet been found. It may be that this is simply not possible in Northern Mao or perhaps that they are so rare that they have not yet been encountered in natural speech.

changing operation, cf. section 9.7), some verbs can be used in both intransitive and transitive constructions with no additional morphological marking. I use the term *labile* for verbs that can be used in either intransitive or transitive constructions, without valence-changing morphology. While I have, by no means, tested all verbs for such variable valence phenomena, I have identified the set of verbs in Table 11.1 as labile.

Table 11.1. A Sampling of Labile Verbs

		Intransitive Construction: Semantic Roles of Participants			Transitive Construction: Semantic Roles of Participants			
		Patient or Theme	Experiencer	Non-Referential 3SG (weather)	Instrument _[SBJ] + Patient or Theme _[OBJ]	Theme _[SBJ] + Locative _[OBJ]	Agent _[SBJ] + Patient or Theme _[OBJ]	Non-Referential 3SG _[SBJ] + Experiencer _[OBJ]
“Middle”	ts’ak	‘break’	+		+		+	
	k’o:s	‘change’	+			+	+	
	kump	‘shatter’	+			+	+	
	wè:ŋk’	‘open’	+				+	
“Experiencer”	ʃil	‘be.tired’ ‘make.tired’		+				+
	nik	‘be.hungry’ ‘make.hungry’		+				+
	kjakim	‘be.cold’ ‘make.cold’	+	+	+			+
	kar	‘be.hot’ ‘make.hot’	+		+		+	+

Let me begin by briefly explaining the meaning of the semantic roles which appear at the top of Table 11.1. I use patient for participants which are acted upon by some sort of cause (an agent or instrument) and undergo a change of state, and I use theme for non-agent participants which are not directly acted upon. This distinction does not appear to be relevant to grammatical relations (i.e. patients and themes are mapped similarly into the same grammatical relations--the only exception being that a theme can

serve as the subject of a transitive construction while patients do not, at least not in the available data).

Experiencers are human participants which experience an event as happening to them. The non-referential 3rd person is used for any sort of non-specified subject, including weather predications and impersonal predications; non-referential subjects are not indicated by overt noun phrases--they are marked as 3rd person on the verb, with a paradigmatic zero (cf. section 9.4.1). Agent is used for volitional participants (i.e. as causers of the event). Instrument is used for an inanimate participant which acts essentially as an agent (i.e. construed as a cause of an event).

The labile verbs in Table 11.1 fall into two basic types: those which take a patient or theme subject when used in an intransitive construction and an agent subject with a patient or theme object in a transitive construction (here called “Middle” verbs);²²⁷ and those which can take experiencer objects in transitive constructions (here called “Experiencer” verbs). The experiencer verbs can be further divided into those which always require a semantic experiencer (either as a subject in the intransitive or as an object in the transitive), and those which can take a variety of semantic roles as subject in intransitive constructions but which, when the subject is a non-referential 3rd person, take an experiencer object in transitive constructions.

I will illustrate the so-called middle verbs first. Examples (11.107-11.108) illustrate the verb ‘break’ in a transitive construction and then in an intransitive

²²⁷ There are other possible configurations as well (such as instrumental subjects with patient or theme objects or theme subjects with locative objects), but the two configurations I mention in the text above are attested with all the “middle” verbs; the others (mentioned in this footnote and also in Table 11.1) are not.

construction, with no verbal marking to indicate the change in valence.

- Agent Patient
(11.107) tí-ʃ dóŋ-nà ha-tí-ts'ak-á
1SG-SBJ stool-OBJ AFF-1SG-break-DECL
'I broke a (three-legged) stool.'

- Patient
(11.108) dóŋ-ìʃ ha-tí-ts'ak-á
stool-SBJ AFF-1SG-break-DECL
'A stool broke.'

Examples (11.109-11.110) illustrate the verb 'break' with the passive suffix. In (11.110), the agent is expressed with an instrument postpositional phrase. It is not possible to include an agent in the intransitive construction with 'break' when there is no passive marker (11.111).

- Patient
(11.109) dóŋ-ìʃ ha-ts'ak-ek'-á
stool-SBJ AFF-break-PASS-DECL
'A stool was broken.'

- Patient Agent
(11.110) dóŋ-ìʃ (p'ìʃ-an) ha-ts'ak-ek'-á
stool-SBJ child-INS AFF-break-PASS-DECL
'A stool was broken (by a child).'

- (11.111) * dóŋ-ìʃ p'ìʃ-an ha-tí-ts'ak-á
stool-SBJ child-INS AFF-1SG-break-DECL

Examples (11.112-11.114) illustrate the verb 'change' in a transitive and then intransitive constructions.

Theme Location

- (11.112) as-ij̃ ha:ts'-nà ha-k'ó:s-^lá
hail-SBJ water-OBJ AFF-change-DECL
'(The) hail changed into water (i.e. melted).'

Theme

- (11.113) as-ij̃ ha-k'ó:s-^lá
hail-SBJ AFF-change-DECL
'(The) hail changed.'
(Interpreted as 'melted'.)

Theme

- (11.114) tí-ŋ ma:gèw-ij̃ ha-k'ó:s-^lá
1SG-GEN friend-SBJ AFF-change-DECL
'My friend changed.'
(Interpreted as 'into a bad person'.)

I have not yet encountered a passive suffix on the verb 'change.'

Examples (11.115-11.116) illustrate the verb 'shatter' in transitive and intransitive constructions.

Agent Patient

- (11.115) jàsín-ij̃ ànán-nà ha-kùmp-á
Yasin-SBJ plate-OBJ AFF-shatter-DECL
'Yasin shattered a plate.'

Theme

- (11.116) ànán-ij̃ ha-kùmp-á
plate-SBJ AFF-shatter-DECL
'A plate shattered.'

Again, as with 'break' (11.109-11.110), the passive suffix can be used with the verb 'shatter' (11.117), with or without the instrumental postpositional phrase indicating the

agent.

- Patient Agent
(11.117) ànán-ìʃ (jàsín-àn) ha-kùmp-ek'-á
plate-SBJ Yasin-INS AFF-shatter-PASS-DECL
'A plate was shattered (by Yasin).'

It is not possible to include the agent in any way in an intransitive construction without the passive suffix (11.118).

- (11.118) * ànán-ìʃ jàsín-àn ha-kùmp-á
plate-SBJ Yasin-INS AFF-shatter-DECL

Examples (11.119-11.120) illustrate the verb 'open' in transitive and intransitive constructions.

- Agent Patient
(11.119) tí-ʃ k'úns-nà ha-tí-wè:ŋk'-á
1SG-SBJ door-OBJ AFF-1SG-open-DECL
'I opened a door.'

- Theme
(11.120) k'úns-ìʃ ha-tí-wè:ŋk'-á
door-SBJ AFF-1SG-open-DECL
'A door opened.'

As with the verbs 'break' and 'shatter,' 'open' can take a passive suffix and may or may not include the agent in an instrumental postpositional phrase (11.121).

- Patient Agent
(11.121) k'úns-ìʃ (jàsín-àn) ha-tí-wè:ŋk'-ek'-á
door-SBJ Yasin-INS AFF-1SG-open-PASS-DECL
'A door was opened (by Yasin).'

An instrumental subject can be used with the verb ‘open’ (11.122) (as indicated in Table 11.1) and presumably with ‘break’ and ‘shatter’ as well--though I’ve not elicited examples for these latter two verbs. The instrumental subject is not marked morphologically as an instrument and behaves morphosyntactically the same as an agent (i.e. as a sort of non-volitional “cause”); That said, I have listed the instrumental subject + patient/theme object as an independent transitive construction (from the agent + patient/theme) in Table 11.1, in an attempt to list all configurations attested.

	Instrument		Patient	
(11.122)	wè:ŋk’-k’ulf-ij		kjat’-k’ulf-na	ha-wè:ŋk’-á
	open:INF-lock-SBJ		house-lock-OBJ	AFF-open-DECL
	‘A key opened (the) lock of the house.’			

Example (11.123) illustrates the instrument in an adjunct role, where it is marked morphologically by the instrumental postposition (cf. section 8.3.2.2).

	Patient		Instrument
(11.123)	kjat’-kuns-nà		(wè:ŋk’-k’ulf-an)
	house-door-OBJ		open:INF-lock-INS
	ha-tí-wè:ŋk’-á		
	AFF-1SG-open-DECL		
	‘I opened (the) door of the house with a key.’		

Let’s turn now to the second set of labile verbs which can change the valence: the so-called “experiencer” verbs. Examples (11.124-11.125) illustrate the verb ‘be/make tired’ in transitive and intransitive constructions. The transitive construction predicates the experiencer as in a state of tiredness (11.124). The grammatical subject of the construction is a non-referential 3SG (perhaps a semantic force?), while the object is the

semantic experiencer. It is not possible to use any overt noun phrase stimulus as a subject in this construction. And in the data collected to date, I have not encountered free pronouns (even 3SG) used for the non-referential subjects used with the experiencer verb class.

Experiencer

- (11.124) tí-ná ha-ʃíl-á
 1SG-OBJ AFF-make.tired-DECL
 ‘I am tired.’ OR ‘It made me tired.’

In the intransitive construction (11.125), the experiencer is mapped to the grammatical subject and the meaning is distinct from (11.124). The intransitive is an inchoative, expressing that the experiencer has entered the state (of tiredness, in this instance).

Experiencer

- (11.125) (tí-ʃ) ha-tí-ʃíl-á
 1SG-SBJ AFF-1SG-be.tired-DECL
 ‘I became tired.’

In the formally transitive construction (11.126), no overt subject can be used. But it is possible to express a stimulus for the predicated state through clause chaining: using a different-subject clause chain (11.126), a same-subject chain (11.127), or a temporally-integrated clause chain (11.128).

(11.126) (tí-ǰ) bàm̀bàs-ét tí-kí-ǰǰ
 1SG-SBJ Bambassi-LOC 1SG-come-DS:NF

Experiencer

tí-ná ha-ǰìl-á
 1SG-OBJ AFF-make.tired-DECL

‘I came to Bambassi, and it made me tired.’

In examples (11.127-11.128), the experiencer is marked on the final verb (1SG).

(11.127) bàm̀bàs-ét tí-kí-in ha-tí-ǰìl-á
 Bambassi-LOC 1SG-come-SS:NF AFF-1SG-make.tired-DECL
 ‘Having come from Bambassi, I got tired.’
 OR ‘I came from Bambassi and got tired.’

(11.128) hádèm hadèm-èt ha-tí-ǰìl-á
 work:INF work-TI:NF AFF-1SG-be.tired-DECL
 ‘While working, I became tired.’

Examples (11.129-11.132) illustrate the verb ‘make.hungry/be.hungry’ in transitive and intransitive constructions.

Experiencer

(11.129) tí-ná ha-ník-^lá
 1SG-OBJ AFF-make.hungry-DECL
 ‘I am hungry.’ OR ‘It made me hungry.’

Experiencer

(11.130) múnts’-nà ha-ník-^lá
 woman-OBJ AFF-be.hungry-DECL
 ‘(The) woman became hungry.’

Experiencer

- (11.131) (tí-ʃ) ha-tí-ník-^lá
1SG-SBJ AFF-1SG-be.hungry-DECL
'I became hungry.'

Experiencer

- (11.132) múnts'-ìʃ ha-ník-^lá
woman-SBJ AFF-be.hungry-DECL
'(The) woman became hungry.'

An inchoative meaning can also be expressed through the use of the verb 'grab' (11.133), where the nominal 'hunger' (an infinitive verb stem) acts as an agent and serves as the subject and the experiencer serves as the object.

Agent Experiencer

- (11.133) ník-ìʃ tí-ná ha-már-^lá
be.hungry-SBJ 1SG-OBJ AFF-grab-DECL
'Hunger grabbed me.'

As with 'be/make tired' (in examples 11.126-11.128), a stimulus can be expressed via a clause chain. In (11.134), the 1SG experiencer is marked only on the verb.

- (11.134) mì-wá ha-tí-ník-^lá
eat:INF-NEG:NF AFF-1SG-be.hungry-DECL
'I didn't eat and became hungry.'
OR 'Without eating, I became hungry.'

Experiencer

(11.135) mì-wá tí-bíʃ-iʃ tí-nà
 eat:INF-NEG:NF 1SG-EXIST-DS:NF 1SG-OBJ

ha-ník-[↓]á
 AFF-make.hungry-DECL
 ‘I didn’t eat, and it made me hungry.’

Let’s now turn to the verb ‘be/make cold.’ Examples (11.136) below illustrate ‘be/make cold’ in a transitive construction with a sort of non-referential (“weather”) 3SG subject. The experiencer is mapped to the object.

Experiencer

(11.136) sá:p-èt tí-ná ha-kjakim-á
 night-LOC 1SG-OBJ AFF-make.cold-DECL
 ‘It made me cold at night.’
 (Literally: ‘It colded me at night.’)

Three different intransitive constructions (in terms of semantic roles) can be formed with the verb /kjakim/ (11.137-11.139): one with a theme subject (11.137); one with an experiencer subject (11.138); and one and with a “weather” subject (11.139)--a sort of non-referential 3SG subject (cf. Table 11.1).

Theme

(11.137) íʃ àʃaj-iʃ ha-kjakim-á
 DEF tea-SBJ AFF-be.cold-DECL
 ‘The tea is cold.’

Experiencer

(11.138) (tí-ʃ) sá:p-èt ha-tí-kjakim-á
 1SG-SBJ night-LOC AFF-1SG-be.cold-DECL
 ‘I became cold at night.’

(11.139) sá:p-èt ha-kjakim-á
 night-LOC AFF-be.cold-DECL
 ‘It is cold at night.’

In the transitive construction, no specific stimulus (other than the non-referential 3SG) can be expressed in the transitive construction

(11.140) * umbot-iʃ tí-ná ha-kjakim-á
 rain-SBJ 1SG-OBJ AFF-1SG-make.cold-DECL
 Intended: ‘Rain made me cold.’

But we can use a periphrastic causative (formed through a clause chain) to include the stimulus (11.141).

	Agent		Experiencer
(11.141)	umbot-iʃ	hí-tà-áʃ	tí-ná
	rain-SBJ	3SG-CAUSE-DS:NF	1SG-OBJ
		ha-kjakim-á	
		AFF-make.cold-DECL	
		‘Rain made me cold.’	

Now, let’s turn to the verb ‘be/make hot,’ which exhibits a couple of important differences from ‘be/make cold’ discussed just above. Examples (11.142-11.143) illustrate the verb ‘make hot’ in transitive constructions.

	Agent	Patient	
(11.142)	(tí-ʃ)	àlbún-ná	ha-tí-kar-á
	1SG-SBJ	coffee-OBJ	AFF-1SG-make.hot-DECL
			‘I heated coffee.’

The subject in the intransitive construction in (11.143) is a non-referential 3SG. It is not clear if the subject here is really a “weather” subject or not. In (11.144), a theme

subject is used.

Experiencer

- (11.143) tí-ná ha-kar-á
1SG-OBJ AFF-make.hot-DECL
'It made me hot.' OR 'I am hot.'

Theme

- (11.144) àlbún-íʃ ha-kar-á
coffee-SBJ AFF-be.hot-DECL
'(The) coffee is hot.'

The sort of non-referential 3SG subject in (11.145), unlike the subject of (11.143), does appear to be a “weather” subject.

- (11.145) nà aw-èt ha-kar-á
PROX day-LOC AFF-be.hot-DECL
'It is hot today.'

Interestingly, the intransitive construction with the verb ‘be/make hot’ cannot be used with the meaning ‘be hot’. In every example, where I have tried, the verb is interpreted as ‘make hot’ (i.e. ‘heat’) and the construction appears to be a transitive where the object is not syntactically present, but semantically implied. That is, the subject is interpreted as an agent (not an experiencer). The example in (11.146) is not interpreted as an inchoative.

- (11.146) ha-tí-kar-á
AFF-1SG-make.hot-DECL
'I heated (something).'

It seems reasonable to assume that humans have a functional need for a verb ‘to

heat', while not all have need for a single verb 'to make cold' (or in some cases the means to carry out the action of making things cold). Perhaps the verb 'make hot' is for this reason in Northern Mao not able to be used as an inchoative; the form is pre-empted by the transitive verb 'heat.'

CHAPTER XII
NON-FINAL VERBS, CLAUSE CHAINS
AND RELATED CONSTRUCTIONS

Northern Mao has a special class of verb forms which I call *non-final* verbs (cf. the introduction to Chapter IX and sections 9.4.2 and 10.1) which occur in non-final dependent (but not subordinate) clauses. These dependent clauses can be strung together in successive chains of clauses. Non-final verbs and clause chaining is relevant to three other phenomena, which are also discussed in Chapter XII: the periphrastic causative, verb serialization and verb compounding. But before we get into the specifics for Northern Mao, a brief discussion on terminology is needed.

In the broader (non-Omoti) literature, verb forms with functions analogous to Northern Mao's non-final verbs are sometimes called *medial* verbs (cf. Haiman 1987) and the phenomenon of multiple clauses strung together with these non-final/medial verbs is called clause chaining (cf. Longacre 1985; Genetti 1986 and 2005; Haiman 1987; DeLancey 1991). Clause chaining is frequently found in verb-final (OV type) languages (Longacre 1985; Haiman and Thompspon 1988), and Northern Mao, like many languages of Ethiopia, fits clearly within this typological system.

Within the Ethiopian arena, various terms have been used for such verb forms/functions (cf. Azeb Amha and Dimmendaal 2006). The Northern Mao *non-final* verb appears to be distinct from *converbs*, as defined by Haspelmath (1995). According to Haspelmath, converbs and converbial clauses are essentially subordinate adverbial constructions whose primary function is modification of a final verb or clause (1995:7).

Northern Mao's non-final verbs are not prototypically or most frequently adverbial, though in some cases a non-final verb and its clause can be read in this way. Rapold (2007) offers a clear and concise overview of the way in which the term *converb* has been used in the literature and notes, in particular, that while Haspelmath's (1995) definition is one of the more narrow definitions of converbs (e.g. not including the linking of successive events as part of a prototypical function), it happens also to be one of the most influential definitions (Rapold 2007:11). Others, however, have used *converb* in a broader sense, as summarized by Rapold:

...most linguists agree that a converb is a verb form specialised for combining clauses and, more specifically, marking a dependent verb form that is neither argumental nor adnominal (2007:9).

Azeb Amha and Dimmendaal have used the term *converb* in a broad sense in their recent typological work on African languages, applying it particularly to the languages of Ethiopia (2006). While Azeb Amha and Dimmendaal's definition of *converb* involves adverbial modification as a central component of converbial function (similar to Haspelmath 1995), they also use the term to encompass what are often called non-final or medial verbs in clause chains (e.g. sequences of events) in the literature. Since this broader definition of *converb* still involves adverbial modification as prototypical of converbs, I have chosen to use *non-final* in this grammar.²²⁸ As Rapold notes, terms like

²²⁸ While I have elected not to follow Azeb Amha and Dimmendaal's terminological choice (of *converb*) in this grammar, I do believe the Northern Mao non-final verb and its use in clause chains is analogous to the syntactic phenomenon described by Azeb Amha and Dimmendaal for other Omotic languages (2006:396ff)--and perhaps for many other Ethiopian languages as well. To further muddy the waters, the term *gerund* has also sometimes been used by Ethiopianists for a non-final verb type, which bears much similarity to both medial and converb phenomena. The term *gerund* does not work for Northern Mao (and for many languages, for that matter), as non-final verb forms are typically not synchronically nominal (cf. Hayward 1991:547); in Northern Mao, today, non-final verb forms do not appear to be nominalizations.

non-final allow a linguist to side-step the converb definition debate while still describing phenomena which are readily relevant to the typological community (2007:12-13).

I will now give a brief overview of non-final verbs in Northern Mao and then discuss how non-final verbs fit into the wider typological discussion. In Northern Mao, non-final verbs take suffixes which specify the type of clause in which they occur: those which express main events in discourse as chronologically successive, those which express events as temporally overlapping to some degree, and those which express events which did not/will not occur (i.e. negative non-final verbs). Among the clauses which express chronological succession, the non-final suffix indicates whether the non-final clause and the following clause share the same subject (SS) or whether the following clause has a different subject (DS); i.e. typologically, this is also a type of switch-reference system..

While some affirmative non-final verbs (and their clauses) can be interpreted with variety of readings (including cause/effect, reason/result, or manner/event), the most basic division in meaning which coincides with morphological marking seems to be between those which indicate a succession or sequence of events (the same- and different-subject clauses) versus those which indicate some degree of temporal overlap (the temporally-integrated clause). Other readings are not morphologically indicated and may be inferred as the result of speakers' knowledge of the world and assumptions that joined clauses must relate to one another in one or more ways (cf. Grice's maxims of communication, especially *relevance*, 1975; cf. Mann and Thompson 1987).

So, how do Northern Mao's non-final verbs fit into the wider typological and

terminological discussion? What I call non-final verbs do not form a completely coherent category. While the same- and different subject non-final verbs can carry some aspectual distinctions (progressive and perfect) and can be negated, the temporally-integrated non-final verb cannot carry any aspectual markers or be negated. The temporally-integrated non-final verbs often (if not always) express presupposed information (as opposed to the same- and different-subject non-final verbs which express main events) and appear to be closer to adverbial in function than the other non-final verbs.

That said, same-, different-subject and temporally-integrated non-final verbs are part of a single clause-chaining system to the extent that each of these is a functional means of clause combining that does not appear to fully involve subordination (i.e. these are not simply nominalizations, relativizations or complements). Each is marked with a unique suffix which forms part of a single paradigm based on morphological substitution as well as the typological tendency for clause chaining devices to exhibit same-, different-subject and temporally-integrated distinctions (Longacre 1985).

Chapter XII's section 12.1 begins with a definition of non-final verbs/clauses in Northern Mao. I discuss how non-final verbs differ morphologically and functionally from the other two types of verbs (final and subordinate verbs). Section 12.2 illustrates affirmative non-final verbs and their three types of clauses: same-subject (section 12.2.1), different-subject (section 12.2.2) and temporally-integrated (section 12.2.3). Section 12.3 illustrates negative non-final verbs/clauses: two types (simple and complex) of negative same-subject non-final clauses (sections 12.3.1 and 12.3.2) and different-subject non-final clauses (section 12.3.3). Section 12.4 illustrates a periphrastic causative construction

which is formed through the use of a different-subject non-final clause (formally) involving the verb ‘give’ as the non-final verb, but which has been grammaticalized as a valence increaser. Section 12.5 presents some thoughts on the development of the non-final verb suffixes themselves. Finally, section 12.6 briefly discusses verb serialization and compounding as phenomena relevant to clause chaining.

12.1. Defining the Northern Mao Non-Final Verb

Non-final verbs are morphosyntactically and functionally distinct from subordinate verbs (Chapter XIII) and from final verbs (Chapter X). However, I group both non-final verbs and subordinate verbs into a class of *dependent* verbs (cf. the introduction to Chapter IX and section 10.1), juxtaposed against final verbs. In this grammar, the term *dependent* verb is used for all verbs which require another non-bound²²⁹ (final) verb (the most fully finite type of verb) for the utterance to be fully complete.²³⁰ Dependent verbs (non-final and subordinate verbs together) are also morphologically identifiable: most affirmative, non-future subordinate verbs and affirmative non-final/medial verbs take special 3rd person subject markers (cf. section 9.4.2) not found on final verbs. The notion of non-final verbs as *dependent to* but not *subordinate to* final verbs is also supported by Haiman (1985:216-217) and is also discussed at length by Genetti (2005:76). In the discussion below, I first discuss the non-final vs. subordinate verb distinction for Northern Mao and then briefly summarize the

²²⁹ Auxiliary verbs (generally bound elements, cf. section 10.3.1) are not meant to be included here as final verb forms, though historically, they do appear to have been final verbs before being further grammaticalized (section 9.5).

²³⁰ It is not clear to me that the notion ‘sentence’ is appropriate for discussing the arrangement of clauses in natural discourse in Northern Mao.

non-final vs. final verb distinction (which is discussed in section 10.1).

Non-final and subordinate verb forms are separate categories in a number of ways. First, non-final verbs and their clauses do not serve as arguments of another clause. In contrast, subordinate verbs and their clauses may serve as subject or object complements or as adjuncts (e.g. in an adverbial function) (cf. sections 13.3 and 13.4); non-final verbs and their clauses are never required by the valence of final verbs.

Second, non-final verbs are frequently strung together in clause chains, one after another with as many as three or four (and sometimes more) non-final clauses before a fully-finite final verb is used. I have not found examples where subordinate verbs/clauses (be they adverbial or complements) can be strung together consecutively. Of course, complements, in particular, are limited to the number of available argument slots in a construction's valence.

Third, unlike many affirmative subordinate verbs, affirmative non-final verbs always require the finite verb stem and use the realis verb form (section 9.1.1). Negative non-final verbs require the non-finite verb stem (like other negative verbs) and take the irrealis verb form (section 9.1.3).

Fourth, while the more finite subordinate verbs can express tense (non-future and future), non-final verbs do not ever express tense; that is the realis verb form does not actually express non-future tense itself. The "tense" reading of the non-final clause is inherited from the final verb.

Finally, as noted in the introduction to Chapter XII, non-final verbs carry suffixes which mark the type of clause (as same-subject, different-subject, temporally-integrated

or negative). The five observations listed above form the basis for the non-final vs. subordinate distinction.

Let's now turn to a brief summary of the distinction between non-final verbs and final verbs, which is discussed in more depth in section 10.1 (and represented in Table 10.1). In short, non-final verbs differ from final verbs by not expressing any tense (future or non-future) distinctions. Final verbs do express this future vs. non-future tense distinction (section 10.2.1).²³¹ Non-final verbs also do not carry utterance-type markers, such as declarative or interrogative. Utterance type marking is reserved for final verbs (section 10.4). Based on these two limitations, non-final verbs can be said to be less finite than final verbs.

12.2. Affirmative Non-Final Verbs and Their Clauses

Affirmative non-final verbs are marked with one of three different suffixes: 1) /-in/ for clauses with the same subject as the following clause (SS:Nf), 2) /-ij/ for clauses with a different subject than the following clause (DS:Nf), and 3) /-et/ for clauses which indicate an event which overlaps temporally with the following clause regardless of whether the subject is the same as the following clause or not (TI:Nf). Each of these affirmative non-final verb types is illustrated in Table 12.1.

²³¹ Interestingly, some affirmative non-final verbs (same-subject and different-subject, though not temporally-integrated non-final forms) are able to express perfect and progressive aspect (cf. section 12.2.4).

Table 12.1. Affirmative Non-Final Verbs in Clause Chains

Clause-Chain Type	Marker	Example
Same-Subject	-in SS:Nf	kà:l-là mí-in ha-hów-j- ^l á porridge eat-SS:Nf AFF-go-AWAY-DECL 'S/he ate porridge and went away.'
Different-Subject	-iʃ DS:Nf	kà:l-là hí-mí-iʃ ha-hów-j- ^l á porridge 3SG-eat-DS:Nf AFF-go-AWAY-DECL 'S/he ate porridge and (someone else) went away.'
Temporally-Integrated	-et TI:Nf	kà:l-là hí-mí-èt ha-tí-hów-j- ^l á porridge 3SG-eat-TI:Nf AFF-1SG-go-AWAY-DECL 'While s/he ate porridge, I went away.'

The functions of the affirmative non-final clauses can be divided into two groups based on whether the events expressed in the non-final and following clause are interpreted as sequences (as in the same- and different-subject non-final verbs) or as temporally overlapping and thus non-sequential (as in the temporally-integrated non-final verb). Longacre notes that this structural distinction between chronological succession and chronological overlap is frequently attested in clause chaining systems (1985:264). And as noted in the introduction to this chapter, additional readings or interpretations of the sequence (SS and DS) clause chains are also possible, depending on the combination of the verbs involved and speakers' knowledge about the particular context or the world in general. For instance, it is often also the case that non-final clauses used to denote chronological sequence can also include readings of cause and effect (or reason and result) or manner (cf. Genetti 1986; Mann and Thompson 1987; Andvik 1999).

Affirmative same-subject non-final clauses can relate to the following clause in three different ways: as a sequence/series of events, as cause-effect (or reason/result), and as an expression of the manner of the following event. Different-subject non-final clauses can express both a sequence/series of events and cause-effect relations, but not manner. The affirmative temporally-integrated non-final clause simply expresses a degree of

temporal integration or overlap between the events. In the sub-sections below, I illustrate the structure and functions of these three types of non-final clauses.

12.2.1. Affirmative Same-Subject Non-Final Clauses

The same-subject non-final verb's suffix /-in/ is used when the subject of the non-final clause is the same as the subject of the following clause. In this case, the subject is not typically marked on the non-final verb.²³² In example (12.1), the subject of the non-final verb 'come' is co-referential with the subject of the final verb 'go' (compare 12.1 to the different-subject chain 12.14, below).

- (12.1) p'ɪʃ-ɪʃ kí-in ha-hów-j-á
 child-SBJ come-SS:NF AFF-go-AWAY-DECL
 'A child came and left.'

In (12.1) the subject, which is shared between the non-final and final clauses, is expressed overtly as a noun phrase only in the non-final clause. The final verb must, however, always be marked for the subject, regardless of whether the subject has been mentioned before or not. For example, in (12.2) the pronominal subject (1SG) is expressed only on the final verb.

- (12.2) hadèm-nà hadèm-ìn kà:l-là mí-in
 work:INF-OBJ work-SS:NF porridge-OBJ eat-SS:NF
- kí-gà-t-bíʃ-á
 come-FUT-1SG-NPST:AUX-DECL
 'I will work, eat porridge and then come.'

²³² In natural texts, there are a few places where same-subject non-final verbs do carry subject markers, but these are quite exceptional and may be related to pragmatic needs. In no instance examined does subject marking on these same-subject non-final verbs appear to be syntactically required.

(12.3) mí-in kí-in ha-tí-pòn-á
 eat-SS:NF come-SS:NF AFF-1SG-arrive-DECL
 ‘I ate, came and arrived’

Examples (12.1-12.3) illustrate a series of events expressed by the same-subject clause chain. Example (12.4) can be interpreted simultaneously as having a sequence and a cause and effect relation.

(12.4) p’iʃ-iʃ ínts’-in ha-já:p-[↓]a
 child-SBJ fear-SS:NF AFF-cry-DECL
 ‘The child was afraid and cried.’
 OR ‘The child cried because he was afraid.’

Speakers who wish to stress that one event is the cause or reason for another event may use a causative (section 12.4) or a reason adverbial clause, as in example (12.5).

Reason Adverbial Clause (not a structural non-final clause)
 (12.5) p’iʃ-iʃ ha-j-ínts’-ìt àr-èt ha-já:p-[↓]a
 child-SBJ AFF-3SG-fear-REL reason-LOC AFF-cry-DECL
 ‘Because (the) child was afraid, s/he cried.’

While cause and effect readings are commonly given in translations of some Northern Mao affirmative non-final clauses, these same utterances can also be interpreted as sequences of events. That is, the cause-effect reading appears to be the result the semantic nature of the events themselves, of pragmatic implicature, and perhaps even due to a more general understanding of the nature of the world around (cf. example 12.5); that is, a cause and effect reading is not an altogether distinct function from the sequence reading of the non-final clause. And certainly, the cause and effect reading is not associated with a structure distinct from the same- or different-subject non-final marking.

While some speakers interpreted (12.6) as cause-effect, others simply interpreted

the utterance as two events.

- (12.6) mún̄ts'-íʃ ha:ts'-nà iʃ-ín maŋk'-á
woman-SBJ water-OBJ drink-SS:NF be.sick-DECL
'A woman drank water and was sick.'

It may be the case that illness as a result of drinking contaminated water is more apparent to some speakers than others.

Affirmative same-subject non-final clauses can sometimes be read as expressing the manner of an event. But as with cause-effect readings, the manner vs. sequence reading is not always easy to predict. And in every instance that I've checked, a sequence reading is possible.

- (12.7) tí-ʃ kan-ná ts'aŋ-ín ha-tí-pí-á
1SG-SBJ dog-OBJ kick-SS:NF AFF-1SG-kill-DECL
'I kicked a dog and killed it.'
OR 'I killed a dog by kicking.'

Example (12.8) illustrates the use of a passive verb as a non-final verb in a same-subject non-final clause. This underscores the fact that the same-subject marker /-in/ is relevant to the grammatical subject regardless of whether the verb is a derived form or not.

- (12.8) kan-íʃ héz-[↓]ek'-ín hék'-[↓]á
dog-SBJ hit-PASS-SS:NF die-DECL
'A dog was hit and died.'

Before moving on to different-subject non-final clauses, we should consider how two clauses joined in a chain may provide a means for the grammaticalization of verbs via serializations. In sections (10.2.2.5-10.2.2.7), I discussed the use of grammaticalized

verbs ‘have’, ‘finish,’ and ‘sit’ as markers of perfect, completive and durative aspect, respectively. As grammaticalized verbs, these three verbs are joined to lexical verbs by compounding (perhaps through serialization historically).²³³ Interestingly, however, each of these three verbs can also be used as verbs in non-final or final clauses where they function in a manner similar to the grammaticalized aspect function.

For instance, example (12.9) illustrates a long clause chain (with both SS and DS clauses); the verb ‘have’ (with the meaning of perfect aspect) is used twice, first in a non-final clause (in the second line) and then in a compound verb (in the fifth line). There are two complete groupings (sentences?) in example (12.9); the ends of these utterances are indicated with (END).

The long example in (12.9, below) is not particularly unusual in having seven non-final verb forms in chained clauses (five same-subject chains and two different-subject chains). What is of most interest to the present discussion is that the use of the verb stem /kòt’/ ‘have’ is used as a marker of perfect aspect not only in line 5 but also in line 2, where it is a non-final verb. It is likely that the use of the ‘have’ first meant ‘after’ (in line 2), and this led to its full grammaticalization as a phonologically compounded perfect marker (as in line 5, of example 12.9)

²³³ In section 12.6, I discuss the use of the term *compound* for the grammaticalized aspectual forms. In short, these forms appear to have moved beyond serializations and have become part of a complex verb stem which itself is surrounded by prefixal and suffixal elements marking the final verb.

(12.10) mí-in ma:gèw-àn tò-s-ín
eat-SS:NF friend-COM talk-SS:NF

hadèm-ìn ha-ts'el-á
work-SS:NF AFF-finish-DECL

‘S/he ate, talked with a friend, worked and finished (working).’

In (12.10) the final verb’s meaning is interpreted as referring to the immediately previous event of ‘working.’ Its scope is not extendable to the events of ‘talking’ or ‘eating.’ It seems likely that constructions like this involving ‘finish’ led to the grammaticalization of ‘finish’ as a completive aspect marker where today it can be compounded to a lexical verb stem (cf. section 10.2.2.6).

Example (12.11) illustrates the verb ‘sit’ (which can also mean ‘stay’) as a final verb. The chain can be interpreted as expressing either a single event with ‘working in the house’ or as an event which takes place after ‘working in the house.’ The event-integrated reading is similar to the function of the durative aspect marker, which is derived from ‘sit’ (cf. section 10.2.2.7).

(12.11) kjat'-sis hadèm-ín ha-kòw-á
home-inside work-SS:NF AFF-sit-DECL

‘S/he stayed working inside (the) house.’

OR ‘S/he worked inside (the) house and sat (down).’

In example (12.12) the final verb ‘sit’ can also be interpreted as ‘stay’; the event of ‘staying in the house’ is interpreted as occurring after the event of ‘working’.

(12.12) hadèm-ín kjat'-sis ha-kòw-á
work-SS:NF house-inside AFF-sit-DECL

‘S/he worked and sat/stayed inside (the) house.’

In same-subject non-final clauses, the placement of adjuncts (such as locatives) is important to the interpretation (12.11-12.12): more integrated events require the non-final verb and the following verb (whether final or another non-final) to be immediately adjacent, but even then, the events must be interpretable as integrated (see 12.13 for a same-subject example which can only be read as two events; an integrated event where there is temporal overlap requires the TI:NF form, section 12.2.3). As may be expected, events expressed with different-subject non-final clauses cannot be interpreted as highly integrated with the following event.

- (12.13) mí-in tí-jé:ts' -^lá
 eat-SS:NF 1SG-run-DECL
 'I ate and (then) ran.'

Like examples (12.9-12.11), which illustrate clause chains which express aspectual meaning, it is possible to repeat (in an adjacent manner) a single lexical verb in a same-subject non-final clause multiple times to express a function which corresponds to the iterative/continuative aspectual (reduplication) construction (cf. section 10.2.2.8). Example (12.14) illustrates the use of two identical same-subject non-final clauses to indicate iterative events or an event which continued for a while.

- (12.14) mí-in mí-in ha-tí-há:l -^lá
 eat-SS:NF eat-SS:NF AFF-1SG-sleep-DECL
 'I ate and ate (ate a lot or repeatedly) and (then) slept.'

12.2.2. Affirmative Different-Subject Non-Final Clauses

The different-subject non-final clause is marked by /-ij/. Both the different-subject non-final verbs and the temporally-integrated non-final verbs consistently carry

the same prefixes which mark subject on other affirmative, non-future dependent verbs (cf. section 9.4.2).²³⁴ As noted in section 12.2.1, same-subject non-final verbs do sometimes carry these same prefixes, but only rarely.

Contra example (12.1), the different-subject non-final marker in (12.15), along with the subject prefix on the verb, establishes that the subject of the first clause, ‘child’, is not co-referential with the third person argument of the final verb.

- (12.15) p’iʃ-iʃ hí-kí-iʃ ha-hów-j-^lá
 child-SBJ 3SG-come-DS:NF AFF-go-AWAY-DECL
 ‘A child_i came and s/he_j left.’
 OR ‘Because a child came, s/he left.’

While example (12.15) can be interpreted as expressing a sequence and a cause/effect relation, some event collocations don’t trigger the cause/effect interpretation. In (12.16), for instance, the events are interpreted only as sequences.

- (12.16) múnts’-iʃ hí-mí-iʃ ha-há:l-^lá
 woman-SBJ 3SG-eat-DS:NF AFF-sleep-DECL
 ‘A woman ate and (then) (someone else) slept.’

If the two events in (12.16) occur at the same time, speakers use the temporally-integrated non-final clause (cf. example 12.22, section 12.2.3).

Example (12.17) illustrates an utterance analogous to (12.16) but with a same-subject non-final clause.

²³⁴ In natural texts, if the subject is clear from the context, it is not completely uncommon to leave the subject marking off the different-subject non-final verb. The vast majority of the time, however, the different-subject non-final verb does carry marking in reference to its subject.

(12.17) mún̄ts' -ìʃ m̄i-in ha-há:l-[↓]á
 woman-SBJ eat-SS:NF AFF-sleep-DECL
 'A woman ate and (then) slept.'

It is possible for a different-subject non-final clause to share the same object as the following clause. In (12.18) the 3SG pronoun in the final clause is not required. (It was mentioned for emphasis in this particular example.)

(12.18) kan-ná ha-tí-ts'á:ŋ-ìʃ (í-té) héz-héz-in
 dog-OBJ AFF-1SG-kick-DS:NF 3SG-SBJ hit-hit-SS:NF

 ha-pí-[↓]á
 AFF-kill-DECL
 'I kicked the dog, and s/he beat it (i.e. hit it repeatedly) and killed it.'

Example (12.19) illustrates another different-subject non-final clause which can be interpreted as a sequence or as cause/effect.

(12.19) pa:lt' -ìʃ ent' -p'íʃ-nà hí-kòts' -ìʃ
 girl-SBJ male-child-OBJ 3SG-laugh-DS:NF

 (í-té) uns-ǰál ha-jé:ts' -[↓]á
 3SG-SBJ home-way AFF-run-DECL
 'A girl laughed at a boy, and he (the boy) ran home.'
 OR 'Because a girl laughed at a boy, he ran home.'

Example (12.20) illustrates an utterance with a same-subject non-final clause (corresponding to the different-subject non-final clause in 12.19).

(12.20) pa:lt'-iʃ ent'-p'íʃ-nà kòts'-ín
 girl-SBJ male-child-OBJ laugh-SS:NF

uns-shál ha-jé:ts'-↓á
 home-way AFF-run-DECL

‘A girl laughed at a boy, and (she) ran home.’

OR ‘Because a girl laughed at a boy, (she) ran home.’

I have not encountered any clear examples where different-subject non-final clauses have been found expressing the manner of an event.

Now that we have observed the differences in the same- and different-subject non-final clauses, we can consider an example like (12.21).

(12.21) í-té hí-mí-iʃ tí-ʃ tí-iʃ-íʃ
 3SG-SBJ 3SG-eat-DS:NF 1SG-SBJ 1SG-drink-DS:NF

kí-in han-pòn-á
 come-SS:NF 1DU-arrive-DECL

‘S/he ate, I drank, and we (dual) came and arrived.’

In example (12.21) the first two non-final clauses exhibit different subjects and the verbs carry the non-final suffixes. The 3SG participant ‘eats’ and the 1SG participant ‘drinks.’ But then the two subjects become a complex subject and carry out the last two events ‘coming’ and ‘arriving’ as a unit.²³⁵ The final verb carries the 1DU subject marking which is interpreted as including the two subjects mentioned previously. The non-final verb ‘come’ is marked as having the same-subject as the final verb, indicating that both

²³⁵ The use of ‘come’ in this example is interesting in its own right. Its inclusion in the utterance appears to function in much the same way a cislocative directional functions: establishing movement toward the deictic center. Of course, it is no coincidence that the cislocative directional (which today is compounded to lexical verbs, cf. section 9.8.2) is also from the verb ‘come.’ So, in (12.21), again, we find a form/function in a non-final clause corresponding to a related form/function which has become part of a verb.

previously mentioned subjects (as expressed with the 1DU marking on the final verb) carry out the ‘coming’ as well as the ‘arriving.’

Examples like (12.21) are rare, but completely grammatical. The example above was elicited only through setting up a scenario, not through direct translation. No examples like this where different subjects have been incorporated into a same-subject non-final clause have been identified in natural discourse.

The different-subject non-final clause is also used in the formation of a periphrastic causative construction involving a grammaticalized verb ‘give’ (section 12.4).

12.2.3. Affirmative Temporally-Integrated Non-Final Clauses

Temporally-integrated non-final verbs take /-et/ TI:Nf, which is cognate with the locative/source postposition (cf. section 8.3.2.1); these non-final clauses may or may not contain the same subject as the next clause. Subject marking is required on the non-final verb. The function of temporally-integrated non-final clauses is to mark temporal overlap between events in consecutive clauses; the overlap may be partial or complete. The temporally-integrated non-final clauses do not lend themselves to other interpretations.

As noted in the introduction to this chapter, non-final verbs/clauses do not form a completely coherent category. While the same- and different-subject constructions typically express main events, the temporally-integrated non-final clauses appear to express presupposed information, and in so doing, are more like Haspelmath’s 1995 converbial category. Structurally speaking, the same- and different-subject non-final verbs take suffixes which mark same or switch reference (of the subject), can be marked

for progressive or perfect aspect (cf. section 12.2.4), and can be negated, the temporally-integrated non-final clauses are used with same or different subjects (always marking the subject with a prefix on the non-final verb); they do not take aspectual marking and cannot be negated (cf. section 12.3).

In (12.22) there is no different subject-marking indicated for the final clause, apart from 3SG, which is also marked on the non-final verb. The subjects of both clauses are interpreted as co-referential; this interpretation is undoubtedly due to the nature of the events involved. One actor could not ‘eat’ and ‘sleep’ at the same time.

(12.22) mún̄ts’-ìʃ hí-mí-èt ha-há:l-ʋá
 woman-SBJ 3SG-eat-TI:NF AFF-sleep-DECL
 ‘While a woman_i ate, s/he_j slept.’

Example (12.22) is comparable to examples (12.16-12.17), different-subject and same-subject examples, respectively. Structurally, I consider all the forms (the same- and different subject non-final verbs and the temporally-integrated non-final verbs) part of a single non-final verb system, in a broad sense. In examples (12.16-12.17 and 12.22), only the non-final suffixes (and the fact that the SS example in 12.17 does not mark the subject on the non-final verb) indicate the differences in meaning. While it may be that the temporally-integrated non-final verb is more like Haspelmath’s 1995 converb in its adverbial function, the use of the term *non-final* is meant to include not only the more prototypical non-final/medial verbs as well as the more converbial temporally-integrated form.

Examples (12.23-12.24) contrast the same- and different-subject uses of the temporally-integrated non-final clause.

- (12.23) kà:l-là ha-tí-mí-èt
 porridge-OBJ AFF-1SG-eat-TI:NF
- tí-ŋ ʔmagèw-nà ha-tí-int'-á
 1SG-GEN friend-OBJ AFF-1SG-see-DECL
 ‘While I was eating porridge, I saw my friend.’

- (12.24) kà:l-là ha-tí-mí-èt
 porridge-OBJ AFF-1SG-eat-TI:NF
- tí-ŋ ʔmagèw-ìʃ ha-pò:n-á
 1SG-GEN friend-SBJ AFF-go.out-DECL
 ‘While I was eating porridge, my friend left.’

It is possible to use the same-subject non-final clause to achieve a functional temporally-integrated non-final clause. For instance, example (12.25) illustrates a temporally-integrated non-final clause formed in the same manner as those immediately above (i.e. with the /-et/ suffix on the non-final verb). In (12.26), however, the same-subject non-final clause’s non-final verb expresses progressive aspect (through the use of the non-past auxiliary /bij/ [bʃ], cf. section 12.2.4.2, below). The /bij/ auxiliary is positioned after the lexical verb stem and before the non-final suffix, and its use of the progressive aspect allows for a temporally-integrated reading (12.26).

- (12.25) tí-ʃ mì-mìs tí-mí-èt
 1SG eat:INF-thing 1SG-eat-TI:NF
- tí-nú:ŋk'-á
 1SG-rise.up-DECL
 ‘While I was eating, I stood up.’

(12.26) tí-ʃ m̀̀-̀̀m̀̀s mí-bʃ-in
1SG eat:INF-thing eat-NPST:AUX-SS:NF

tí-nú:ŋk' -'á

1SG-rise.up-DECL

'I was eating and stood up.'

(May or may not be temporally-integrated.)

One consultant suggested that the events may or may not overlap in progressive examples like (12.26), while temporal overlap is a required interpretation in the non-final clauses marked with /-et/. The interaction(s) of tense and aspect in clause chains are discussed below in section 12.2.4.

12.2.4. Tense and Aspect in Affirmative Non-Final Clauses

While tense cannot be morphologically marked on non-final verbs, some aspectual distinctions can. In the discussion below, I will illustrate the inheritance of tense semantics to non-final clauses from final verbs (section 12.2.4.1) as well as the use of progressive (section 12.2.4.2) and perfect (section 12.2.4.3) aspects on same- and different-subject non-final verbs. I have not found (or been able to elicit) any examples of progressive or perfect aspect on temporally-integrated non-final verbs.

12.2.4.1. The Scope of Final Verb Tense

The tense reading (non-future vs. future) of non-final clauses is a function of the scope of the final clause's verb's tense. The examples below illustrate the inheritance of non-future or future tense from the final verb to the same-subject non-final clauses (12.27-12.28), the different-subject non-final clauses (12.29-12.30), and the temporally-integrated non-final clauses (12.31-12.32), respectively.

Same-Subject with Non-Future Tense Final Verb

- (12.27) àsúg hí-in ʃapków ʃén-[↓]á.
market go-SS:NF shoe buy-DECL
'S/he went to the market and bought shoes.

Same-Subject with Future Tense Final Verb

- (12.28) àsúg hí-in ʃapków ʃén-gà-m-bìʃ-á.
market go-SS:NF shoe buy-FUT-3-NPST:AUX-DECL
'S/he will go to the market and buy shoes.

Different-Subject with Non-Future Tense Final Verb

- (12.29) hí-hí-iʃ ʃapków tí-ʃén-[↓]á.
3SG-go-DS:NF shoe 1SG-buy-DECL
'S/he went (left), and I bought shoes.

Different-Subject with Future Tense Final Verb

- (12.30) hí-hí-iʃ ʃapków ʃén-gà-t-bíʃ-á.
3SG-go-DS:NF shoe buy-FUT-1SG-NPST:AUX-DECL
'S/he will go (leave), and I will buy shoes.

Temporally-Integrated with Non-Future Tense Final Verb

- (12.31) ʃapków tí-ʃén-èt
shoe 1SG-buy-TI:NF

tí-ŋ [↓]magèw-iʃ int'-á
1SG-GEN friend-SBJ see-DECL
'While I was buying shoes, my friend saw me.'

Temporally-Integrated with Future Tense Final Verb

(12.32) ʃapków tí-ʃén-èt
shoe 1SG-buy-TI:NF

tí-ŋ ˈmagèw-ìʃ intʹ-gà-m-bíʃ-á
1SG-GEN friend-SBJ see-FUT-3-NPST:AUX-DECL
‘While I will be buying shoes, my friend will see me.’

When the tense of clauses is distinct, it appears that different sentences/utterances are necessary (each with its own utterance marker, i.e. both are final clauses) (12.33).

(12.33) kwalla àsúg hí-in tí-kí-á (END)
yesterday market go-SS:NF 1SG-come-DECL

hátsʹà ʃapków ʃén-gà-t-bíʃ-á (END)
tomorrow shoe buy-FUT-1SG-NPST:AUX-DECL
‘Yesterday I went to the market. Tomorrow I will buy shoes.’

12.2.4.2. Progressive Aspect

While tense readings on non-final clauses is a function of the scope of tense on the final verb (in the final clause), progressive aspect can be marked on same- and different-subject non-final clauses (via an auxiliary on the non-final verbs) so that the aspectual distinction only applies to the event expressed by the non-final clause.

Progressive aspect is marked with the /bíʃ/ non-past auxiliary. On non-final verbs, this auxiliary is most typically reduced to [bʃ] phonologically. I have elected to represent the auxiliary /bíʃ/ as phonologically bound on non-final verbs because the auxiliary is typically reduced phonologically; this is in contrast to its non-reduction as a non-bound auxiliary on progressive final verbs (cf. section 10.2.2.4).

As noted in the introduction to section 12.2.4, it is not possible to mark

progressive aspect on the temporally-integrated non-final clauses. Consider, for instance, example (12.34). The use of the progressive in a same-subject non-final clause results in an event which may or may not be interpreted as overlapping with the following event. Regardless of whether the events are interpreted as overlapping, though, the event of ‘eating’ has internal complexity.

Progressive Aspect in Same-Subject Non-Final Clause
(with Non-Future Tense Final Verb)

(12.34) tí-ʃ mì-mìs mí-bʃ-in
1SG-SBJ eat:INF-thing eat-NPST:AUX-SS:NF

ha-tí-hów-j-^lá
AFF-go-AWAY-DECL

‘I was eating and left.’

(May or may not include temporal overlap between events.)

In the same manner, when the final verb’s tense is future, the non-final clause’s event could still be interpreted as temporally overlapping or in a sequence, albeit a sequenced event with internal complexity (12.35). That is the event of ‘eating’ could overlap with ‘leaving’ or could be interrupted by one’s getting up to leave.

Progressive Aspect in Same-Subject Non-Final Clause
(with Future Tense Final Verb)

(12.35) tí-ʃ mì-mìs mí-bʃ-in
1SG-SBJ eat:INF-thing eat-NPST:AUX-SS:NF

ha-hów-j-k’-à-t-bíʃ-á
AFF-go-AWAY-FUT-1SG-NPST:AUX-DECL

‘I will be eating and will leave.’

In (12.36-12.37) progressive aspect is used in different-subject non-final clauses.

As with the same-subject examples above, these appear to be interpretable as either temporally overlapping events or as sequenced events.

Progressive Aspect in Different-Subject Non-Final Clause
(with Non-Future Tense Final Verb)

(12.36) tí-ʃ mì-mìs tí-mí-bʃ-iʃ
1SG-SBJ eat:INF-thing 1SG-eat-NPST:AUX-DS:NF

tí-ŋ ma:gèw-iʃ ha-hów-j-á
1SG-GEN friend-SBJ AFF-go-AWAY-DECL
'I was eating, (then/while) my friend left.'

Progressive Aspect in Different-Subject Non-Final Clause
(with Future Tense Final Verb)

(12.37) tí-ʃ mì-mìs tí-mí-bʃ-iʃ
1SG-SBJ eat:INF-thing 1SG-eat-NPST:AUX-DS:NF

tí-ŋ ma:gèw-iʃ
1SG-GEN friend-SBJ

ha-hów-j-k'á-m-bíʃ-á
AFF-go-AWAY-FUT-1SG-NPST:AUX-DECL
'I will be eating, (then/while) my friend will leave.'

When multiple non-final verbs marked for progressive aspect are strung together in a series, the interpretation is that the events of the entire clause chain, including the final verb, overlap temporally--at least in all the examples I have encountered thus far (12.38).

(12.38) mí-biʃ-in kí-biʃ-in
 eat-NPST:AUX-SS:NF come-NPST:AUX-SS:NF

ha-tí-pòn-á
 AFF-1SG-arrive-DECL
 ‘I was eating and coming and arrived.’

Example (12.38) also illustrates same-subject non-final clauses which could be interpreted as expressing the manner of the final event, i.e. ‘I arrived, eating and coming.’ As noted in the introduction to this chapter, there is no morphological distinction allocated to expressing the manner (adverbial) meaning over the more frequently attested sequence reading.

When both the non-final clause and the final clause are marked for progressive aspect, the reading is that both events are simultaneously executed (12.39).

(12.39) ha-hadèm-biʃ-ín tí-mí biʃ-á
 AFF-work-NPST:AUX-SS:NF 1SG-eat NPST:AUX
 ‘I am working and eating.’

Curiously, I have not found any examples of multiple non-final clauses where only one of the non-final verbs carries progressive aspect.

12.2.4.3. Perfect Aspect

The perfect marker, which is /-ti/ on final verbs (cf. section 10.2.2.2), has a special form which is used only on same- or different-subject non-final verbs/clauses: /-tit/. The form /-tit/ is followed by one of the non-final verb markers (some speakers, but not all, also use the form [-titit:] to mark perfect aspect with no difference in meaning). The function of /-tit/ is to place the event marked as perfect before the next event but with clear relevance to the next event (whether the next verb is another non-final or a final

verb). Examples (12.40-12.45) illustrate the use of perfect aspect on same-subject non-final clauses.

- (12.40) íʃ-kol-té kǐ-tit-ín mí-and-á
3-PL-SBJ come-PF-SS:NF eat-NSG-DECL
'After they came, they ate.'
Literally 'They have come and eaten.'

- (12.41) ha-p'íʃ-èk'-in pòn-ki-tit-ín
AFF-birth-PASS-SS:NF go.out-TOWARD-PF-SS:NF

àld-á
know-DECL
'S/he is born and then after s/he has come out to us, s/he learns.'
(Children leave the 'birthing house' after a month (for boys) or
after two months (for girls) and enter the community and only
then do they begin learning Mao culture from the community.)

Example (12.42) illustrates multiple non-final clauses with the perfect aspect.

- (12.42) íʃ-kol-té kǐ-tit-ín mí-tit-ín
3-PL-SBJ come-PF-SS:NF eat-PF-SS:NF

kúʃ-tit-ín há:l-and-á
wash-PF-SS:NF sleep-NSG-DECL
'After they have come, have eaten, and have washed, they sleep.'
(Here, the speaker is describing what's required for hospitality
for guests.)

Examples (12.43-12.44) illustrate the use of perfect aspect on different-subject non-final clauses.

(12.43) í-té kí-tit-íʃ ha-hój-k'à-n-bish-á
 3SG-SBJ come-PF-DS:NF AFF-go-FUT-1DU-AUX-DECL
 ‘After s/he comes, we’ll both go.’
 Literally, ‘S/he has come, and we will go’

(12.44) í-té hí-kí-tit-íʃ
 3SG-SBJ 3SG-come-PF-DS:NF

 zè:p’ hadèm-gà-n-bísh-á
 together work-FUT-1PL-NPST:AUX-DECL
 ‘After s/he comes, we will work together.’
 Literally: ‘S/he has come, and we will work together.’

Unlike the use of progressive aspect (which, if marked on one non-final verb in a clause chain, is marked on all non-final verbs), it is possible for the perfect suffix to appear on only one non-final verb in a chain of clauses (12.45, below). The reason for this apparently involves the function of the perfect aspect in non-final clauses: as indicating an obligatory sequence, which I translate with ‘after’ in English.

(12.43) uns-ʃál-nà tí-hí-íʃ tí-ŋ munts’-íʃ
 home-way-OBJ 1SG-go-DS:NF 1SG-GEN woman-SBJ

 kà:l-là hí-ká:l-tit-íʃ
 porridge-OBJ 3SG-make.porridge-PF-DS:NF

 ha-tí-mí-á
 AFF-1SG-eat-DECL
 ‘I went home, and after my wife made porridge and I ate.’
 Literally: ‘I went home, my wife made porridge, and I ate.’

12.3. Negative Non-Final Verbs and Their Clauses

While it is not possible to negate temporally-integrated non-final verbs, it is

possible to negate same- and different-subject non-final verbs, independently of their final verbs. There are, in fact, three different morpho-syntactic constructions to negate these non-final verbs: two for same-subject forms (what I have called the simple form and the complex form), and one for the different-subject forms (Table 12.2).

Table 12.2. Negative Non-Final Forms

	Type of Negative Non-Final Clause	Essential Morphology	Example
1	Simple Same-Subject	-tó / -wá -NEG:NF	bàmbàs-ná ki-wá Bambassi-GOAL come:INF-NEG:NF ha-hów-j- ^l á 3SG-go-away-DECL 'S/he did not come to Bambassi and left.' OR 'Without coming to Bambassi, s/he left.'
2	Complex Same-Subject	-tó / -wó + -NEG:NF -bíj-in -NPST:AUX-SS:NF	mì-wó-bíj-in eat:INF-NEG:NF-NPST:AUX-SS:NF tí-hów-j- ^l á 1SG-go-away-DECL 'I did not eat and left.' OR 'Without eating, I left.'
		-tó / -wó + -NEG:NF subject marking + -é:z-in -NFUT:AUX-SS:NF	mì-wó-t-é:z-in eat:INF-NEG:NF-1SG-NFUT:AUX-SS:NF tí-hów-j- ^l á 1SG-go-away-DECL 'I did not eat and left.' OR 'Without eating, I left.'
3	Different-Subject	-tó / -wó + subject marker + -NEG:NF -bíj-ij -NPST:AUX-DS:NF	ki-wó-hí-bíj-ij come:INF-NEG:NF-3SG-NPST:AUX-DS:NF tí-hów-j- ^l á 1SG-go-away-DECL 'S/he did not come and I left.' OR 'Without her/him coming, I left.'
		-tó / -wó + subject marker + -NEG:NF -e:z-ij -NFUT:AUX-DS:NF	ki-wó-hí-é:z-ij come:INF-NEG:NF-3SG-NFUT:AUX-DS:NF tí-hów-j- ^l á 1SG-go-away-DECL 'S/he did not come and I left.' OR 'Without her/him coming, I left.'

I will begin by briefly highlighting the most important morphological features of these negative non-final constructions. First, as is the case with final verbs, only the

infinitive verb stem (marked as such by tonal melody) can be used with negative non-final verb forms (cf. section 9.2). The simple same-subject construction (row 1) is unique from the other negative non-final construction in that it does not involve one of the non-final verb suffixes we have seen previously. Just the negative non-final suffix (/tó/ or /wá/) is required to mark the non-final verb. I have chosen to gloss these negative suffixes as NEG:NF since they alone indicate the non-final status of the simple same-subject negative non-final construction. In contrast, the complex same-subject and the different-subject form (in rows 2 and 3) also use a negative suffix (/tó/ or /wó/) as well as either the /bif/ non-past or /e:z/ non-future auxiliaries (cf. sections 9.1.3 and 10.3.1) which are then followed by the same- or different-subject suffixes found on affirmative non-final verbs.²³⁶ The complex same subject construction lacks subject marking preceding the /bif/ auxiliary; the complex different-subject construction requires the presence of subject marking before the auxiliary. Curiously, subject marking is used before the /e:z/ auxiliary in the negative complex same-subject non-final verb form.

It seems likely that /wá/ in the simple same-subject construction (row 1, Table 12.2) is related to /wó/ used in the complex constructions (rows 2 and 3) and even to the /á/ and /wé/ negative suffixes found on negative final verbs (cf. section 9.1.3). Perhaps the [a] vowel of /wá/ underwent rounding before the following bilabial on the auxiliary

²³⁶ The complex same-subject and different-subject non-final constructions in rows 2 and 3 (Table 12.2) include lexical non-final verb stems, their negative suffixes, as well as auxiliary elements and non-final verb suffixes; these complex SS and DS constructions should each be considered single non-final verb constructions. First, no material may ever occur between the negated non-final verb and the auxiliary which follows. Second, the two auxiliaries used are the same forms found in the negative non-future non-3rd person declarative form (section 10.5.1). Finally, the auxiliary /e:z/ is never attested as an independent main verb (cf. section 10.3.1).

/bɨf/; while the auxiliary /-e:z/ can be used as well, it is much less frequent in my data. The /-wé/ negative marker (section 10.5.1) is found only before the /-ja/ NFUT:AUX on the 3rd person negative declaratives. In this case, the vowel could have changed from [a] to [e] before the palatal approximant. The /-tó/ negative non-final marker can be used in both same-subject and different-subject non-final clauses (cf. examples 12.47 and 12.54, below). Since /-wó/ NEG:NF can be used with both same- and different-subject constructions and since it is likely that the forms /-wá/ and /-wó/ are related, I use the gloss NEG:NF for all these forms, without specifying the same-subject or different-subject status of the non-final clause.

The simple same-subject negative non-final construction with /-wá/ is by far most common. In my texts, it is used almost exclusively. The other forms were offered during elicitation sessions, working from these texts. The form /-tó/ can be used interchangeably with /-wá/.²³⁷ Each of the negative non-final constructions is exemplified below.

12.3.1. The Negative Simple Same-Subject Non-Final Clause

Examples (12.46-12.47) illustrate the use of /-wá/ and /-tó/ in the negative simple same-subject non-final clauses.

²³⁷The verb ‘be good’ /ha-nok-á/ requires /-wá/ for marking it as a negative non-final verb. This may be related to the fact that the headless relative clause form of ‘be good’ is /nók-t-ó/ be.good:INF-REL-TV. I cannot say for sure why this one nominalization carries the final vowel /-o/ after the relativizer, but the final vowel appears to have harmonized with the verb stem’s vowel. Also, it is not clear to me why the final vowel would occur on this one word in this context, where other terminal vowels don’t occur (cf. section 8.2). At any rate, the form /nók-t-ó bíj-^lá/ be.good:INF-REL-TV EXIST-DECL is not a clause chain (nor a negative at all), but means rather ‘It is that which is good.’

(12.46) kà:l-là mì-wá ha-tí-hadèm-á
 porridge-OBJ eat:INF-NEG:NF AFF-1SG-work-DECL
 ‘I didn’t eat porridge and worked.’
 OR ‘Without eating porridge, I worked.’

(12.47) kà:l-là mì-tó ha-tí-hadèm-á
 porridge-OBJ eat:INF-NEG:NF AFF-1SG-work-DECL
 ‘I didn’t eat porridge and worked.’
 OR ‘Without eating porridge, I worked.’

Example (12.48) shows that the negative simple same-subject non-final verb can be used with a future tense final verb.

(12.48) íʃ-nà ínt’-tó
 3SG-OBJ see:INF-NEG:NF

 ha-hów-j-gà-m-bìʃ-á
 AFF-go-AWAY-FUT-NPST:AUX-DECL
 ‘S/he did not see her/him and left.’
 OR ‘Without seeing her/him, s/he left.’

12.3.2. The Negative Complex Same-Subject Non-Final Clause

Examples (12.49-12.50) illustrate the two different auxiliary elements with negative non-final verbs in the complex same-subject construction. As noted in the introduction to section 12.3, no subject marking occurs on the non-final verb before the /bìʃ/ auxiliary; but subject marking is used on the non-final verb before the /-e:z/ auxiliary. No difference in meaning has been observed.

(12.49) mì-wó-bíʃ-in
eat:INF-NEG:NF-NPST:AUX -SS:NF

jè:ts' -j-á-t-bíʃ-[↓]á
run:INF-AWAY-NEG-1SG-NPST:AUX-DECL
'I didn't eat and didn't run away.'

(12.50) mì-wó-t-é:z-in
eat:INF-NEG:NF-1SG-NFUT:AUX-SS:NF

jè:ts' -j-á-t-é:z-[↓]á
run:INF-AWAY-NEG-1SG-NFUT:AUX-DECL
'I didn't eat and didn't run away.'

Example (12.51) illustrates the use of the /-tó/ NEG:NF suffix in the negative complex same-subject non-final construction.

(12.51) hádèm-tó-bíʃ-in uns-ʃál-nà
work:INF-NEG:NF-NPST:AUX-NF home-way-OBJ

ha-tí-hów-j-[↓]á
AFF-1SG-go-AWAY-DECL
'I didn't work and went home.'
OR 'Without working, I went home.'

12.3.3. The Negative Different-Subject Non-Final Clause

Examples (12.52-12.54) illustrate negative different-subject non-final clauses. The /-wó/ negative non-final suffix is used in (12.52 and 12.53); these two examples also illustrate use of the two auxiliaries (/ -bíʃ/ and / -e:z/).

(12.52) ki-wó-hí-bíʃ-ij̃
come:INF-NEG:NF-3SG-NPST:AUX-DS:NF

ha-tí-hów-j-^lá
AFF-1SG-go-AWAY-DECL
‘S/he did not come and I left.’
OR ‘Without her/him coming, I left.’

(12.53) ki-wó-hí-é:z-ij̃
come:INF-NEG:NF-3SG-NFUT:AUX-DS:NF

tí-hów-j-^lá
1SG-go-AWAY-DECL
‘S/he did not come and I left.’
OR ‘Without her/him coming, I left.’

Example (12.54) illustrates the /-tó/ negative non-final suffix in the negative different-subject non-final clause.

(12.54) kà:l-là mì-tó-hí-bíʃ-ij̃
porridge-OBJ eat:INF-NEG:NF-NPST:AUX-DS:NF

ha-tí-hów-j-^lá
AFF-1SG-go-AWAY-DECL
‘S/he did not eat porridge and I left.’
OR ‘Without her/him eating porridge, I left.’

As noted in section 12.2.3, temporally-integrated non-final clauses cannot be negated. This suggests that temporally-integrated non-final clauses do not express presupposed (not asserted) information. Speakers do not accept the use of /-tó/, /-wá/ or /-wó/ on temporally-integrated non-final verbs (12.55).

(12.55)* ínint'-wó-tí-bíʃ-èt
 try:INF-NEG:NF-1SG-NPST:AUX-TI:NF

tí-ŋ ↓ma:gèw-nà ha-tí-int'-á
 1SG-GEN friend-OBJ AFF-1SG-see-DECL
 (intended: 'While I was not trying, I saw my friend.')

Furthermore, negations of the final verb do not have scope over the temporally-integrated non-final clauses (12.56 and 12.57).

(12.56) tí-mí-èt tí-ŋ ↓ma:gèw-nà
 1SG-eat-TI:NF 1SG-GEN friend-OBJ

ínt'-á-t-é:z-↓a
 see:INF-NEG-1SG-AUX-DECL
 'While I was eating, I didn't see my friend.'
 (Implies that the speaker did indeed eat and the friend was present.)

(12.57) kwalla ʃapków tí-ʃén-èt tíŋ ↓ma:gèw-ìʃ
 yesterday shoe 1SG-buy-TI:NF 1SG-GEN friend-SBJ

tí-ná ínt'-wé-jà
 1SG-OBJ see:INF-NEG-NFUT:AUX
 'While I was buying shoes yesterday, my friend didn't see me.'
 (Implies that the speaker did indeed buy shoes.)

12.4. The Periphrastic Causative

As alluded to at the end of section 12.2.2, the verb /tà/ 'give' can function as a grammaticalized 'CAUSE' morpheme in what appears to be an affirmative different-subject non-final construction. I call this the periphrastic causative. In the wider literature, causatives have been described as involving micro-events which are linked into a single

integrated, macro-event (Comrie 1981:158ff). The notion of event-integration and clause union in causativization is also central to the work of others (cf. Givón 2001 and Shibatani 2001, among others).

It is perhaps not much of a surprise that clause chains, which can be interpreted as exhibiting cause and effect relations, could couple with the verb ‘give’, to achieve a periphrastic causative. The verb ‘give’ is also used as a valence increasing, derivational applicative (cf. section 9.7.2). Today, the periphrastic causative exhibits certain morphosyntactic and semantic properties that are different from its different-subject non-final source construction.

Examples (12.58-12.61) illustrate the periphrastic causative construction.

(12.58) tí-ʃ íʃ-nà tí-tà-aʃ ha-kí-^lá
 1SG-SBJ 3SG-OBJ 1SG-CAUSE-DS:NF AFF-come-DECL
 ‘I made her/him come.’

(12.59) tí-ʃ tí-tà-aʃ í-té ha-kí-^lá
 1SG-SBJ 1SG-CAUSE-DS:NF 3SG-SBJ AFF-come-DECL
 ‘I made her/him come.’

(12.60) p’íʃ-na hí-tà-aʃ kan-ná héz-^lá
 child-OBJ 3SG-CAUSE-DS:NF dog-OBJ hit-DECL
 ‘S/he made a child hit a dog.’

(12.61) tí-ná hì-tà-aʃ uns-ʃál-nà
 1SG-OBJ 2SG-CAUSE-DS:NF home-way-OBJ

ha-tí-hów-j-^lá
 AFF-1SG-go-AWAY-DECL
 ‘You (SG) made me go home.’

The causee can be mentioned overtly (as a free pronoun) in the first clause in (12.58). The zero subject marking (3SG) on the final verb is co-referential with this causee. In (12.59) the causee is mentioned only in the final clause; the meaning of the two utterances is interpreted as the same by my consultants. The causee cannot be mentioned overtly in both clauses.²³⁸ In (12.60), the causee is expressed in an object noun phrase in the first clause, and the causee controls zero subject marking on the verb in the final clause. But in (12.60), the final verb is transitive, so the final clause also includes the patient /kané/ ‘dog’ of the caused event ‘hit’. Example (12.61) illustrates a non-3rd person causee.

While I gloss the /-ij/ DS:Nf ([-af] after the verb stem /tà/) suffix in the same manner as I do in clear non-final clauses, the periphrastic causative construction, if it includes a synchronic clause chain at all, is not typical.

So, what is different about the periphrastic causative? First, the non-final verb has clearly undergone semantic bleaching (i.e. no event of ‘giving’ occurs in any of the examples above). Second, the normal ditransitive valence of ‘give’ is certainly not satisfied in example (12.59).²³⁹ It is important to note that there is no theme in any of the non-final clauses in periphrastic causatives. I will return to this below.

Third, there is a recipient-subject pivot requirement in the periphrastic causative, where the object (recipient) of the first clause is co-referential with the subject of the

²³⁸ That said, the syntactically more integrated example (12.58) may correspond to a higher degree of direct causation. I can’t say for sure.

²³⁹ While it is not completely rare to find examples of ‘give’ with one object not overtly mentioned because it is implied by context, I know of no examples where both objects (the recipient and the theme) are left to contextual speculation.

second clause. While recipient-subject pivots are possible with the non-causative different-subject non-final construction involving ‘give’, it is by no means required (see example 12.67, below).

Fourth, the event-structure of the periphrastic causative appears to be much more integrated than other (corresponding) different-subject chains. The clearest evidence for higher clause-union is in negation. It is not possible to negate the non-final verb in the periphrastic causative (as can be done with other different-subject non-final verbs, cf. 12.3.3.). Examples (12.62-12.63, below) illustrate that when the non-final ‘give’ verb of a construction otherwise identical to the periphrastic causative is negated, the meaning is interpreted as a negative ‘giving’ event, using negative constructions structurally corresponding to examples (12.60 and 12.61, above).

(12.62) p’iʃ-na tá-wó-hí-bíʃ-iʃ
 child-OBJ give:INF-NEG:NF-3SG-NPST:AUX-DS:NF

kan-ná héz-^lá
 dog-OBJ hit-DECL

‘S/he_i didn’t give (it) to a child_j, and s/he (either the child or someone else) hit a dog.’

(This example is considered grammatical but the meaning is unclear to speakers, presumably because the reason for linking these events is by no means obvious.)

(Compare to example 12.58, above.)

(12.63) tí-ná tá-tó-hì-bìj-ìj
 1SG-OBJ give:INF-NEG:NF-2SG-NPST:AUX-DS:NF

uns-fál-nà ha-tí-hów-j-^lá
 home-way-OBJ AFF-1SG-go-AWAY-DECL
 ‘You (SG) didn’t give (it) to me and I went home.’
 (Compare to example 12.59, above.)

That is, in examples (12.62-12.63) the construction is read as a negative DS non-final clause, cf. section 12.3.3. The forcing of a different event interpretation suggests that the periphrastic causative has indeed become a different construction. The difference is a matter of semantic event-structure and structural clause-union. The periphrastic causative is more integrated than synchronically viable different-subject clause chains.

When the final verb is negated in a periphrastic causative construction, the meaning is that a negative event was caused. In these cases, the interpretation maintains integrated event-structure semantics (12.64-12.65).

(12.64) es-nà tí-tà-aj
 person-OBJ 1SG-CAUSE-DS:NF

hìp’-á-gà-m-bìj-á
 go:INF-NEG-FUT-3-NPST:AUX-DECL
 ‘I made him not go.’

(12.65) tí-ná hí-tà-aj
 1SG-OBJ 3SG-CAUSE-DS:NF

mì-á-t-é:z-^lá
 eat:INF-NEG-1SG-NPST:AUX-DECL
 ‘S/he made me not eat.’

Let's turn now to different-subject non-final clauses involving the actual, lexical verb 'give'. In examples (12.66-12.67), a semantic theme as well as a semantic recipient are present in the non-final clause--that is the ditransitive valence of 'give' is satisfied. As noted above, this is an important structural difference between the periphrastic causative construction, where 'give' functions only as a grammaticalized 'causative' morpheme, and the non-final clause examples where 'give' functions lexically. I have no examples where a clear periphrastic causative includes a semantic theme in the non-final clause.

Non-Causative DS Non-final Clause

	Agent	Theme	Recipient		
(12.66)	tí-ʃ	ki:m-na	íʃ-nà	tí-tà-aʃ	í-té
	1SG-SBJ	money-OBJ	3SG-OBJ	1SG-give-DS:NF	3SG-SBJ

ha-kí-[↓]á

AFF-come-DECL

'I gave her/him money and s/he came.'

Non-Causative DS Non-final Clause

	Recipient	Theme			
(12.67)	íʃ-nà	pák-nà	tí-tà-aʃ	kan-íʃ	ha-mí- [↓] á
	3SG-OBJ	injera-OBJ	1SG-give-DS:NF	dog-SBJ	AFF-eat-DECL

'I gave her/him injera and a dog ate it.'

As noted in section 11.3, the order of the two objects in the ditransitive construction is not fixed syntactically. This appears to hold for ditransitive non-final clauses as well--the order of the objects is theme - recipient in (12.66) and recipient - theme in (12.67).

Another important difference in lexical uses of 'give' in non-final clauses is that there is no required recipient-subject pivot (see 12.67). As is observed in (12.66),

however, the presence of a recipient-subject pivot is permissible. In periphrastic causatives like (12.60-12.61, above), however, the object (an erstwhile recipient) of the first clause is necessarily co-referential with the subject of the following clause. This, as expected, does not hold when the non-final verb ‘give’ is negated, as in (12.62), a non-causative example. In (12.62) the subject of the final clause may or may not be co-referential with the recipient of the non-final clause.

Some examples have been interpreted as ambiguous with regards to causality (see 12.68, below). In an attempt to determine what happens when a theme is included in a non-final ‘give’ construction which could otherwise be interpreted as a causative, I elicited examples like (12.68). My purpose was to find a construction which could be read as either a two-event clause chain or as a single-event periphrastic causative construction. I have not encountered examples like (12.68) outside of elicitation. That said, the utterance was accepted as permissible by the consultants. What appears to make the ambiguity possible is 1) the presence of a theme (*injera*) in the first clause (allowing for a lexical ‘give’ reading), and 2) a recipient-subject pivot, and 3) an event setting which could lend itself to a causative reading. To further underscore the importance of the semantic theme as a cue to the interpretation of the construction, example (12.69) is interpreted as an unambiguous periphrastic causative; unlike (12.68) the theme is found only in the final clause.

Ambiguous (not found in natural speech)

- (12.68) ? pák-nà íʃ-nà tí-tà-aʃ ha-mí-^lá
injera-OBJ 3SG-OBJ 1SG-give-DS:NF AFF-eat-DECL
'I gave her/him injera and s/he ate it.'
OR 'I made her/him eat injera.'

Unambiguous Periphrastic Causative

- (12.69) íʃ-nà tí-tà-aʃ pák-nà ha-mí-^lá
3SG-OBJ 1SG-give-DS:NF injera-OBJ AFF-eat-DECL
'I made her/him eat injera.'

Finally, before leaving the discussion of the periphrastic causative, I briefly illustrate the use of multiple periphrastic causatives in a single utterance (12.70).

- (12.70) tí-ʃ ent'-p'íʃ-nà tí-tà-aʃ
1SG-SBJ male-child-OBJ 1SG-CAUSE-DS:NF

ent'-p'íʃ-ìʃ pa:lt'-nà hí-tà-aʃ
male-child-SBJ girl-OBJ 3SG-CAUSE-DS:NF

k'el kúsh-^lingk-á
body wash-REFL-DECL

'I made the boy make the girl wash herself.'

(In both instances, causation appears to be less direct and may be better translated with 'had/have' rather than 'made/make'.)

Example (12.70, above) illustrates the use of the recipient-subject pivot, where the erstwhile recipient of each non-final clause is co-referential with the subject of the following clause. As expected, there is no theme in the non-final clauses.

It is also possible to use both the periphrastic and morphological causatives (section 9.7.2) in a single utterance (12.71). Again, the erstwhile recipient of the non-final clause's erstwhile 'give' is co-referential with the subject of the final clause.

(12.71) í-té tí-ná hí-tà-af
 3SG-SBJ 1SG-OBJ 3SG-CAUSE-DS:NF

es-nà tí-àld-sìs-á
 person-OBJ 1SG-know-CAUSE-DECL
 ‘S/he had me teach a person’
 (Literally: S/he made me make him know.)

12.5. A Note on the Genesis of the Non-Final Suffixes

The three non-final suffixes /-in/ SS:NF, /-ij/ DS:NF, and /-et/ TI:NF bear a striking resemblance to other morphemes in terms of shape, and in some cases, in function. The SS:NF suffix corresponds to the coordinate conjunction /-an/ ([-n] ~ [-in] ~ [-an]) used to join noun phrases (section 8.4) and also the instrumental/comitative postposition /-an/ (section 8.3.2.2). The DS:NF suffix is similar to the subject case marker /-ij/ (section 8.3.1.1), the definite article /íj/ (section 6.2) and the anaphoric demonstrative pronoun /íjé/ (section 6.1.2). The TI:NF suffix is similar to the locative/source postposition /-et/ (section 8.3.2.1). It seems very likely that some or all of these resemblances are indicative of grammaticalization pathways for Northern Mao’s non-final suffixes. I only very briefly examine these possible sources for the non-final suffixes below.

First, the rather obvious functional similarities between a coordinate conjunction and a same-subject non-final suffix make for a compelling scenario. In section 8.4, the conjunction /-an/ was illustrated as a means of joining noun phrases. In (12.72) this same conjunction is used to join clauses. It is important to note that, even when joining clauses, the /-an/ form still attaches to noun phrases, as a second-position clitic (I have found no examples where it is used on non-noun phrase elements).

(12.72) es-ìʃ k'úp ʃén-gà-m-n-á
 person-SBJ hat buy-FUT-3-NPST:AUX-DECL

múnts'-ìʃ-ín ʃapków ʃén-gà-m-n-á
 woman-SBJ-CONJ shoe buy-FUT-3-NPST:AUX-DECL

‘A guy will buy a hat and a woman will buy shoes.’

In (12.72) the two clauses joined by the conjunction are each fully independent clauses, carrying tense and utterance type markers. The conjunction is cliticized to the end of the first noun phrase (the subject, in this instance) of the second clause. The syntactic arrangement in (12.72) is clearly distinct from the use of /-in/ as a SS:NF suffix. In clause chains, the non-final verb does not express tense, does not carry utterance type markers and requires the non-final and following clause have the same subject. Further, the same-subject non-final marker occurs on the end of the first clause, not the end of the first phrasal constituent of the second clause.

The fact that the comitative (and instrumental) postposition (section 8.3.2.2) is of an identical shape is not much of a surprise. In many languages, comitatives and conjunctions are expressed with the same marker (cf. Stassen’s description of ‘with-languages’, 2000).

Perhaps less clear is the nature of the relationship between the /-ìʃ/ DS:NF suffix and the subject case marker (which are also related to the anaphoric demonstrative, the 3rd person pronoun or the definite article). While I assume there may well be a common source to all these morphological forms, at this point I can only speculate as to some of the pathways involved. That said, it is clear, typologically, that a historical relationship between case markers and switch-reference markers is not particularly unusual (cf.

Haiman 1983 and Jacobson 1983, for discussions of historical relationship between case markers and non-final verb/clause markers in languages of two other regions of the world).

I assume an ultimate demonstrative source is likely (cf. the discussion in section 6.3), or it may be that the non-final suffix actually derived from the subject case marker itself. Perhaps the different-subject non-final clause has its roots in subject complementation, where the complement was marked with subject case.

The temporally-integrated /-et/ suffix's relationship to the locative/source postposition seems clear. The use of a locative marker, however, for marking an event as continuing long enough to overlap with a following event, the span of which overlaps with another event is perhaps not difficult to understand. This is akin to saying something like 'at eating, I saw my friend.' While the postposition /-et/ only attaches to noun phrases, the /-et/ TI:Nf suffix attaches to a verb form which carries no nominalization marker and which requires the use of the finite verb stem.

While the non-final verbs appear not to be nominals today, nominalization may well have played a role in their history. The same-subject suffix likely arises from a conjunction which, at least in all the data available currently, otherwise attaches only to nominal forms, even when joining clauses. The different-subject suffix may have come from the subject case marker on subject complements. And the temporally-integrated suffix is quite clearly related to the locative postposition which attaches to noun phrases in its postpositional function. None of the non-final verb forms, however, shows any other clear synchronic evidence (apart from their non-final suffixes) of nominalization.

That is, they are not relativized and require the use of the finite verb stem (when affirmative, just as final verbs do). Of course, the non-final verbs do appear to be less finite than final verbs in that they don't carry tense marking or utterance type marking and don't mark the wide array of aspectual distinctions found on realis verb forms (cf. section 10.2.2).

12.6. Serialization and Compounding of Verbs

Northern Mao natural discourse exhibits only a very occasional use of serialization, i.e. a construction in which verb stems occur in immediate succession and where the subjects of each of these verbs is the same, but where none of the verbs is marked with the SS:NF suffix or any other dependency marker. In contrast, verbal compounds (illustrated in section 9.8), where two verb stems (i.e. roots with verbal tone melodies) join to form a single complex verb stem, the entirety of which is surrounded by inflectional prefixes and suffixes, are more commonly attested. These compounds form single morpho-phonological words. Verbal compounding mainly involves a grammaticalized verb from a small closed set of verbs joining with a lexical verb from a large open class. Aikhenvald (1990:490) notes that “verb compounding is often viewed as the result of grammaticalization or lexicalization of serial constructions.” In the discussion below, I will briefly discuss these two phenomena.

12.6.1. Verb Serialization

Lehmann defines verb serialization as a process which “involves the combination of verbals to complex verbals without the intervention of any connectives which might make explicit the relation among them” (1988:190). Aikhenvald adds,

A serial verb construction (SVC) is a sequence of verbs which act together as a single predicate, without any overt marker of coordination, subordination or syntactic dependency of any other sort. Serial verb constructions describe what is conceptualized as a single event. They are monoclausal; their intonational properties are the same as those of a monoverbal clause, and they have just one tense, aspect, and polarity value. SVCs may also share core and other arguments. Each component of an SVC must be able to occur on its own. (2006:1).

In Northern Mao, we must distinguish serialized verbs from verbal compounding, discussed in section 12.6.2, below. Serial verbs are not single morphophonological words in Northern Mao. They are like Matisoff's (1969) "nonce concatenations" in Lahu, in which the same-subject non-final marking is not present. In (12.73) the verb 'come' appears as a bare stem before the verb 'eat' which carries the SS:NF suffix. In (12.74), the non-final suffix is present on 'come' with no observable difference in meaning.

Serial verb + Clause Chain

(12.73) kí mí-in tí-hów-j-[↓]á
 come eat-SS:NF 1SG-go-AWAY-DECL
 'I came, ate and left.'

Clause Chain (not a serialization)

(12.74) kí-in mí-in tí-hów-j-[↓]á
 come-SS:NF eat-SS:NF 1SG-go-AWAY-DECL
 'I came, ate and left.'

Interestingly, the verb 'eat' cannot occur as a serial (i.e. without a non-final suffix) before 'come' (12.75).²⁴⁰ The few examples of serialization I have found in natural data appear to be somewhat constrained (that is more constrained than clause chaining but less

²⁴⁰ It is possible to say /mì kí-in tí-hów-j-[↓]á/ eat:INF come-SS:NF 1SG-go-AWAY-DECL 'I came to eat and left.' But in this case, the tone of the verb stem 'eat' is low, indicating the infinitive, not the finite stem. This is interpreted as the purposive, albeit without the purposive suffix /-gàf/: /mì-gàf/ kí-in tí-hów-j-[↓]á/ eat:INF-PURP come-SS:NF 1SG-go-AWAY-DECL 'I came to eat and left.' Only the finite stems can be used in affirmative non-final verbs (and their corresponding serial forms).

constrained than verbal compounding, discussed below); where one order may be acceptable, another may not be. The use of non-final suffixation renders (12.75) to be grammatical (12.76).

(12.75) * mí kí-in tí-hów-j-^lá
 eat come-SS:NF 1SG-go-AWAY-DECL
 Intended: ‘I ate, came and left.’

(12.76) mí-in kí-in tí-hów-j-^lá
 eat-SS:NF come-SS:NF 1SG-go-AWAY-DECL
 ‘I ate, came and left.’

Examples (12.77-12.79) illustrate a few other examples where serial verbs have been produced in natural data. In each instance (which I have checked with speakers), the SS:NF suffix is perfectly acceptable. It remains to be seen if there is some additional semantic integration coinciding with the lack of the SS:NF suffix on these verbs.

(12.77) bèt'-ná t'è̀m int'-ín
 salt-OBJ taste see-SS:NF
 ‘...(they) tasted and saw salt...’
 (text 05.30)

(12.78) pàpáj kez-èt pór k'íl-kòt'-in
 papaya top-LOC forget leave-PF-SS:NF

tí-hój-kj-á
 1SG-go-TOWARD-DECL
 ‘I forgot and have left (it) up in the papaya tree and came.’
 (text 09.08)

(12.79) kan-ná héz pí-^lá
dog-OBJ hit kill-DECL
'S/he hit and killed a dog.'

12.6.2. On the Relation of Serialization to Verbal Compounding

While verbal compounding is illustrated in section 9.8 (also with relevance to section 10.2.2), it is now necessary to revisit the issue briefly in light of our discussion of clause chaining and verb serialization. As noted in the introduction to section 12.6, verbal compounds in Northern Mao are formed by two verb stems (one lexical and one grammaticalized) which combine to form a single phonological word. The compounded verb stems take both prefixal and suffixal inflection common to non-compounded verbs, supporting the notion that these forms are single verbs (despite the presence of more than one verb stem).

In Northern Mao, serialization appears to have been a factor in the grammaticalization of various aspect markers used on realis verbs (cf. section 10.2.2): the perfect /-kòt'/ from 'have/put', the completive /-ts'e:l/ from 'finish', and the durative /kò-/ from 'sit/stay'. Serialization also very likely played a role in the grammaticalization of directional (the cislocative /-kj/ from 'come' and the translocative /-j/ from 'go', cf. section 9.8.2) and applicative suffixes (/ -tà/ from 'give').

It seems likely that these aspectual, directional and applicative grammatical morphemes developed from serializations involving the verbs that underwent grammaticalization. Foley and Olson (1985) note that deictic motion verbs and postural verbs (analogs are found in Northern Mao's 'come,' 'go,' and 'sit/stay') are particularly susceptible to serialization. And DeLancey (1985) has discussed functional explanations

for some of these types of grammaticalization mention by Foley and Olson, adding to those verbs the grammaticalization of transitive and ditransitive verbs (analogs are found in Northern Mao's 'have/put,' 'finish,' and 'give').

Particular evidence which supports historical serialization is the relative order of the lexical and grammatical verb stems in some of the realis aspectual constructions (section 10.2.2). For instance, while the verb stem 'finish' (the completive) is found following the lexical verb stem (12.80), the verb stem 'sit/stay' (the durative) is found preceding the lexical verb (12.81).

(12.80) nà aw-èt ha-tí-hadèm-ts'e:l-á
 PROX day-LOC AFF-1SG-work-COMPL-DECL
 'I finished working today.'
 (literally: 'I work-finish on this day.')

(12.81) mú:kés-aw ha-tí-kò-hadèm-á
 all-day AFF-1SG-DUR-work-DECL
 'I was working all day.'
 (literally: 'I sit/stay-work all day.')

The different orders (lexical stem + grammaticalized stem vs. grammaticalized stem + lexical stem) are just what we would expect in serialization. The serialization for (12.80) would be 'work finish' while the serialization for (12.81) would be 'sit/stay work'.

DeLancey (1991), in his examination of serialization in Tibetan, proposes three developmental stages in moving from a non-final verb in a clause chain to an inflectional suffix: 1) a non-final verb drops the NF suffix (becoming serialized), 2) the form then loses morphological and phonological independence and 3) the form undergoes

morphologization becoming an inflection marker (1991:7-8). As seen in section 12.6.1, it is clear that while non-final verbs usually carry their non-final suffixes, there are instances in natural discourse where the non-final suffixes are not present. The lack of the NF suffix coincides with exactly that syntactic environment where serialization is expected: i.e. where each verb has the same subject and where there is no intervening material. While the grammaticalized verbs in the aspectual compounds are not reduced phonologically, the directionals are clearly reductions of /kí/ ‘come’ and /hí/ ‘go’ (section 9.8.2). In some morphophonological environments (especially prevocally), the applicative can be reduced from /-tà/ to simply [-t].

The position of the applicative marker /-tà/ and the directionals /-kj/ and /-j/ is interesting. The applicative may follow derivational marking such as the passive /-ek’/ (cf. Tables 9.1 and 9.2, section 9.1). The derivational markers defy charting in a position class chart. They can follow lexical verb stems (as in examples 9.135 and 9.136, section 9.8.2), but can also follow the applicative marker /-tà/ (as in examples 9.137 and 9.138, section 9.8.2), which, of course, is grammaticalized from the verb ‘give’. Thus, the directionals can be positioned only after verb stems (including grammaticalized verb stems), and as illustrated in section 9.8.2, the position appears to be a matter of semantics, likely related to the same sorts of ordering found in serializations (e.g. ‘take-come-give’ vs. ‘take-give-come’, where the second sequence is highlighting the direction of the giving event, as toward the deictic center).

Compounds formed with the stem /hùngùl/ ‘drop; throw away’ (cf. examples 9.144-9.148, section 9.8.3) are also likely the result of serialization. The first verb stem

(i.e. the lexical stem) in these compounds provides the main semantic material; and in several of the compounds also corresponds to what was likely the first event in a series with ‘drop; throw away’: e.g. ‘hoe’ before ‘drop’ in the verb for ‘to weed’ (9.146).

There is one other element which should be considered within this discussion of serialization and grammaticalization of verbs. The hearsay marker /-w/ is derived from the verb /wi:/ ‘say’ (cf. sections 10.4.1.2 and 10.5.1.2). This form, however, may not have undergone any compounding (but perhaps still serialization) on its journey to an inflectional suffix. The position of /-w/ is very near the end of the verbal word form (just before the declarative utterance type marker, cf. sections 9.1.1 and 9.1.2). Unlike the aspectual elements, the /-w/ form is not always immediately adjacent to the lexical verb stem. Still, it is possible that clause chains ending with the verb ‘say’ could have been the source of the hearsay suffix, regardless of whether lexical verb stems ever actually compounded with the grammaticalized ‘say’ verb. But to say more would be purely speculative at this point.

As a final note, it is important to observe that clause chaining and serialization are not the only pathways to grammaticalize verbs in Northern Mao. As discussed in section 9.5, the irrealis future verb developed from a subordinate + final existential/copular verb structure.

CHAPTER XIII

SUBORDINATE CLAUSES

Northern Mao exhibits a variety of structures whereby clauses can be embedded inside other (phrases or clauses). I use the term *subordinate clause* as a cover term for all these such embedded forms. In some cases the subordinate clause is embedded inside a noun phrase, as a modifier of a noun; these are relative clauses. In other cases, subordinate clauses function as arguments of larger clauses; these I call complement clauses. A third type of subordination in Northern Mao is when a clause is embedded as an adverbial element inside another clause in a non-argument function; these I call adverbial clauses. This chapter briefly surveys of all the subordinate clause structures which I have identified to date and highlights their particular functions.

We begin with a brief definition of *subordination* as the term is used in this grammar (13.1). We will then explore relative clauses (section 13.2), subject and object complement clauses (section 13.3) and adverbial clauses (section 13.4).

13.1. Defining the Subordinate Clause

I define subordination as the embedding of a clause within another phrase or clause. The concept of *embedding* leaves non-final clauses out of the class of subordinate forms as defined here. Thus, in this grammar dependent forms include both subordinate and non-final clauses (cf. sections 9.4.2, 10.1, and 12.1). But not all dependent structures are considered subordinate in this analysis.

Forms that function as subordinate clauses in Northern Mao may structurally have the form of an infinitive verb stem (e.g. one which serves as a subject or object

complement) or of a headless relative clause (e.g. one which modifies nouns or even as a subject/object complements). But forms which function as subordinate clauses may also be much more complex, including quite finite structures which have their complete argument array; such finite clauses can function as complements or as adverbials.

Simple nominalizations of the type verb > noun (i.e. infinitive verb stems and headless relative clauses) have already been briefly discussed in Chapter IV (sections 4.1 and 4.6.2). That said, these structures are also relevant to our discussion of subordination and are thus included in the discussion below. Nevertheless, the primary focus in Chapter XIII is on the wide array of more complicated subordinate structures, which, in some cases, exhibit various degrees of nominalization and, in other instances, quite finite structures.

13.2. Relative Clauses

Relativization is a nominalization process in Northern Mao (cf. section 4.6.2.2). The suffix /-(i)t/ is the most widespread marker of relativization, but there is also a special negative relativizer /-és/ which forms negative relative clauses, relativized on the subject. The discussion of relativization includes various affirmative (section 13.2.1) and negative (section 13.2.2) relative clause forms, relativized on different grammatical relations (subject, object, oblique and possessor) and expressing different certain tense/aspect categories.

13.2.1. Affirmative Relative Clauses

Relative clauses in Northern Mao precede their heads, when a head noun is overt. Relative clauses may also be headless, in which case the verb itself is essentially a

nominalization and may carry dual or plural number marking as well as any case marking required of the matrix verb's arguments (cf. section 4.6.2.2). In terms of verbal morphology, all affirmative relative clauses carry the /-(i)t/ relativizer; the marking of subject on the relativized verb is relevant to the type of relative clause and what erstwhile argument within the restricting clause (i.e. the relative clause itself) the relative clause is used to modify.

As discussed in section 4.6.2.2, relativization makes use of the infinitive-finite verb stem opposition (cf. sections 3.6 and 9.2). The finite verb stem is used when the relative clause carries subject prefixes or where the relativized element includes more than the verb form itself (e.g. objects, adverbials, etc.). The infinitive stem is used only when the relative clause is an erstwhile verb with no subject prefixes.

Affirmative relative clauses use only the subject-prefixal “realis” verb form (cf. section 9.1.1), but with an interesting twist. Unlike other uses of the realis verb form, relativized verbs can take the future tense suffix /-gàm/, found today only on relativized verbs but which is an older form of the future tense suffix found on final verbs (/ -gà/ FUT), cf. section 9.5 for the details on how this form has undergone reanalysis and has been divided into two morphemes. All headed relative clauses can take the future suffix. The headless relative clause is likely not a candidate for any tense distinction because it is the most nominal of the relative clauses. In headed relative clause types (see Table 13.1, below), the absence of the future tense suffix on relative clauses indicates non-future tense.

The types of affirmative relative clauses are very similar to one another (see Table

13.1, below). The parameters which set the forms apart include: 1) the lack of a head for the relative clause (row 1); 2) the use of the infinitive verb stem (rows 1 and 2); 3) lack of internal elements (other than the relativized verb form itself) to the restricting clause (rows 1-3); 4) the disallowance of subject prefixes (rows 1, 2 and 4), optionality of subject prefixes (row 3), or requirement of subject prefixes (rows 5-7). Each of the types of affirmative relativized clauses are identified and exemplified in Table 13.1, below.

In Table 13.1, row 1 describes the headless relative clause. In Northern Mao, I have found no headless relative clauses relativized on anything but the subject. The verb in these relative clauses is similar to the form found in row 2, where there is no subject marking and the infinitival verb stem is used (see discussion below). I have not found any affirmative headless relative clauses with internal objects in the restricting clause, but I have found negative headless relative clauses with internal objects, so I assume these are possible. The headless relative clause, or at least those which have no internal objects, are actually nouns (i.e. nominalizations). They serve as head nouns themselves (of their noun phrase) and thus carry number marking following the relativizer as well as case, when they occur as arguments of a matrix verb (as seen in row 1, Table 13.1).

In terms of external distribution, headless relative clauses can serve as subjects of matrix verbs (as in row 1, Table 13.1) or as objects of matrix verbs (example 13.1, below), where they carry the expected object case marker /-na/.

- (13.1) hez-ít-wol-na ha-int’-á
 hit:INF-REL-PL-OBJ AFF-see -DECL
 ‘S/he saw those who hit.’

The subject of relativized clauses can be co-referential or not with the subject of

the matrix clause.

Table 13.1. Affirmative Relativized Verb Forms

		Type of Relative Clause	Essential Morphology	Examples
Less Finite	1	Headless Relative Clause	Infinitive Verb Stem + + /-(i)t/ REL	hez-ít-wol-íʃ hit:INF-REL-PL-SBJ ha-kí-wand-á AFF-come-NSG-DECL 'Those who hit came.'
	2	Relativized on Subject (without an internal object)	Infinitive verb stem + /-(i)t/ REL	mì-t es-íʃ eat:INF-REL person-SBJ ha-kí-á AFF-come-DECL 'The person who ate came.'
More Finite	3	Relativized on Object (of Transitive)	Optional subject prefix for 3 rd person + Finite verb stem + /-(i)t/ REL	(hí-)mí-t ka:l-íʃ 3SG-eat-REL porridge-SBJ ha-nok-á AFF-be.good-DECL 'The porridge that s/he ate was good.'
	4	Relativized on Subject (with internal object)	Finite verb stem + /-(i)t/ REL	kà:l-là mí-t es-íʃ porridge-OBJ eat-REL person-SBJ ha-kí-á AFF-come-DECL 'The person who ate the porridge came.'
	5	Relativized on Object (of Ditransitive)	Required subject prefix + Finite verb stem + /-(i)t/ REL	íʃ munts'-íʃ kí:m-na DEF woman-SBJ money-OBJ hí-tà-t es-íʃ 3SG-give-REL person-SBJ ha-kí-á AFF-come-DECL 'The person to whom to the woman gave money came.'
	6	Relativized on Oblique	Required subject prefix + Finite verb stem + /-(i)t/ REL	kap-íʃ kez-èt hí-kòw-t bird-SBJ top-LOC 3SG-sit-REL kjat'-nà ha-int'-á house-OBJ AFF-see-DECL 'S/he saw the house on which sat a bird.'
	7	Relativized on Possessor	Required subject prefix + Finite verb stem + /-(i)t/ REL	(íʃ ¹) kwí:nt' tí-kám-t 3SG hair 1SG-find-REL nogdow-nà tí-int'-á lion-OBJ 1SG-see-DECL 'I saw the lion that (his) hair I found.' (i.e. 'whose hair I found')

The relative clause in row 2 (Table 13.1) is relativized on the subject. This means the noun which the relative clause modifies is co-referential with the subject of the

restricting clause; as a result, the subject in the restricting clause is marked by gaps, where the noun phrase and the subject prefix on the verb would be in a simple finite clause (cf. example 4.76, section 4.6.2.2). The relative clause structure in row 2 does not include any other material in the restricting phrase; this coupled with the lack of subject prefix allows the relative clause to be formed with the infinitive verb stem.²⁴¹

In row 3 (Table 13.1), the relative clause is relativized on the object. In this structure, the modified head noun is co-referential with the object of the restricting clause. There is a gap for the object in the restricting clause. When the subject is not 3rd person (as in 13.2, below), the verb carries the appropriate subject markers. When the subject of the relative clause is 3rd person, the subject may or may not be marked on the relativized verb (13.3-13.4).

(13.2) tí-mí-t ka:l-ìʃ ha-nok-á
 1SG-eat-REL porridge-SBJ AFF-be.good-DECL
 ‘The porridge that I ate was good.’

(13.3) íʃ m̀ntsʹ-ìʃ hí-héz-ìt es-ìʃ ha-kí-á
 DEF woman-SBJ 3SG-hit-REL person-SBJ AFF-come-DECL
 ‘The person whom the woman hit came.’

(13.4) íʃ m̀ntsʹ-ìʃ héz-ìt es-ìʃ ha-kí-á
 DEF woman-SBJ hit-REL person-SBJ AFF-come-DECL
 ‘The person whom the woman hit came.’

In examples (13.2-13.4) the verb stem is the finite form, regardless of whether there is subject marking on the relativized verb. The existence of an overt subject NP in the

²⁴¹ The relative clause in row 4, on the other hand, is also relativized on the subject, but the presence of material in the restricting phrase requires the use of the finite verb stem in the relativized verb.

relative clause (where the 3rd person subject prefix is optional) triggers the requirement of the finite verb stem.

Row 4 features a subject relative clause (i.e. relativized on the subject) with an overt object internal to the restricting clause. An important difference between the relative clauses in rows 2 and 4 is the finiteness category of the relativized verb stem itself.

Row 5 features a relativization on one of the two objects of a ditransitive clause involving the verb ‘give’. In this case, the verb must carry the subject prefix, unlike the optional subject prefixes for 3rd person subjects discussed for the form in row 3. Either of the objects of a ditransitive construction may be relativized on. The semantic recipient is relativized on in row 5. The semantic theme is relativized in (13.5), with no difference in marking on the verb.

- (13.5) íʃ m̀nts’-ìʃ es-nà hí-tà-t ki:m-ìʃ
 DEF woman-SBJ person-OBJ 3SG-give-REL money-SBJ
- ha-bíʃ-^lá
 AFF-EXIST-DECL
- ‘There is the money that the woman gave to a person.’

Row 6 (Table 13.1) illustrates a relativization on an oblique. Again, the strategy used involves a gap, in this instance where ‘house’ would normally be found before the relational noun ‘top’ (cf. section 4.5). The noun ‘house’ serves as the head noun for the relative clause and is marked for object case, as the object of ‘see’.

Row 7 illustrates a relativization on a possessor, in this case ‘lion’. Relativization on a possessor can involve a gap, where the possessor would be in the restricting phrase;

morphological distinctions are relatively complex, we begin with a brief overview of the constructions in Table 13.2.

An important structural parameter is the use of different relativizers: in rows 1-3, the /-(w)és/ NEG:REL is used (and the relativized verb does not contain any other negative suffix), while in rows 4-6, we find the /-(i)t/ relativizer (which is also found on affirmative relative clauses). The negative relativizer /-(w)és/ is only found on headless relative clauses and non-future tense relative clauses, relativized on the subject (see rows 1-3 of Table 13.2). It is important to note that none of these relativized verb forms which take the negative relativizer carry subject marking.

The relativizer /-(i)t/ is used on all the other negative relative clause constructions. For instance, negative non-future relativizations on the object (in row 4, Table 13.2) involve essentially a relativization of the negative non-future final verb (cf. section 9.1.3). The negative future relative clauses are formed in the same manner as the affirmative future relative clauses, except for the use of the infinitive verb stem and the presence of the negative suffix (rows 5 and 6, Table 13.2).

We turn now to a brief discussion, row by row, of Table 13.2. Row 1 illustrates the non-future headless relative clause; the only difference from the affirmative headless relative (row 1 of Table 13.1) is the use of the /-(w)és/ negative relativizer in place of the /-t/ relativizer.

Rows 2 and 3 in Table 13.2 illustrate the verb form used for relativizing on the subject in non-future tense, whether there is an element (argument or adjunct) internal to the restricting clause or not: row 3 features an object in the clause while row 2 does not.

Regardless, an infinitive verb stem with the /-(w)és/ negative relativizer occurs.

Table 13.2. Negative Relativized Verb Forms

	Type of Relative Clause	Essential Morphology	Examples
1	Headless Relative Clause Relativized on Subject	Infinitive verb stem + /-(w)és/ NEG:REL +	mì-wés- [↓] wol-ij̃ eat:INF-NEG:REL-PL-SBJ ha-kí-wand-á AFF-come-NSG-DECL 'Those who didn't eat came.'
2	Non-Future Relativized on Subject (no internal object)	Infinitive verb stem + /-(w)és/ NEG:REL	mì-wés es-ij̃ eat:INF-NEG:REL person-SBJ ha-kí- [↓] á AFF-come-DECL 'The person who didn't eat came.'
3	Non-Future Relativized on Subject (with internal object)	Infinitive verb stem + /-(w)és/ NEG:REL	kà:l-là mì-wés es-ij̃ porridge-OBJ eat:INF-NEG:REL person-SBJ ha-kí- [↓] á AFF-come-DECL 'The person who didn't eat the porridge came.'
4	Non-Future Relativized on Object (either mono- or ditransitive)	Relativized negative declarative non-future verb (with subject marking) + /-(i)t/ REL	ák-á-t-é:z-it eat:INF-NEG-1SG-NFUT:AUX-REL oʃk-nà ha-ak-á meat-OBJ AFF-eat-DECL 'S/he ate the meat that I didn't eat.'
5	Future Relativized on Subject	Infinitive verb stem + /-á / NEG + /-gám/ FUT + /-b/ NPST:AUX + /-(i)t/ REL	hádèm-á-gám-b-t work:INF-NEG-FUT-NPST:AUX-REL es-ij̃ person-SBJ mì-á-gà-m-bij̃-á eat:INF-NEG-FUT-3-NPST:AUX-DECL 'The person who will not work will not eat.' (an aphorism)
6	Future Relativized on Object	Subject marking + Infinitive verb stem + /-á / NEG + /-gám/ FUT + /-b/ NPST:AUX + /-(i)t/ REL	tí-mì-á-gám-b-t 1SG-eat:INF-NEG-FUT-NPST:AUX-REL ka:l-là tí-ŋ [↓] ob-ij̃ porridge-OBJ 1SG-GEN brother-SBJ ha-mí-gà-m-bij̃-á AFF-eat-FUT-3-NPST:AUX-DECL 'My brother will eat the porridge that I will not eat.'

Row 4 illustrates the negative relativization on the object. This structure can be used to relativize on the object of a monotransitive or either of the objects of a ditransitive. Example (13.9) illustrates the same structure used for relativizing on a semantic theme, and example (13.10) illustrates its use for relativizing on the semantic

recipient in a ditransitive construction.

(13.9) p'ij-na tá-á-tí-bí-t ki:m-nà
child-OBJ give:INF-NEG-1SG-NPST:AUX-REL money-OBJ

hup'-és-ìf ha-húp'-↓á
steal:INF-person-SBJ AFF-steal-DECL
'A thief stole the money that I didn't give a child.'

(13.10) ki:m-na tá-á-tí-bí-t p'ij-ìf
money-OBJ give:INF-NEG-1SG-NPST:AUX-REL child-SBJ

ha-jé:ts'-j-↓á
AFF-run-AWAY-DECL
'The child that I didn't give money to ran away.'

As noted in the discussion preceding Table 13.2, the relative clause structure in row 4 is unique among the negative relative clauses: it uses the negative declarative non-future (non-3rd person) verb construction (cf. section 10.5.1.1) as the base, to which the /-(i)t/ relativizer attaches.

Unlike the affirmative relative clauses in Table 13.1, negative relative clauses always mark the subject when relativizing on the object. As noted in section 9.4.2, affirmative, non-future dependent verb forms (including relative clauses) generally use the realis verb form and thus mark subjects with prefixes. One important exception to this strong tendency is found in row 4 (of Table 13.2), where the relativization is based on a negative irrealis verb construction and the subject is thus marked with a suffix.

In row 4, the subject marking is found positioned immediately before either of the auxiliary elements /-bij/ or /-e:z/ (cf. sections 10.3.1 and 10.5 for the use of these

appears to be headless and which includes the future tense suffix (13.15). What's unusual about this is that this is the only example I have encountered where the typically very nominal headless relative clause includes a future tense suffix.

(13.15) hádèm-á-gàm-b-t-ìf
work:INF-NEG-FUT-NPST:AUX-REL-SBJ

mì-á-gà-m-bìf-á
eat:INF-NEG-FUT-3-NPST:AUX-DECL
'Who will not work will not eat.'

It is not known whether other headless relative clauses can take the future tense suffix, or whether this form in the proverb is really unique.

As noted above (at the end of section 13.2.1), there is no way to relativize on a pronominal subject or object. This holds for the negative relative clause as well as the affirmative.

13.3. Complements

In this grammar, the term *complement* is used for clauses which serve as either subject or object arguments of another verb. There are a variety of complement types in Northern Mao. The most obvious division involves the grammatical function of the complement itself: that is subject vs. object complements. Within these two types, though, further divisions are clear. Subject complements are generally restricted to the most nominalized forms (see section 13.3.1, below) and do not appear to be limited by any selectional restrictions of the matrix verb which takes them as an argument. Object complements exhibit more of a range in their degrees of finiteness than the subject complement forms and do appear to be limited in terms of the type of matrix verb which

can take them (see section 13.3.2).

While relative clauses (which are nominal) can function as subjects and objects, these are not complements in the narrow sense that I use *complement* in this grammar. Relative clauses are either essentially nouns (e.g. the headless relative clause) or clauses embedded inside noun phrases. Thus, their ability to serve as subjects or objects is simply due to the fact that noun phrases can serve this function. I have not yet encountered any clear examples where Northern Mao’s relativizer /-(i)t/ also functions as a complementizer.

13.3.1. Subject Complements

There are two types of subject complements in Northern Mao, which I have called the non-finite and the more finite subject complements. Both types take the subject case marker. In neither instance can the subject complement verbs take subject prefixes. The more finite complement may (but need not) include an object or peripheral (i.e. adverbial) material internal to the complement structure. The non-finite complement cannot include any internal constituency beyond the complement verb itself. Both types of subject complements are illustrated in Table 13.3.

Table 13.3. Subject Complements

	Complement Type	Essential Morphology	Gloss
1	Non-Finite Complement	Infinitive verb stem + /-iʃ/ SBJ	ki-iʃ ha-pá:l-l-á come:INF-SBJ AFF-be.difficult-DECL ‘Coming was difficult.’
2	More Finite Complement	Finite verb stem + /-iʃ/ SBJ	kàl-là mí-iʃ ha-nok-á porridge-OBJ eat-SBJ AFF-be.good-DECL ‘Eating porridge is good.’

Row 1 (Table 13.3) features another highly nominal complement. In most cases in the texts, no subject is expressed at all on verbs in subject complements. It is possible,

however, to express an agent argument subject through the use of a genitive construction, where a genitive-marked nominal precedes the infinitive verb stem.

- (13.16) tí-ŋ ↓ki-ìʃ ha-pá:l-↓á
 1SG-GEN come:INF-SBJ AFF-be.difficult-DECL
 ‘My coming was difficult.’

When a transitive verb is used in a subject complement, it is not possible to include an object if the agent is expressed via a genitive construction (13.17-13.18).

- (13.17) * íʃ-ìŋ oʃk-nà ak-ìʃ ha-k’úm-↓ek’-á
 3SG-GEN meat-OBJ eat:INF-SBJ AFF-forbid-PASS-DECL
 Intended: ‘Her/his eating meat was forbidden.’

- (13.18) íʃ-ìŋ ak-ìʃ ha-k’úm-↓ek’-á
 3SG-GEN eat:INF-SBJ AFF-forbid-PASS-DECL
 ‘Her/his eating was forbidden.’
 (i.e. as during a fast)

If the agent argument is not expressed through the genitive construction, the patient of the complement verb can be joined to an infinitive complement verb through the (noun + noun) associative construction (cf. section 4.4.1 and example 3.19). The object cannot, however, be expressed in a noun phrase independent from the complement verb (13.20).

- (13.19) ká:nd-óʃk-ak-iʃ ha-k’úm-↓ek’-á
 pig-meat-eat:INF-SBJ AFF-forbid-PASS-DECL
 ‘Eating pork is forbidden.’

- (13.20) * ká:nd-óʃk-nà ak-iʃ ha-k'úm-^lek'-á
 pig-meat-OBJ eat:INF-SBJ AFF-forbid-PASS-DECL
 Intended: 'Eating pork is forbidden.'

In (13.19), the complement agent cannot be expressed, even via a genitive construction; speakers have rejected every attempt I've made to include it. No agents have been found in natural examples of complements which include objects like (13.19). At issue here is a requirement for a highly nominalized subject complement structure (i.e. a complement which fits into one of the noun phrase constructions found elsewhere in the language, such as the associative or genitive constructions); this coincides with the use of the infinitive verb stem.

Row 2 in Table 13.3 features a more finite subject complement form. In this complement type, the finite verb stem is used. Use of the finite verb stem correlates with the inclusion of the complement verb's object in a free NP. As noted in section 4.6.2.2, it may be that constructions like (13.21) are nominalizations of a verb phrase or of a clause and examples like (13.18) and the example in row 1 of Table 13.3 are nominalizations of a verb itself.

- (13.21) pàl-là kjàmb-ìʃ ha-nok-á
 antelope-OBJ hunt-SBJ AFF-be.good-DECL
 'Hunting antelopes is good.'

The more finite complement in row 2 of Table 13.3 cannot express the agent via a genitive construction or via a subject marker on the verb stem. In other words, the genitive construction only takes the most nominalized noun phrases in the second position (as the possessum) (13.22-13.23). I've found no way to include both a subject and an object in any subject complements thus far.

with a finite verb stem

- (13.22) * tí-ŋ pàl-là kjámb-ìʃ ha-nok-á
1SG-GEN antelope-OBJ hunt-SBJ AFF-be.good-DECL
Intended: ‘My hunting antelopes is good.’

with an infinitive verb stem

- (13.23) tí-ŋ kjamb-ìʃ ha-nok-á
1SG-GEN hunt:INF-SBJ AFF-be.good-DECL
‘My hunting is good.’

Clause chains with non-final verbs appear to be preferred for this function (as in 13.24), cf. section 12.2.2.

- (13.24) pàl-là tí-kjámb-ìʃ tí-ŋ kjamb-ìʃ
antelope-OBJ 1SG-hunt-DS:NF 1SG-GEN hunt:INF-SBJ

ha-nok-á
AFF-be.good-DECL
‘I hunt antelopes and my hunting is good.’

I have not encountered any subject complements which take the future tense suffix. It is not clear to me if this is due to limited data or if this is related to the degree of nominalization required for subject complements. Even when the matrix verb takes the future tense, the complement verb (of the subject complement) does not (13.25).

- (13.25) pàl-là kjámb-ìʃ ha-nok-gà-m-bìʃ-á
antelope-OBJ hunt-SBJ AFF-be.good-FUT-3-NPST:AUX-DECL
‘Hunting antelopes will be good.’

13.3.2. Object Complements

Like subject complements (section 13.3.1), some object complement structures take the infinitive verb stem while others take the finite verb stem. The choice of object

complement structure is relevant to the particular matrix verb used; that said, I note that more research is needed to fully explore the relationship between matrix verbs and their object complement options. What follows is by no means the last word on the topic.

We will begin our exploration of object complements with the less finite constructions. These include the simple complement constructions (Table 13.4), and the /-gàf/ complements (Table 13.5). None of these three less-finite complement constructions can be interpreted to have a different tense from the matrix verb; they are unmarked for tense. Two parameters are useful for examining these structures: 1) the verb stem (infinitive vs. finite) and 2) the nature of the subject of the complement (either the same or different subject from the matrix verb).

We begin with object complement forms analogous to the subject complement forms in Table 13.3. I call these constructions “simple” object complements because they do not involve any special subordination morphology apart from the object case marker itself and they cannot carry subject marking. These complements involve either an infinitive or finite verb stem followed by an obligatory object case marker. Essentially, the infinitive stem is used when the complement includes only the verb stem; the finite stem is used when the complement includes an object. Neither of these complement constructions can carry a subject different from the matrix verb (in fact, the subject cannot be marked on the complement verb at all). The simple object complement construction are illustrated in Table 13.4.

Table 13.4. Simple Object Complements

	Complement Type	Subject Type	Essential Morphology	Type of Complement
1	Non-Finite Complement	SS	Infinitive verb stem + /-na/ OBJ	jè:ts'-nà ha-tí-nó:k- [↓] a run:INF-OBJ AFF-1SG-begin-DECL 'I began running.'
2	More-Finite Complement	SS	Finite verb stem + /-na/ OBJ	bàmbàs-ǰál-nà jé:ts'-nà Bambassi-way-GOAL run-OBJ ha-tí-nó:k- [↓] a AFF-1SG-begin-DECL 'I began running to Bambassi.'

The simple object complement constructions in Table 13.4 typically occur with matrix verbs such as 'begin' (Table 13.4), 'try,' 'finish,' and same-subject complements of 'want' (13.26-13.31). These verbs fit within the category of matrix verbs Givón calls "modality verbs" (2001:81).

(13.26) jè:ts'-nà ha-tí-inint'-[↓]á
run:INF-OBJ AFF-1SG-try-DECL
'I tried to run.'
(Literally: 'I tried running.')

(13.27) bàmbàs-ǰál-nà jé:ts'-nà ha-tí-inint'-[↓]á
Bambassi-way-OBJ run-OBJ AFF-1SG-try-DECL
'I tried running to Bambassi.'

(13.28) jè:ts'-nà ha-tí-ts'él-[↓]á
run:INF-OBJ AFF-1SG-finish-DECL
'I finished running.'

(13.29) bàmbàs-ǰál-nà jé:ts'-nà ha-tí-ts'él-[↓]á
Bambassi-way-OBJ run -OBJ AFF-1SG-finish-DECL
'I finished running to Bambassi.'

(13.30) jè:ts'-nà ha-tí-wó:l-^lá
 run:INF-OBJ AFF-1SG-want-DECL
 'I want to run.'
 (Literally: 'I want running.')

(13.31) bàmbàs-ʃál-nà jè:ts'-nà ha-tí-wó:l-^lá
 Bambassi-way-OBJ run-OBJ AFF-1SG-want-DECL
 'I want to run to Bambassi.'

Northern Mao has two object complement constructions that use the form /-gàʃ/ as a subordinator:²⁴² one is formed with the infinitive verb stem and the other with the finite verb stem (Table 13.5).

Table 13.5. The /-gàʃ/ Object Complements

	Complement Type		Subject Type	Essential Morphology	Example
1	Infinitive /-gàʃ/ Complement (Same-Subject) (without internal object or adverbial)		SS	Infinitive verb stem + /-gàʃ/ + optional /-na/ OBJ	tjám-gàʃ-nà count:INF-COMP-OBJ ha-tí-wó:l- ^l á AFF-1SG-want-DECL 'I want to count.'
2	Finite /-gàʃ/ Complement	Same-Subject (with internal object or adverbial)	SS	Finite verb stem + /-gàʃ/ + optional /-na/ OBJ	ki:m-na tjám-gàʃ-nà money-OBJ count-COMP-OBJ ha-tí-mé:nt- ^l á AFF-1SG-tell-DECL 'I told her/him to count the money.'
		Different-Subject (with or without internal object or adverbial)	DS	Subject Prefix + Finite verb stem + /-gàʃ/ + optional /-na/ OBJ	hí-tjam-gàʃ-nà 3SG-count-COMP-OBJ ha-tí-mé:nt- ^l á AFF-1SG-tell-DECL 'I told her/him to count.'

While object case marking is required on simple object complements (13.26-13.31), it is

²⁴² The /-gàʃ/ subordinator is also found on the non-complement purposive adverbial (section 13.4.1). The form /-gàʃ/ is very likely related to the /-gàm/ FUT tense marker seen in relative clauses as well as the /-gà/ FUT tense marker found on final verbs. As discussed in section 9.5, the subordinator function appears to be older than the tense function. It may be that the [ʃ] in /-gàʃ/ bears some relationship to the relational noun /ʃal/ 'way' which is found on postpositional locative phrases in movement predications (cf. section 4.5).

optional on /-gàʃ/ complements, like on most other objects (cf. section 8.3.1.2).

In addition to the infinitive vs. finite verb stem, /-gàʃ/ object complement structures can be classified by their ability to take the same (SS) or a different subject (DS) from their matrix verb. The infinitive /-gàʃ/ complement (row 1) requires the same subject as the matrix verb. The finite /-gàʃ/ complement (row 2) may take either the same or a different subject from the matrix verb. As with relativization (section 13.2.1), the use of the finite verb stem in /-gàʃ/ complements co-occurs with the presence of subject prefixes on the verb or with the presence of an overt object or adverbial in the complement structure.

Matrix verbs which take /-gàʃ/ object complements include the ‘modality’ verbs (‘begin,’ ‘try,’ ‘finish’ and ‘want’), cf. examples (13.32-13.35) below. It is also possible to use the verb ‘want’ with a different-subject on the complement--a function which Givón’s (2001:40) considers “manipulation”. Certain other matrix verbs allow for the expression of indirect speech with the /-gàʃ/ complement (cf. section 13.3.3, below): ‘tell’ (13.37), ‘ask’ (13.38-13.39), and ‘say’ (13.40-13.41). Reports of indirect speech can also be expressed through the complex object complement (section 13.3.3, example 13.49).

Infinitive /-gàʃ/ Complements

(13.32) mì-gàʃ-(nà) ha-tí-nó:k-ʼá
eat:INF-COMP-OBJ AFF-1SG-begin-DECL
‘I began to eat.’

(13.33) mì-gàʃ-(nà) ha-tí-inintʼ-á
eat:INF-COMP-OBJ AFF-1SG-try-DECL
‘I tried to eat.’

(13.34) mì-gàʃ-(nà) ha-tí-ts'é:l-^lá
 eat:INF-COMP-OBJ AFF-1SG-finish-DECL
 'I finished eating.'

(13.35) mì-gàʃ-(nà) ha-tí-wó:l-^lá
 eat:INF-COMP-OBJ AFF-1SG-want-DECL
 'I want to eat.'

Finite /-gàʃ/ Complements

(13.36) kà:l-là hí-mí-gàʃ-(nà) ha-tí-wó:l-^lá
 porridge-OBJ 3SG-eat-COMP-OBJ AFF-1SG-want-DECL
 'I want her/him to eat porridge.'

(13.37) kà:l-là hí-mí-gàʃ-(nà) ha-tí-mé:nt-^lá
 porridge-OBJ 3SG-eat-COMP-OBJ AFF-1SG-tell-DECL
 'I told her/him to eat porridge.'
 (indirect speech)

(13.38) ha-tí-hów-j-k'àʃ-(nà) tì-nà ha-wò:s-á
 AFF-1SG-go-AWAY-COMP-OBJ 1SG-OBJ AFF-ask-DECL
 'S/he asked me to leave.'
 (indirect speech)

(13.39) tí-ʃ ha-tí-hów-j-k'àʃ-(nà) ha-wò:s-á
 1SG-SBJ AFF-1SG-go-AWAY-COMP-OBJ AFF-ask-DECL
 'S/he asked me to leave.'
 (indirect speech)

When the matrix verb has manipulative force, then the manipulee in a finite (DS) /-gàʃ/ complement may be expressed as either an object noun phrase in the matrix clause (13.38) (i.e. there is raising), or as a subject-marked noun phrase in the complement clause (13.39).

I have only found a few instances where (non-manipulative) ‘say’ takes a /-gàf/ complement; in these few instances, the complement is always finite and the subjects of the complement and final verbs are always different. These forms are relevant to the discussion of reported speech (section 13.3.3).

(13.40) ha-kí-gàf-(nà) wi:-á
 AFF-come-COMP-OBJ say-DECL
 ‘S/he_i said that s/he_j came.’
 (indirect speech)

(13.41) ha-tí-kí-gàf-(nà) wi:-á
 AFF-1SG-come-COMP-OBJ say-DECL
 ‘S/he_i said that I_j came.’
 (indirect speech)

While the infinitive /-gàf/ complement is most common when there is no subject marking on the complement verb, it is also possible to use the finite verb stem in /-gàf/ complements without subject marking (as these are same-subject complements). This seems rare in natural speech, but speakers have accepted a finite verb stem in every instance in elicitation (13.42, as compared to 13.32, above).

(13.42) mí-gàf-nà ha-tí-nó:k-á
 eat-COMP-OBJ AFF-1SG-begin-DECL
 ‘I tried to eat.’

It is not possible to use the infinitive verb stem in the /-gàf/ complement when there is a subject prefix on the complement verb or when there is an object or adverbial inside the complement.

The simple object and /-gàf/ object complement constructions cannot take the

future tense marker and cannot exhibit any tense distinction different from the matrix verb (13.43-13.46).

Non-Finite Simple Complement

- (13.43) mì-nà ha-nók:g-à-t-bíj-á
eat:INF-OBJ AFF-begin-FUT-1SG-NPST:AUX-DECL
'I will try to eat.'

More-Finite Simple Complement

- (13.44) kà:l-là mí-nà
porridge-OBJ eat-OBJ

ha-nók:g-à-t-bíj-á
AFF-begin-FUT-1SG-NPST:AUX-DECL
'I will try to eat porridge.'

Infinitive /-gàʃ/ Complement

- (13.45) mì-gàʃ-(nà) ha-nók:g-à-t-bíj-á
eat:INF-COMP-OBJ AFF-begin-FUT-1SG-NPST:AUX-DECL
'I will try to eat.'

Finite /-gàʃ/ Complement

- (13.46) kà:l-là mí-gàʃ-(nà)
porridge-OBJ eat-COMP-OBJ

ha-mé:nt-gà-t-bíj-á
AFF-tell-FUT-1SG-NPST:AUX-DECL
'I will tell (someone) to eat.'
(indirect speech)

There is no way to use the future tense suffix on these less-finite complement verbs. We now turn to the last two types of object complements: the complex object complement

and finite object complement constructions which can exhibit tense distinctions different from their matrix verb.

The complex object complement is so-named because it requires a doubling of the complement verb: 1) the complement verb is relativized and 2) the infinitive verb stem corresponding to this relativized complement verb serves as the head of the relative clause (Table 13.6).

Table 13.6. The Complex Object Complement

Subject Type	Essential Morphology	Tense	Example
SS	Subject Prefix + Finite verb stem + /(i)t/ REL + Infinitival verb stem with /-na/ OBJ	Non-Future	íʃ ki:m-nà tí-tjam-it tjam-na DEF money-OBJ 1SG-count-REL count:INF-OBJ ha-tí-àld-á AFF-1SG-know-DECL 'I know that I counted the money.'
		Future	íʃ ki:m-nà DEF money-OBJ tí-tjam-gàm-b-ìt 1SG-count-FUT-NPST:AUX-REL tjam-na ha-tí-àld-á count:INF-OBJ AFF-1SG-know-DECL 'I know that I will count the money.'
DS	Subject Prefix + Finite verb stem + /(i)t/ REL + Infinitival verb stem with /-na/ OBJ	Non-Future	íʃ ki:m-nà tí-tjam-it tjam-na DEF money-OBJ 1SG-count-REL count:INF-OBJ ha-àld-á AFF-know-DECL 'S/he knows that I counted the money.'
		Future	íʃ ki:m-nà DEF money-OBJ tí-tjam-gàm-b-ìt 1SG-count-FUT-NPST:AUX-REL tjam-na ha-àld-á count:INF-OBJ AFF-know-DECL 'S/he knows that I will count the money.'

While the complex object complement construction is, like other relative clauses, a noun phrase, it is unique in the way the head noun of the relative clause is limited to the infinitive stem of the relativized (finite verb stem) verb. Despite the fact that this construction is a noun phrase, I include it in the discussion of complementation because it

Clearly, in a language with normally quite rigid SOV order, it seems strange to find these object complements before the matrix subject. So, the question arises, how can one be sure that these are not simply two full sentences in immediate succession? The word order alone certainly seems to support the notion that the first finite clause is not an embedded complement, but an independent sentence. It is also worth noting that while most other affirmative, non-future dependent verb forms (including relative clauses and complements which can take subject markers as well as non-final/medial verbs) take subject prefixes including the unique 3rd person forms (cf. section 9.4.2), the future tense form of the finite object complements (in Table 13.7) do not. They exhibit the same subject marking as is found on final verbs (cf. section 9.4.1).

Evidence that the first clause is a complement is three-fold. First, in all instances where I have checked these structures with speakers, no pause may be found between the first finite clause and the second. Second, the valence of the final verb is not satisfied in any of these complements (unless we assume a definite null object)--see Table 13.7. And third, this juxtaposed two-clause phenomenon has only been found (thus far) with three matrix verbs ('think,' 'say,' and 'tell'), which are utterance verbs (if we allow for 'think' to reference internal speech). The use of 'tell' with this complement structure only includes a sense of 'reporting information', cf. section 13.3.3, example 13.54; it does not function here as a manipulation verb (cf. 13.51, below). I have not identified any syntactic tests which could shed more light on the status of the first clause, and so, for now, I consider these to be complements and include them here as such.

The so-called finite object complement may exhibit a same or a different subject

from the matrix verb. Regardless of whether the subject is the same as that of the matrix verb or not, it is always marked on the complement verb. As expected of any highly finite complement, the complement verb takes its own tense marking.

Examples (13.50-13.51) illustrate the finite object complement with the verbs ‘say’ and ‘tell.’ While the use of terms like same-subject and different-subject can be used for the finite complement of the matrix verb ‘think’ (as in Table 13.7), these terms are problematic for uses of this complement that involve reporting direct speech, as when ‘say’ or ‘tell’ serve as matrix verbs. For instance, a 3rd person matrix subject can be co-referential with the 1st person complement subject (as in ex. 13.51) while two 3rd person subjects (on the matrix verb and complement verb, respectively) need not be co-referential (13.50). This is clearly in contrast with how subject marking on the finite object complement functions when the verb ‘think’ is used for internal speech (Table 13.7). From consultants’ translations into Amharic, it appears that the 1st person subject in the complement is not co-referential with the ‘thinker.’

- (13.50) háts’à ha-kí-gà-m-bìj-á
 tomorrow AFF-come-FUT-3-NPST:AUX-DECL
- ha-wi:-á
 AFF-say-DECL
 ‘S/he_i said, “S/he_j will come tomorrow.”’

- (13.51) háts'à kí-gà-t-bíʃ-á
 tomorrow come-FUT-1SG-NPST:AUX-DECL
- ha-me:nt-á
 AFF-tell-DECL
 'S/he_i told (to someone), "I_i will come tomorrow.'"

All of the finite object complement examples in Table 13.7 involve only declarative utterances as complements, but others are possible (cf. the discussion of reported speech, section 13.3.3, below).

13.3.3. Reported Speech Complements

Reported speech in Northern Mao appears to involve only certain of the object complement structures: direct speech is reported via the finite object complement while indirect speech can be reported with either the /-gàʃ/ object complement or the complex object complement. The simple object complements (which are the least finite of the object complements in terms of subject marking, negation and tense) cannot be used for reporting speech.

The only examples of direct speech which I have found involve the finite complement construction (Table 13.7). Of course, this is no surprise, given that direct speech essentially means that the reporter of the speech has done very little to recast the speech of another into the immediate discourse. Examples (13.50-13.51) illustrate the use of the finite complement as a means of expressing direct speech. Additional examples, including reported declarative, interrogative, and imperative speech, respectively, are illustrated below (13.52-13.54).

object complement. Only the /-gàf/ object complement (Table 13.5) and complex object complement (Table 13.6) appear to be used for indirect speech. Examples (13.37-13.41 and 13.46), above, illustrate the /-gàf/ object complement as a means of expressing indirect speech with the verbs ‘tell,’ ‘ask,’ and ‘say.’ Examples (13.49, above) and (13.57, below) illustrate the use of the complex object complement as a means of expressing indirect speech with the verb ‘say.’

- (13.57) ha-tí-in-gàm-b-t in-na ha-wi:-á
 AFF-1SG-do-FUT-NPST:AUX do:INF-OBJ AFF-say-DECL
 ‘S/he_i said that I_j will do (it).’

While I have discussed reported speech constructions in Northern Mao in terms of direct and indirect, recent typological work on reported discourse shows that there is a continuum of categories ranging between two extremes of “minimal or maximal shift of the deictic center” (i.e. various categories which may be found between the extremes of direct and indirect speech) (Güldemann and Roncador 2002:viii). Certainly, more research is needed to explore ways in which Northern Mao speakers may report speech as well as the ways they disambiguate pronominal reference in reported speech. All of my referentiality indexing is based on interpretations provided by speakers. It may be the case, however, that there could be ambiguities about which I am currently unaware.

13.3.4. Negative Object Complements

The subject complements (Table 13.3, section 13.3.1) and the simple object complement (Table 13.4, section 13.3.2) cannot be negated independently of the matrix verb. However, the other object complements in section 13.3.2 (i.e. the /-gàf/ object complement (Table 13.5), the complex object complement (Table 13.6) and the finite

object complement (Table 13.7)) can be negated independent of the matrix verb. As is the case with all other negative verbs, only the infinitive verb stem can be used in any morphologically negative form (cf. section 9.2). In the discussion below, I briefly illustrate how each of these complements can be negated.

Negation of the /-gàʃ/ object complement requires two different sorts of constructions, depending on whether the complement carries the same subject as the matrix verb or not. The same-subject /-gàʃ/ object complement is negated by the addition of the /-á/ negative suffix (cf. section 9.1.3) (13.58).

Negative SS /-gàʃ/ Object Complement

- (13.58) *mì-á-gàʃ-(na) tí-wó:l biʃ-á*
 eat:INF-NEG-COMP-OBJ 1SG-say NPST:AUX-DECL
 ‘I am wanting not to eat.’

The different-subject /-gàʃ/ object complement, on the other hand, is formed similarly to the negative different-subject non-final verbs (section 12.3): the negative marker /-wá ~ -wó/ is used before the subject-marked non-past auxiliary.²⁴⁴ Unlike the non-final verbs, the object complement is marked with the /-gàʃ/ complementizer (13.59-13.60).

Negative DS /-gàʃ/ Object Complement

- (13.59) *ki-wá-tí-bíʃ-gàʃ-(nà) tí-ná mé:nt-á*
 come:INF-NEG-1SG-NPST:AUX-COMP-OBJ 1SG-OBJ tell-DECL
 ‘S/he told me not to come.’

²⁴⁴ Throughout section 12.3, I gloss the /-wá ~ -wó/ suffix as a negative non-final suffix (NEG:NF) because same-subject non-final verbs can simply take the /-wá ~ -wó/ with no other non-final marking (cf. section 12.3.1). That said, there is no reason at all to assume that the /-wá ~ -wó/ in the subordinate clauses is anything but a negative marker, albeit one only found on dependent verbs (i.e. not on final verbs, but on non-final and some subordinate verbs--such as the /-gàʃ/ object complement and the complex object complement).

clauses of location and one of the structures used for reason may exhibit their own tense, independent of the final verb, while the other non-conditional adverbials do not take any tense marking. Conditional adverbials, on the other hand, never exhibit tense marking and almost always require that the final matrix verb be marked for future tense (irrealis).

13.4.1. Non-Conditional Adverbials: Time, Location, Manner, Purpose and Reason

Only one grammatical construction has been found for each of the adverbial functions of time and location. However, multiple constructions are used for manner, purpose and reason adverbials.

The only structure found functioning as an adverbial of time is the temporally-integrated non-final clause (Table 13.8); cf. section 12.2.3.

Table 13.8. Adverbial of Time

Essential Morphology	Example
Temporally-Integrated Non-Final Verbs (cf. section 12.2.3)	<p>hí-hadèm-èt 3SG-work-TI:NF kí-gà-t-bíj-á come-FUT-1SG-NPST:AUX-DECL ‘While s/he is working, I will come.’</p>

Adverbials of location can be expressed by relative clauses headed by the noun /ku:le/ ‘place,’ followed by the locative postposition /-et/ (Table 13.9).

Table 13.9. Adverbial of Location

Essential Morphology	Example
Relative Clause + /ku:l-èt/ place-LOC	<p>í-té hí-hadèm-t ku:l-èt 3-SBJ 3SG-work-REL place-LOC hadèm-gà-t-bíj-á work-FUT-1SG-NPST:AUX-DECL ‘I will work at the place s/he worked.’</p>

Adverbials of manner can be formed by three different constructions (Table 13.10).

infinitive verb stem) as the matrix verb, or with a different subject (requiring the finite verb stem with subject prefixes) from the matrix verb.

If on an adverbial clause, /-gàj/ cannot be followed by the /-na/ object case marker. While both uses of /-gàj/ clearly appear to be a single form, I have used different glosses to highlight its different function as a complementizer (COMP) or as a purpose adverbial subordinator (PURP). It is also possible to form purpose adverbials with an infinitive verb stem followed by the genitive case marker /-iŋ/ (cf. section 8.3.1.3 for a general discussion of the genitive case marker).

Adverbials of reason can also be expressed through the use of multiple constructions (Table 13.12).

Table 13.12. Adverbials of Reason

Essential Morphology	Example
Same- or Different-Subject Non-Final Verbs (cf. sections 12.2.1 and 12.2.2)	jè:ts'-ná jé:ts'-iŋ tí-ná run:INF-OBJ run-DS:NF 1SG-OBJ ha-ŋil-á AFF-make.tired-DECL 'Because I ran a race, it made me tired.' OR 'I ran race, and it made me tired.'
Relative Clause + /àr-èt/ reason-LOC	jàk'-ná tí-pí-t àr-èt tí-ná goat-OBJ 1SG-kill-REL reason-LOC 1SG-OBJ pí-gà-m-biŋ-á kill-FUT-3-NPST:AUX-DECL 'S/he will kill me because I killed (her/his) sheep.'

Some same- or different-subject non-final clause constructions can be interpreted as cause-effect or reason-result (cf. sections 12.2.1 and 12.2.2).²⁴⁵ It is also possible to use a relative clause headed by the noun /àr-èt/ 'reason' plus the locative postposition /-et/ (as in the second example in Table 13.12).

Only adverbials formed with relative clause structures can express tense

²⁴⁵ As noted in section 12.2, these non-final clauses can be interpreted as sequences as well.

distinctions (i.e. adverbials of location and the relative clause + /àr-èt/ reason adverbial). Non-future and future tense distinctions in relative clauses are illustrated in sections 13.2.1 and 13.2.2.

Before we consider conditional adverbials, we must consider which of the structures above (which can function as non-conditional adverbials) can be negated independently of the final verb. The potential for negation has to do with the grammatical construction used. Adverbials of time, some adverbials of manner (those formed with the infinitive + instrumental postposition), and some adverbials of purpose (those formed with the infinitive verb stem + genitive case marker) cannot be negated. All the other types can be morphologically negated, independently of the final verb. These include relative clauses, the /-gàf/ subordinations and same- or different subject non-final verb forms. Their respective negative constructions are illustrated in sections 13.2.2 for relative clauses, 13.3.2 for /-gàf/ subordinations, and 12.3 for non-final verbs.

13.4.2. Conditional Adverbials

Northern Mao's conditional adverbials can be used to express relations such as 'if...then' (the simple conditional), 'whether X or not...Y' (the uncertain conditional), or hypothetical situations of the sort 'if X were to obtain, then Y would occur' (the hypothetical conditional). Each conditional clause type can take either the same or a different subject from the final verb; each of them can also be morphologically negated independent of the final verb. None of the conditional clauses can mark tense morphologically (though temporal settings can be expressed through adverbial forms within the clauses). Each of the conditional clauses is illustrated in Table 13.13.

Table 13.13. Conditional Clauses

Essential Morphology	Subject Type	Example
Simple Conditional Subject Prefix + Finite Verb Stem + / -fɪn/	Same-Subject	háts'à tí-kí-fɪn hì-nà tomorrow 1SG-come-COND 2SG-OBJ ha-int'-gà-t-bɪf-á AFF-see-FUT-1SG-NPST:AUX-DECL 'If I come tomorrow, I will see you.'
	Different-Subject	háts'à tí-kí-fɪn tí-nà tomorrow 1SG-come-COND 1SG-OBJ ha-int'-gà-m-bɪf-á AFF-see-FUT-3-NPST:AUX-DECL 'If I come tomorrow, s/he will see me.'
Uncertain Conditional Subject Prefix + M toned Verb Stem (on H toned Finite Stems) + / -fɪn/	Same-Subject	tí-mi-fɪn 1SG-eat:UNCERT-COND háts'à hadèm-gà-t-bɪf-á tomorrow work-FUT-1SG-NPST:AUX-DECL 'Whether I eat (or not), I will work tomorrow.'
	Different-Subject	tí-mi-fɪn 1SG-eat:UNCERT-COND háts'à kà:l-là tomorrow porridge-OBJ ha-ká:l-gà-m-bɪf-á AFF-make.porridge-FUT-3-NPST:AUX-DECL 'Whether I eat (or not), s/he will make porridge tomorrow.'
Hypothetical Conditional (with counterfactual) Relative Clause + /-an/ INS + Counterfactual Final Verb (cf. section 10.2.4.2)	Same-Subject	tí-kí-t-an int'-gà-tí-ntè 1SG-come-REL-INS see-FUT-1SG-HYP:AUX 'If I were to come, I would see you.'
	Different-Subject	mi-mis-ɪf hí-bi-t-an eat:INF-thing-SBJ 3SG-EXIST-REL-INS mí-gà-tí-ntè eat-FUT-1SG-HYP:AUX 'If there were food, I would eat.'

Both the simple conditional and the uncertain conditional are marked with a suffix /-fɪn/ COND. The simple conditional requires the finite verb stem, marked with the expected tone melody normally associated a given stem (either H, M or L, cf. section 3.6). The uncertain conditional, encountered rarely, is marked by a tonal change such that a H-toned finite verb stem takes a M tone, while the M and L finite verb stems remain unchanged. This means, of course, that any difference between the simple and uncertain conditionals is neutralized when the verbs in the conditional clause involve M and L

toned finite stems. Perhaps the pattern of tone change for the uncertain conditional was once more robust than it is today. Given the behavior of H finite verb stems in the uncertain conditional, it may be that the construction once involved a L tone (or perhaps a L toned prefix) marking the verb as ‘uncertain.’ It is entirely possible, though, that as has been found in some other Omotic languages, like Benchnon (Rapold 2006) and Sheko (Hellenthal 2010), the tonal melody of a verb could be used to indicate a modal difference (such as fact vs. non-fact). Whatever the case was in history, today the use of tone to indicate such a difference is found only in the uncertain conditional.

Example (13.69) illustrates the use of the M tone on H class finite verb stems. We can see that the infinitive stem for ‘eat’ is L toned (in ‘food’ /mì-mìs/ eat:INF-thing), while the finite stem for ‘eat’ carries a H tone (/ha-mí-gà-m-bìf-á/ AFF-eat-FUT-3-NPST:AUX-DECL). On the conditional verb, however, the tone is clearly M (/tí-mi-ʃin/ 1SG-eat:UNCERT-COND).

(13.69) mì-mìs-ìʃ tí-mi-ʃin
 eat:INF-thing-SBJ 1SG-eat:UNCERT-COND

tí-ŋ ma:gèw-ìʃ ha-mí-gà-m-bìf-á
 1SG-GEN friend-SBJ AFF-eat-FUT-3-NPST:AUX-DECL
 ‘Whether I eat food (or not), my friend will eat.’

In (13.70), however, the simple conditional construction is used, with the H tone on the conditional clause’s verb.

(13.70) m̀̀-m̀̀s-ìʃ tí-mí-ʃín
 eat:INF-thing-SBJ 1SG-eat-COND

tí-ŋ ma:gèw-ìʃ ha-mí-gà-m-bìʃ-á
 1SG-GEN friend-SBJ AFF-eat-FUT-3-NPST:AUX-DECL
 ‘If I eat food, my friend will eat.’

I have found no way to force an uncertain conditional reading when the conditional clause involves a finite verb stem with the tones M or L. In every instance, the form is translated as a simple conditional. No identifiable semantic class has been established for H class finite verb stems. The tonal melody of finite (or infinitive) stems seems to be unrelated to any notion of verb classes, other than the melody classes themselves (cf. sections 2.5.3 and 3.6).

In the simple and uncertain conditionals, the final verb (outside the adverbial clause proper) is most typically marked for future tense, though there are exceptions. Perhaps this is partly due to the nature of conditional utterances. The only exceptions to this that I’ve encountered involve final verbs that are negative cognitive verbs, like ‘not know.’ Clearly negative verb forms require the irrealis form (cf. section 9.1.3), which may well be part of the issue. But, that said, I have only encountered verbs of cognition as negative non-future final verbs in these constructions. It may be that verbs of cognition can do this because they are able to express a present meaning even when they are not progressive forms in the non-future tense (cf. section 10.2.1). Example (13.71) illustrates the use of the non-future ‘know’ with the simple conditional, while example (13.72) illustrates the same phenomenon with the uncertain conditional.

(13.71) m̀̀-m̀̀s-̀̀j̃f h́-bíj̃-f̃in
eat:INF-thing-SBJ 3SG-EXIST-COND

àld-á-t-é:z-^lá
know.INF-NEG-1SG-NFUT:AUX-DECL
'If there is food, I don't know.'

(13.72) m̀̀-m̀̀s-̀̀j̃f h́-bíj̃-f̃in
eat:INF-thing-SBJ 3SG-EXIST:UNCERT-COND

àld-á-t-é:z-^lá
know.INF-NEG-1SG-NFUT:AUX-DECL
'Whether there is food (or not), I don't know.'

I have not identified any instances of the uncertain conditional in the texts, but the construction was spontaneously offered during one of my elicitation sessions.

The hypothetical conditional (in Table 13.13) is formed by a relative clause followed by the instrumental postposition /-an/. Thus far in my data hypothetical conditionals have only been found with a particular counterfactual verb form (the “hypothetical conditional counterfactual”) serving as the final verb (cf. section 10.2.4.2). This sort of counterfactual has not been found outside of the hypothetical conditional construction. I translate hypothetical conditionals with subjunctive conditional constructions in English in an attempt to capture the hypothetical nature of these utterances.

Unlike the simple and uncertain conditionals, the hypothetical conditional cannot take any non-future final verb. Despite elicitation attempts to the contrary, the final verb is always counterfactual (i.e. taking the irrealis form, the future tense suffix and the

hypothetical auxiliary, cf. section 10.2.4.2).

It is possible, however, to negate the final counterfactual verb. When the final counterfactual verb in the hypothetical conditional is negated, the construction can express meaning similar to a concessive ('even if...would not') conditional (cf. section 10.2.4.2, example 9.37, repeated below as 13.73).

- (13.73) mì-mìs-ìf hí-bí-t-an
eat:INF-thing-SBJ 3SG-EXIST-REL-INS
- mì-á-gà-tí-ntè
eat:INF-NEG-FUT-1SG-HYP:AUX
'If there were food, I would not eat.'

No particular grammatical structure, however, has been identified as allocated to any sort of concessive conditional.

CHAPTER XIV

ALIGNMENT

In this final chapter of the grammar, it is perhaps fitting that we turn to cross-constructional patterns related to the marking and function of core arguments. The brief examination to follow involves a summary of patterns identified and illustrated in previous chapters of the grammar and also explores theoretical issues in categorizing this particular system.

I begin with a definition of alignment (section 14.1), and then turn to a summary of coding strategies for core arguments, such as word-order, bound pronominal marking and core case marking (section 14.2). I then identify the behavioral properties associated with subject and object categories (section 14.3), and summarize the facts pertinent to Northern Mao's system (section 14.4). I conclude by considering the degree to which the Northern Mao's nominative-accusative alignment system fits with König's (2006 and 2008) definition of marked-nominative systems and by considering broader implications related to the reconstruction of case in Proto-Omotoc (sections 14.5).

14.1. Alignment Defined

Alignment concerns cross-constructional patterns in the mechanism(s) by which a language establishes the grammatical relations of core arguments: the single arguments of intransitive constructions (S), the most agent-like argument (A) and patient-like arguments (P) of transitive constructions (Comrie 1978). Alignment may be manifested in a variety of coding structures including constituent order, participant-reference marking on verbs, case marking and various combinations thereof; as well as by morphosyntactic

behavioral properties, such as equi-subject/object deletion and switch-reference.

14.2. An Overview of Northern Mao Patterns: Coding Strategies

Formal/structural coding of the ‘S,’ ‘A,’ and ‘P’ elements involves constituent order, bound pronominal marking on verbs (for subjects, not for objects) and morphological case markers in Northern Mao.

14.2.1. Constituent Order

The constituent order in the vast majority of Northern Mao constructions is a rigid SV in intransitives and APV in transitives (cf. sections 11.1 and 11.2).

	S		V
(14.1)	es-ìʃ		ha-kí-ti-á
	person-SBJ	AFF-come-PF-DECL	
	‘A person has come.’		

	A	P	V
(14.2)	es-ìʃ	kan-(ná)	ha-pí- [↓] á
	person-SBJ	dog-(OBJ)	AFF-kill-DECL
	‘A person killed a dog.’		

The SV / AVP order holds for all intransitive and transitive constructions with overt (free) NP core arguments, with two pragmatically-marked exceptions involving fronted objects and clefting (cf. sections 8.3.1.2 and 11.1.3, respectively, as well as below).

In (14.3), for instance, the object ‘a dog’ is in a focused pre-subject position. As discussed in section 8.3.1.2, the object case marker, which is optional on objects in canonical preverbal (AOV) position, is required on fronted object NPs.

	P	A	V
(14.3)	kan-ná	es-ìʃ	ha-pí- ^h á
	dog-OBJ	person-SBJ	AFF-kill-DECL
	‘A person killed a dog .’		

In cleft constructions, which are formally intransitive (section 11.1.3), the S is postverbal. The order of the elements is the clefted predicate in first position, followed by a copular verb (or a zero copula, if the meaning is present tense, see ex. 14.6), and the S (a relativized verb) (14.5-14.6).

	Predicate	S	(in Cleft)
(14.5)	àbdél:	bitè kí-t-ìʃ-é	
	Abdellah	be.PST come-REL-SBJ-TV	
	‘It was Abdellah who came.’		

	Predicate	S	(in Cleft)
(14.6)	àbdél:-è	kí-t-ìʃ-é	
	Abdellah-TV	come-REL-SBJ-TV	
	‘It’s Abdellah who came.’		

The cleft construction is essentially a pragmatically-marked form of Northern Mao’s copular construction (section 11.1.2), where the subject is right-dislocated.

In (14.7-14.8), a pragmatically unmarked equative copular construction illustrates the order of S followed by the predicate and then verb argument, for comparison.

	S	Predicate	(in Equative Construction)
(14.7)	kí-t-ìʃ	àbdél: bitè	
	come-REL-SBJ	Abdellah be.PST	
	‘Who came was Abdellah.’		

	S	Predicate	(in Equative Construction)
(14.8)	kí-t-ìf	àbdél:-è	
	come-REL-SBJ	Abdellah-TV	
	‘Who came is Abdellah.’		

Thus, while constituent order in Northern Mao is rigidly SV / APV in pragmatically neutral utterances, instances of focus may involve objects and clefted predicates positioned before the subject.²⁴⁶

14.2.2. Bound Pronominal Marking

All Northern Mao verbs in clauses exhibit subject marking, except for same-subject non-final verbs (sections 12.2.1 and 12.3.1) and the more nominalized subordinate verbs (sections 13.2 and 13.3). Objects, on the other hand, are not marked on the verb.

Final verbs (sections 9.1 and 10.1), different-subject non-final verbs (section 12.2.2), temporally-integrated non-final verbs (section 12.2.3) and the more finite subordinate verbs (sections 13.2 and 13.3) exhibit various participant reference marking systems relevant to subjects. Most generally, realis verb forms exhibit subject prefixes for both S and A, while irrealis verb forms exhibit subject suffixes for both S and A (sections 9.4.1 and 9.4.2). On final realis verbs, 3rd person singular is zero-marked while 3rd person dual and plural subjects (S and A) are marked with a non-singular suffix and a zero prefix. On final irrealis verbs, 3rd person is morphologically marked (section 9.4.1). On affirmative dependent verbs (i.e. non-final and non-future subordinate verbs), there are

²⁴⁶ The terminal vowel /e/ is required on clefted elements when no copular verb is present (i.e. when there is a zero copula) and also when nominals occur at the ends of utterances (cf. section 8.2, for a complete description of the terminal vowel's distribution).

3rd person subjects (S and A) are marked by prefixes (section 9.4.2). Verbs in imperative and jussive utterances exhibit subject markers which are unique among Northern Mao verbs (sections 10.4.3 and 10.5.3).

In summary, then, only S and A (subjects) are ever marked on the verb in Northern Mao; objects are never marked on verbs.

14.2.3. Core Case Marking

There are two case markers which mark core (i.e. non-peripheral) arguments in Northern Mao clauses: the subject case marker /-ij/ (section 8.3.1.1) and the object case marker /-na/ (section 8.3.1.2). The subject case marker is required on very nearly all grammatical subjects, whether S or A; the only exception is on conjoined noun phrases, where the subject case marker appears to be optional (according to some speakers, at least) (section 8.4), and the optionality holds for both S and A. As noted above (with respect to examples 14.2 and 14.3), in transitive constructions, the object case marker is optional when the object is preverbal and obligatory when fronted before the subject. In ditransitive (double-object) constructions, the object marker is required on the first object and optional on the second object, regardless of semantic roles (theme, patient or recipient) (section 11.3).

14.2.3.1. The Subject Case Marker

The subject case marker marks all grammatical NP subjects (whether intransitive S or transitive A), including semantic agents (14.9), themes (14.10), locations (14.11), experiencers (14.12) and instruments (14.13). The subject case marker is not used for any other function.

Agent

- (14.9) p'ɨʃ-ɨʃ kan-(ná) ha-héz-¹á
child-SBJ dog-(OBJ) AFF-hit-DECL
'A child hit a dog.'

Theme

- (14.10) tí-ŋ ma:gèw-ɨʃ bàmbàs-ét bitè
1SG-GEN friend-SBJ Bambassi-LOC be.PST
'My friend was in Bambassi.'

Location

- (14.11) bàmbàs-ɨʃ ha-wák-¹á
Bambassi-SBJ AFF-be.far-DECL
'Bambassi is far (from here).'

Experiencer

- (14.12) múnts'-ɨʃ ha-ník-¹á
woman-SBJ AFF-be.hungry-DECL
'A woman is hungry.'

Instrument

- (14.13) wè:ŋk'-k'ulf-ɨʃ kjat'-kulf-(na) ha-wè:ŋk'-á
open:INF-lock-SBJ house-lock-(OBJ) AFF-open-DECL
'A key opened (the) lock of the house.'

I have chosen the term 'subject case' over 'nominative' because this case marker is highly restricted in its use (cf. Sasse 1984:111-112, who uses 'subject case' for some East Cushitic languages). In Northern Mao, subject case is used on and only on grammatical subjects, not on other potential candidates for nominative marking, such as predicate nominals in copular constructions; predicate NPs (i.e. predicate nominals) are

not marked with either of the core cases (section 11.1.2).²⁴⁷

14.2.3.2. The Object Case Marker

The object case marker is used for all objects, including semantic themes (14.14), patients (14.15), experiencers (14.16), locatives (14.17), and benefactives (14.18) in transitive constructions and both objects, including the theme and recipient (14.19) in the ditransitive construction.

Theme

- (14.14) íʃ p'íʃ-íʃ kan-(ná) ha-kòt'-á
DEF child-SBJ dog-(OBJ) AFF-have-DECL
'The child has a dog.'

Patient

- (14.15) tí-ŋ ʎma:gèw-íʃ kan-(ná) ha-ts'a:ŋ-á
1SG-GEN friend-SBJ dog-(OBJ) AFF-kick-DECL
'My friend kicked a dog.'

Experiencer

- (14.16) múnts'-(nà) ha-ʃíl-á
woman-(OBJ) AFF-make.tired-DECL
'A woman is tired.' OR 'It made a woman tired.'

Location

- (14.17) as-íʃ ha:ts'-(nà) ha-k'ós:-ʎá
hail-SBJ water-(OBJ) AFF-change-DECL
'(The) hail changed into water (i.e. melted).'

²⁴⁷ The marking of predicate nominals is relevant to the discussion of the marked-nominative pattern below (section 14.5.1), where most predicate nominals and citation forms are marked with the same form as accusative case (König 2008:158).

		Theme	Recipient	
(14.18)	háts'à	tí-ʃ	ʃapków-nà	p'íʃ-(na)
	tomorrow	1SG-SBJ	shoe-OBJ	child-(OBJ)

ha-tà-gà-t-bíʃ-á
 AFF-give-FUT-1SG-NPST:AUX-DECL
 ‘Tomorrow, I will give shoes to a child.’

		Benefactive	
(14.19)	tí-ʃ	p'íʃ-(na)	ha-kí-tà-á
	1SG-SBJ	child-(OBJ)	AFF-come-APPL-DECL

‘I came for the child.’ (i.e. on the child’s behalf)

Thus, as far as case marking is concerned, there is no structural basis for making a direct object vs. indirect object distinction in Northern Mao; each object of the ditransitive construction can be marked in the same manner. There is no dative case; there is only the general category ‘object.’

I have chosen the term ‘object case’ for /-na/ on the grounds that all grammatical objects can be marked with it (regardless of semantic role) and also on the grounds that it is a fitting counterpart to my use of ‘subject case’ (section 14.2.3.1).

14.2.3.3. The Object Case Marker in Other Functions

The object case marker /-na/ is less functionally marked than the subject case marker; it can be used on two other elements: semantic goals and it serves as the “marker” on standards in comparative constructions.

First, use of the object case marker on semantic goals in movement predications could be due to movement predications being actual transitive constructions; this requires a ‘definite null’ analysis for all instances where goals are not overtly mentioned in such

constructions (cf. the detailed discussion in section 8.3.4). Example (14.20) illustrates the /-na/ form marking a semantic goal. The object case marker is optional on goals, as on canonically-ordered objects.

- (14.20) àsós-(nà) ha-tí-hów-[↓]á
Asosa-(OBJ) AFF-1SG-go-DECL
'I went to Asosa.'

Another challenge to the argument that goals are syntactic objects is that while most typical objects can become subjects of passive constructions, goals of movement predications cannot.

- (14.21) * bàm̀bàs-íŋ ha-hów-[↓]ek'-á
Bambassi-SBJ AFF-go-PASS-DECL
intended: something like 'Bambassi was gone to.'

I have elected to use the gloss 'OBJ' for all uses of the form /-na/ (all of which are likely to be historically related in some way) in this grammar. That is not meant to suggest, however, that I am convinced that semantic goals are grammatical objects; though they may be, as Dimmendaal suggests for some other African languages (2003:100) (cf. section 8.3.4). Let's turn now to a more clear cut example of the object case marker in a non-object marking function.

The object case marker is also apparently required in one of the comparative constructions, as a marker on standards of comparison (cf. section 11.1.4 and ex. 14.22, below). The comparative constructions are not transitive constructions. As noted in section 11.1.4, the comparative constructions involve the same copular verbs as other copular constructions, such as are used in equative, attributive and locative predications.

Standard-Marker

- (14.22) kan-íʃ àndúr-ná kè̃m-ít-è
dog-SBJ cat-OBJ be.big:INF-REL-TV
‘The dog is bigger than the cat.’

In section 14.2.3.4, below, I illustrate the only instance of an object taking a different case marker. This is found in ditransitive constructions, where benefactives can take the genitive case marker. Normally, however, the genitive case marker does not mark core arguments of the clause (section 8.3.1.3).

14.2.3.4. The Genitive Case as Marker of Core Arguments

The genitive case suffix can be used to mark benefactive NPs (as well as possessors within NPs through the genitive construction, section 4.4.2.2). I have no examples where the object case suffix /-na/ follows the genitive suffix on a benefactive argument (14.23), as might be expected (4.18 above).

- (14.23) ʃapków-nà íʃ p’íʃ-ìŋ ha-tí-ʃén-^lá
shoe-OBJ DEF child-GEN AFF-1SG-buy-DECL
‘I bought shoes for the child.’

14.3. Behavioral Properties of Subject and Object

In Northern Mao, grammatical subjects (both S and A) are relevant to the switch-reference marking system on non-final verbs (sections 12.2 and 12.3). In (14.24), the same-subject non-final marker indicates that the intransitive subject of the non-final clause is the same as the intransitive subject of the following clause.

- (14.24) p’íʃ-íʃ kí-in ha-hów-j-^lá
child-SBJ come-SS:NF AFF-go-AWAY-DECL
‘A child came and left.’

Example (14.25), on the other hand, illustrates the use of different-subject non-final marker to show a change in (again, intransitive) subject from the non-final clause to the next clause.

(14.25) p'ij-ij hí-kí-ij ha-hów-j-^lá
child-SBJ 3SG-come-DS:NF AFF-go-AWAY-DECL
'A child_i came and s/he_j left.'

For each example above, one and only one interpretation is possible: in (14.24) the person who left must be coreferential with the person who came, i.e. the 'child'. And in (14.25), the person who left cannot possibly be the person who came. This type of inter-clausal coreference phenomenon is referred to as a "pivot" property in the literature (Keenan 1976).

While Keenan (1976) explores the S/A pivot in English coordinate clauses as a covert property of subjecthood, I have not been able to find natural examples of same-subject clauses joined with the conjunction (cf. section 12.5). This formal grammar of same-subject clause combining appears to be relegated to the non-final/medial construction in Northern Mao.

The identity of an object is not relevant to the grammatical switch-reference system itself, though same-objects are frequently elided in transitive clauses within a clause chain, whether the subjects of the clauses are the same or different (14.26, repeated here from example 12.18 in section 12.2.2).

(14.26) kan-ná ha-tí-ts'á:ŋ-iʃ (í-té) héz-héz-in
 dog-OBJ AFF-1SG-kick-DS:NF 3SG-SBJ hit-hit-SS:NF

ha-pí-^lá

AFF-kill-DECL

‘I kicked the dog, and s/he beat it (i.e. hit it repeatedly) and
 killed it.’

When a same object is not overt (and, of course, when no other object is specified) as in the second and third (final) clause in (14.26), the object is expressed by a definite null (section 12.4). Subjects arguably are not elided even when identical across clauses, because they are overtly marked in verbs by bound pronominals.

14.4. A Summary of the Northern Mao Facts

Let’s now turn to a brief summary of the Northern Mao facts pertaining to alignment. In short, Northern Mao’s subject category is clearly grammatically more salient than is the object category: 1) full NP subjects are in first position in pragmatically unmarked constructions; 2) subjects are always marked on verbs (except for same-subject non-final verbs and the most nominalized subordinate forms); 3) subjects are marked by an obligatory morphological case marker (except for conjoined noun phrases); 4) the subject category is relevant to the choice of non-final suffix (SS or DS) in the switch-reference system.

Objects are less salient grammatically on the grounds that, though they have a characteristic order, they only optionally carry case marking in that position; they are, however, marked obligatorily by case when out of canonical position. Further, however, objects are never marked with participant reference marking on verbs. They can be elided in same-object constructions when their identity is clear; but they do not display other

known pivot properties.

Table 14.1 summarizes the case-marking facts reviewed in sections 14.2.3.1 through 14.2.3.3.

Table 14.1. Subject and Object Case Functions in Northern Mao

Subject Case	Object Case
S and A Arguments (of Intransitive and Transitive)	P Arguments (of Transitive)
	Object ₁ and Object ₂ of Ditransitive
	Goals of Movement Predications
	Standards in Comparatives

14.5. Alignment Conclusions and Questions

In the most general terms, all the Northern Mao grammatical systems reviewed above exhibit nominative-accusative (NOM-ACC) alignment. That is, the S and A elements form a single ‘subject’ (nominative) category while the P forms an independent ‘object’ (accusative) category.

Two facts call for a closer inspection of Northern Mao’s case-marking pattern. First, the subject case marker is required while the object case marker is not (typically)--the prototypical NOM-ACC pattern involves more formal marking of an accusative (object) rather than of a nominative (subject). Second, many languages in the East Africa area (including a fair number of Omotic languages, see below) have been described as having a “marked-nominative” pattern, where the objects are less marked (morphologically or functionally or both) than subjects (König 2006 and 2008:138ff).

In the available literature, Omotic languages are described as having a variety of case-marking patterns. The prototypical nominative-accusative system, where the object is morphologically marked and the subject is morphologically unmarked, is attested

throughout the South Omotic languages (Aari, Hamar and Dime) and in a disparate group of the North Omotic languages (Dizin (Dizoid), Kafa and Shinasha (Gonga) and Yemsa (Gimojan) (Hayward and Tsuge 1998:22; Mulugeta Seyoum 2008:46).

A marked-nominative pattern is also reported for a number of Omotic languages. A marked-nominative system is found within the Omoto Cluster (Gamo, Wolaitta, Maale, Zayse and Chara and in Benchnon (Gimira)) (Hayward and Tsuge 1998; König 2006:677; Rapold 2006:478). Haro (also an Omoto language) exhibits a marked-nominative system where the object marker is found only on definite nominals (Woldemariam 2003; König 2006:691). Before continuing with conclusions regarding case marking in Northern Mao, a detailed definition of the marked-nominative typology is necessary.

14.5.1. The Marked-Nominative Case Pattern Defined

In marked-nominative systems, the subject is morphologically marked and the accusative form, whether morphologically marked or unmarked, generally serves as the citation form of the noun and is attested in a variety of different syntactic contexts, including predicate NPs in copular constructions and indirect objects, among others (cf. König 2006:677).

König defines marked-nominative case alignment systems as

Marked-nominative languages are defined as follows: A marked-nominative language is present when at least two cases are distinguished, namely an accusative covering O, and a nominative covering S and A, and when the accusative is the functionally unmarked form. The accusative is the default case, that is, the case which is used with the widest range of functions (2008:9).

König divides the marked nominative case pattern into two types (2008:10). In her type 1, which is the most frequently attested, the accusative case form is both morphologically

and functionally unmarked and serves as the citation form of the noun. In her type 2, the accusative case form is morphologically marked but is functionally unmarked (i.e. has the broader distribution in the grammar) and also serves as the citation form.

The requirement that the accusative case form (whether morphologically marked or not) be the citation form is particularly important to our discussion of Northern Mao. In Northern Mao, the citation form of nouns does not include the object case marker /-na/. Rather, citation forms require a terminal vowel /e/ (cf. sections 4.2.1 and 8.2). In the narrow sense, then, Northern Mao's alignment system cannot be considered a marked-nominative pattern of either of König's subtype 1 or 2. This is despite the fact that the subject (nominative) case is clearly more functionally marked than the object (accusative) case (see Table 14.1).

König does proffer two examples of type 2 marked-nominative systems where the citation form can differ from the accusative form, "In type 2 languages, where both forms (accusative and nominative) are derived, the citation form may differ from the accusative" (2008:157). This is observed for Arbore and Haro, but in each instance, at least some citation forms include the accusative form (König 2006:677-8 and 2008:158).

A similar argument, however, cannot be made for Northern Mao, where the citation form consistently takes the terminal vowel (sections 4.2.1 and 8.2) and where objects, even when the object case marker is not used (i.e. on objects in canonical preverbal order), cannot take the terminal vowel (cf. section 8.2).

14.5.2. Final Thoughts on Northern Mao Alignment and Broader Implications

At this point, we do not have sufficient information on the details of the case and

alignment systems in other Mao languages and thus can't speculate as to the history of Northern Mao's system. That said, it is worth noting the morphological and functional similarities between Northern Mao's nominative-accusative system and the type 2 marked-nominative pattern.

Ultimately one could argue that Northern Mao's alignment system, with its morphologically and functionally marked subject case, its functionally less marked object case, and its special (non-accusative) citation form is similar to the marked-nominative patterns of Arbore and Haro.

In terms of broader Omotic, the Northern Mao data suggest a need to reconsider Hayward and Tsuge's (1998:30ff) reconstruction of Proto-Omotic case marking. Hayward and Tsuge reconstruct *m as the Proto-Omotic accusative case marker (based on the small group of South Omotic languages) and then suggest that this *m was replaced by *n during the development of the North Omotic subgroup, leaving *m in South Omotic (1998:30ff). According to both Bender (2003:1) and Hayward (2000:242), the Mao subgroup is an independent branch at the highest level of Proto-Omotic, distinct from both the South and North branches of Omotic (cf. Figures 1.5, for Bender, and Figure 1.6, for Hayward, section 1.4). If this taxonomy is accurate, then the replacement of *m > *n would have had to take place independently in North Omotic as well as in the Mao languages. This seems unlikely to me. I have found no clear reflexes of an old *m accusative marker in Northern Mao. The closest, perhaps, is the /m/ of an old reconstructed subordinator /-gàm/ (still found on future relative clauses today) (cf. section 9.5). It must be noted of course that, at the time of their admittedly tentative

reconstruction (1998), Hayward and Tsuge did not have access to case marking and alignment data for any of the Mao languages. And they repeatedly hedge their hypothesis about *m being widely replaced by *n (1998:33). Given the presence of an ‘n’ form (/na/) marking all objects in Northern Mao, and the lack of a clear reflex of an older *m, it could be that the ‘m’ form is an innovation only in South Omotic, since two of the three branches of Proto-Omotic (Mao and North Omotic) show ‘n’ reflexes without clear evidence of *m.

APPENDIX A

EVIDENCE FOR CONSONANT CONTRAST

p : b

initial

/pake/ HL ‘injera’ /bake/ ML ‘name of bird-species’

/pule/ HL ‘roll:INF’ /buts’e/ HL ‘feast’

intervocalic

/k’ope/ HL ‘road’ /obe/ HL ‘brother’

p : p’

initial

/pa:le/ MM ‘be.heavy:INF’ /p’a:le/ LH ‘tool (for digging)’

/po:ne/ HH ‘go.out:INF’ /p’owe/ HH ‘cross:INF’

intervocalic

/hupe/ MH ‘brood:INF (of a hen)’ /up’e/ HL ‘termite mound’

p’ : f

initial

/p’owe/ HH ‘cross:INF’ /puwe/ HH ‘traditional beer’

intervocalic

/kup’e/ HL ‘hat’ /kupe/ ML ‘granary’

b : m

initial

/be:ze/ HL ‘broom handle’ /me:ze/ HH ‘be.wise:INF’

/buts’e/ HL ‘feast’ /muts’e/ LH ‘area near Bambassi’

intervocalic

/i:be/ LH ‘visitor’ /i:me/ LH ‘cattle’

t : d

initial

/tuge/ HH ‘foot; name’ /duge/ HL ‘house pole’

/tuge/ LL ‘basket (for brewing)’ /dike/ LH ‘scratch:INF’

intervocalic

/ha-wut-a/ MLH ‘cry out’ /ha-ud-a/ [ha²uda]MHM ‘pile (in a heap)’

t : tʰ

initial

/tyame/~[tame] HH ‘count:INF’ /tʰame/ LH ‘taste:INF’

/te:ne/ MM ‘chest’ /tʰe:ntʰe/ ML ‘worm’

intervocalic

(there is no /tʰ/ intervocalically, only /d/, as noted above)

/kute/ MM ‘skin’ /kutʰe/ HL ‘spine’

in CC sequence

/ma:lte/ ML ‘fat’ /ma:ltʰe/ ML ‘bone’

g : k

initial

/gite/ HL ‘head-covering’ /ki-te/ ML ‘come-REL’

/ga:ne/ LL ‘wealth’ /kane/ MH ‘dog’

/gome/ HH ‘clear:INF(land)’ /kowe/ HH ‘sit:INF’

intervocalic

/ha-gaʃ-a/ MLH ‘burp’ /ha-kaʃ-a/ MHM ‘shut’

in initial CC sequence

/gja:je/ HL ‘many’ /kjambe/ ML ‘hunt:INF’

/gwi:ntʰe/ LH ‘sweep:INF’ /kwi:ntʰe/ HH ‘hair’

k : kʰ

initial

/kane/ MH ‘dog’ /kʰane/ LH ‘arrange:INF’

/kuse/ HH ‘hand’ /kʰetsʰe/ HH ‘floor’

intervocalic

/ʃike/ MM ‘knife’ /ʃikʰe/ MH ‘fart’

m : n

initial

/ma:re/ MM ‘grass’ /na:re/ HH ‘brideprice’

/maʃe/ LL ‘brew:INF (beer)’ /na/ L ‘this’ (PROX)

intervocalic

/i:me/ LH ‘cattle’ /ine/ HH ‘do:INF’

n : ŋ

(the velar nasal does not appear word-initially)

intervocalic

/ine/ HH ‘do:INF’ /e:ŋe/ MM ‘heart’

/ko:ne/ MH ‘be.jealous:INF’ /koŋe/ HL ‘collect:INF
(grain after harvest)’

s : ʃ

initial

/se:pe/ LH ‘sword’

/ʃe:me/ ML ‘crab (fresh water)’

/soge/ MH ‘limp:INF’

/ʃoge/ ML ‘krar’

intervocalic

/me:se/ HH ‘harvest’

/me:ʃe/ HH ‘shaman’

s : z

initial

/soge/ MH ‘limp:INF’

/zume/ HH ‘song of praise’

/se:me/ MH ‘find:INF’

/zep’e/ LL ‘together’

intervocalic

/ha-sog-a/ MHM ‘limp’

/ha-zog-a/ MLH ‘follow along a
river/treeline’

s : tsʔ

initial

/soge/ MH ‘limp:INF’

/tsʔoge/ MH ‘collect:INF’

/se:re/ HH ‘law’

/tsʔere/ HL ‘cut:INF (bamboo)’

intervocalic

/ha-sog-a/ MHM ‘limp’

/ha-tsʔog-a/ MHM ‘gather’

in CC sequence

/i:nse/ HL ‘wood’

/intsʔe/ MH ‘fear’

r : d

(/r/ does not appear word-initially, except in borrowed words)

intervocalic

/ure/ HL ‘hump’

/ude/ ML ‘heap:INF’

/are/ HH ‘nipple’

/ade/ ML ‘sister’

/mare/ LL ‘grab:INF’

/ama:de/ LLL ‘in-laws’

r : l

(/r/ is not found word-initially; /l/ is found initially in only a single word)

intervocalic

/arime/ LHL ‘rotten thing’

/alime/ LHL ‘turban’

/tu:re/ MH ‘push:INF’

/tu:le/ MH ‘pound:INF’

w : b

initial

/wit’e/ HL ‘calabash’

/bite/ LH ‘honey-mead’

/weze/ LL ‘be.crazy:INF’

/be:ze/ HL ‘broom handle’

intervocalic

/ke:we/ MM ‘wound:INF’

/ʃebe/ HH ‘loiter:INF’

w : m

initial

/we:ze/ LL 'be.crazy:INF'

/wame/ HH 'river'

intervocalic

/ke:we/ MM 'wound:INF'

/me:ze/ HH 'be.wise:INF'

/ma:me/ LL 'carry:INF (a child)'

/keme/ LH 'grow:INF'

w : j

initial

/jo:se/ MH 'song'

/je:se/ HH 'stew'

intervocalic

/a:je/ LH 'father'

in CC sequence

/gja:re/ ML 'peace'

/wo:se/ MH 'ask:INF'

/weze/ LL 'be.crazy:INF'

/a:we/ LH 'grasshopper'

/gwa:ne/ LH 'pray:INF'

j : ʃ

initial

/je:re/ LH 'baby'

/je:ʃe/ HH 'honey'

intervocalic

/ha-wi:-a/ MMH 'say'

/ʃe:re/ MH 'soup' or 'fresh, hot'

/ʃe:ʃe/ MM 'urine'

/ha-wi:ʃ-a/ MHM 'return (intr.)'

: h

initial

/a:ts'e/ LL 'tooth'

/e:ge/ HL 'scorpion'

intervocalic

/ha-up'-a/ [ha'up'a] MMH 'bury'

/ha:ts'e/ ML 'water'

/hek'e/ MH 'death'

/ha-hup'-a/ MHM 'steal'

APPENDIX B

EVIDENCE FOR VOWEL CONTRAST

i : e

/int'e/ HH 'see:INF'	/ent'e/ MM 'male'
/ts'ik'e/ LH 'white clay'	/ts'ek'e/ HH 'ferment:INF (beer)'

long vowels

/i:me/ LH 'cattle'	/e:me/ LH 'touch:INF'
--------------------	-----------------------

i : u

/tile/ MH 'stomach'	/tule/ HL 'acclimate:INF (to smoking)'
---------------------	--

/ki-te/ HL 'come-REL'	/kute/ MM 'skin'
-----------------------	------------------

long vowels

/pi:re/ HH 'taste:INF (of meat by elders)'	/pu:re/ HH 'apply:INF (lotion)'
--	---------------------------------

e : a

/hets'e/ HL 'flatten:INF (grass)'	/hats'e/ HL 'tomorrow'
-----------------------------------	------------------------

/kese/ LL 'swell:INF'	/kase/ LL 'pour:INF (into another's mouth)'
-----------------------	---

long vowels

/ʃe:me/ ML 'crab (fresh water)'	/ʃa:me/ ML 'collard greens'
---------------------------------	-----------------------------

e : o

/kose/ MH 'breathe:INF'	/kese/ LL 'swell:INF'
-------------------------	-----------------------

/k'ope/ HL 'road'	/k'ele/ MM 'body'
-------------------	-------------------

/bet'e/ LH 'salt'	/bot'e/ ML 'groin'
-------------------	--------------------

long vowels

/k'ots'e/ MH 'stand:INF (tr.)'	/k'e:ts'e/ MH 'flower; burn:INF'
--------------------------------	----------------------------------

u : o

/t'uʃe/ LL 'strap:INF' /t'oʃe/ HH 'sprout:INF'

/puwe/ HH 'traditional beer' /powe/ LL 'anus'

long vowels

/ʃu:ʃe/ HH 'spit:INF' /ʃo:ʃe/ HH 'snake'

o : a

/ʃowe/ HL 'stone' /ʃawe/ HL 'sand'

/pole/ MM 'outside' /pale/ LL 'Thompson's Gazelle'

long vowels

/so:nts'e/ ML 'child' /sa:nts'e/ HL 'bed'

e : u

/bet'e/ LH 'salt' /but'e/ LH 'fear:INF'

/gese/ ML 'friend' /gute/ HL 'crown (of rooster)'

long vowels

/t'e:nt'e/ ML 'worm (general)' /t'u:nt'e/ ML 'bait; fishing worm'

o : i

/ʃowe/ HL 'stone' /ʃiwe/ MM 'wind'

/k'ope/ LH 'cut:INF' /k'ipe/ LH 'cover:INF (a pot for cooking)'

long vowels

/ʃo:ʃe/ HH 'snake' /ʃi:ʃe/ ML 'name of tree'

APPENDIX C

VOWEL FORMANT DATA

The Vowel /i/

Lexeme	Melody	Gloss	V1 ms	F0 Hz	V2 ms	F0 Hz	F1 [i] Hz	F2 [i] Hz
/ʃike/	MM	‘knife’	69	146	103	148	418	2200
/ʃik’e/	MH	‘fart’	60	162	106	196	341	2204
/wit’e/	HL	‘calabash’	69	191	126	133	411	1419
/bite/	LH	‘honey-mead’	80	138	123	175	360	2153
/ints’e/	MH	‘be.afraid:INF’	89	140	75	159	422	1951
/ine/	HH	‘do:INF’	94	184	113	196	384	2175
/gite/	HL	‘head-covering’	85	171	97	133	358	2335
/tige/	LL	‘basket (for brewing)’	60	132	108	128	382	2222
/dike/	LH	‘scratch:INF’	69	129	99	169	370	2327
/k’ipe/ ~ [k’ifɛ]	LH	‘cover:INF (pot for cooking)’	83	138	96	189	434	2099
Totals			758		1046		3880	21085
Means			76		105		388	2109

The Vowel /e/

Lexeme	Melody	Gloss	V1 ms	F0 Hz	V2 ms	F0 Hz	F1 [ɛ] Hz	F2 [ɛ] Hz
/ts’ere/	HL	‘cut:INF (bamboo)’	113	158	86	121	639	1729
/hek’e/	MH	‘death’	96	142	73	159	573	1823
/k’ele/	MM	‘body’	92	152	117	157	558	1560
/keme/	LH	‘grow:INF’	93	129	102	169	516	2043
/weze/	LL	‘be.crazy:INF’	72	128	90	133	517	1842
/ʃebe/	HH	‘loiter:INF’	96	201	100	197	597	1983
/zep’je/	LL	‘together’	96	126	92	124	502	2005
/k’ets’e/	HH	‘floor’	112	177	79	177	546	1827
/keze/	ML	‘top’	105	128	83	103	458	2006
/kese/	LL	‘swell:INF’	95	127	86	127	480	1824
Totals			970		908		5386	18642
Means			97		91		539	1864

The Vowel /u/

Lexeme	Melody	Gloss	V1 ms	F0 Hz	V2 ms	F0 Hz	F1 [u] Hz	F2 [u] Hz
/puwe/ ~ [fuwe]	HH	‘traditional beer’	80	181	81	192	460	853
/kup’e/	HL	‘hat’	76	189	95	113	389	759
/kufe/	ML	‘granary’	61	159	70	128	478	821
/hupe/ ~ [hufe]	MH	‘brood:INF (of a hen)’	85	169	111	190	424	857
/buts’e/	HL	‘feast’	100	182	91	119	393	982
/pule/	HL	‘roll:INF’	96	170	88	134	447	926
/dure/	ML	‘year’	104	135	140	117	376	1217
/tuge/	HH	‘foot; name’	67	193	101	204	402	999
/ude/	ML	‘heap:INF’	104	149	74	127	435	907
/ure/	HL	‘hump’	106	182	86	114	387	933
Totals			879		937		4191	9254
Means			88		94		419	925

The Vowel /o/

Lexeme	Melody	Gloss	V1 ms	F0 Hz	V2 ms	F0 Hz	F1 [o] Hz	F2 [o] Hz
/ts’oge/	MH	‘collect:INF’	97	149	123	172	497	1325
/soge/	MH	‘limp:INF’	63	147	121	160	486	1195
/foŋe/	ML	‘krar’	104	155	105	125	621	1385
/koŋe/	HL	‘collect:INF (grain after harvest)’	95	174	91	116	591	1218
/gome/	HH	‘clear:INF (land)’	114	154	117	152	541	1113
/p’owe/	HH	‘cross:INF’	77	193	95	204	587	975
/obe/	HL	‘brother’	98	189	79	128	566	966
/k’ope/ ~[k’ofe]	HL	‘road’	63	178	91	129	552	1094
/fowe/	HL	‘stone’	104	171	92	120	531	1133
/k’ope/ ~[k’ofe]	LH	‘cut:INF’	97	134	116	171	537	959
Totals			912		1030		5509	11363
Means			91		103		551	1136

The Vowel /a/

Lexeme	Melody	Gloss	V1 ms	F0 Hz	V2 ms	F0 Hz	F1 [a] Hz	F2 [a] Hz
/pake/	HL	‘injera’	92	162	66	114	719	1619
/bake/	ML	‘name of bird-species’	81	136	71	112	671	1650
/wame/	HH	‘river’	73	166	93	165	733	1405
/ase/	MM	‘hail’	109	148	129	146	701	1639
/mare/	LL	‘grab:INF’	71	118	102	119	787	1671
/are/	HH	‘nipple’	99	185	188	195	791	1684
/mafe/	LL	‘brew:INF (beer)’	96	127	85	131	765	1676
/na-fe/	LH	‘this (PROX- SBJ)’	79	129	96	173	745	1686
/kane/	MH	‘dog’	87	176	78	202	744	1761
/k’ane/	LH	‘arrange:INF’	101	133	105	177	754	1650
Totals			888		1013		7410	16441
Means			89		101		741	1644

The Vowel /i:/

Lexeme	Melody	Gloss	V1 ms	F0 Hz	V2 ms	F0 Hz	F1 [i:] Hz	F2 [i:] Hz
/i:be/	LH	‘visitor’	145	131	104	162	387	2317
/i:me/	LH	‘cattle’	132	133	101	168	400	2276
/i:nse/	HL	‘wood’	139	146	76	100	399	2217
/gwi:nt’e/	LH	‘sweep:INF (for mud)’	119	127	88	169	387	2260
/mi:me/	HH	‘mosquito’	157	145	106	145	337	2189
/mi:nts’e/	LL	‘cut:INF; intestines’	127	118	78	125	368	2197
/fi:nt’e/	HH	‘nose’	132	145	112	153	458	2158
/pi:re/ ~ [fi:re]	HH	‘taste:INF (of meat by elders)’	189	165	143	169	353	1290
/fi:fe/	ML	‘name of tree’	168	144	87	113	308	2303
/i:nt’e/	HL	‘grunt:INF’	216	172	107	126	335	2306
Totals			1524		1002		3732	21513
Means			152		100		373	2151

The Vowel /e:/

Lexeme	Melody	Gloss	V1 ms	F0 Hz	V2 ms	F0 Hz	F1 [e:] Hz	F2 [e:] Hz
/be:ze/	HL	'broom handle'	179	159	120	118	506	2042
/te:ne/	MM	'chest'	208	130	106	125	626	2033
/t'e:nt'e/	ML	'worm'	166	135	84	111	673	1954
/se:re/	HH	'law'	203	155	156	165	618	1918
/e:ge/	HL	'scorpion'	166	153	110	109	607	1850
/se:pe/ ~[se:fe]	LH	'sword'	144	145	135	184	583	1997
/ʃe:re/	MH	'soup' or 'fresh, hot'	205	155	146	176	487	2003
/je:ʃe/	HH	'honey'	185	160	136	170	482	2062
/me:ʃe/	HH	'shaman'	177	160	156	166	523	2025
/je:se/	HH	'stew'	182	162	139	169	481	2010
Totals			1815		1288		5586	19894
Means			182		129		559	1989

The Vowel /u:/

Lexeme	Melody	Gloss	V1 ms	F0 Hz	V2 ms	F0 Hz	F1 [u:] Hz	F2 [u:] Hz
/tu:re/	MH	'push:INF'	191	168	164	191	375	1020
/pu:re/ ~ [fu:re]	HH	'apply:INF (lotion)'	204	196	173	200	408	979
/ʃu:ʃe/	HH	'spit:INF'	169	209	150	210	430	1063
/t'u:nt'e/	ML	'bait; fishing worm'	193	172	124	135	376	1031
/ku:me/	LL	'bamboo fish trap'	179	130	137	121	408	796
/t'u:ʃe/	HH	'meet:INF'	180	202	148	201	420	1016
/du:le/	LH	'hyena'	183	119	132	150	372	968
/pu:re/ ~ [fu:re]	LL	'flour'	187	121	128	119	415	970
/su:nts'e/	MH	'back'	197	146	119	164	450	1136
/ku:le/	MM	'middle, central part'	176	158	127	162	393	830
Totals			1859		1402		4047	9809
Means			186		140		405	981

The Vowel /o:/

Lexeme	Melody	Gloss	V1 ms	F0 Hz	V2 ms	F0 Hz	F1 [o:] Hz	F2 [o:] Hz
/jo:se/	MH	'song'	136	169	128	185	520	1140
/ko:ne/	MH	'be.jealous:INF'	173	159	126	182	504	976
/go:me/	ML	'think:INF'	190	129	116	108	418	900
/ko:le/	MM	'cliff'	176	173	116	170	518	999
/jo:ʃe/	ML	'rainy season'	143	155	87	128	471	959
/to:ke/	ML	'head'	174	125	120	110	468	1002
/ho:re/	LL	'tribe; ethnic group'	189	122	147	123	490	971
/ho:t'e/	HH	'sound; voice; yell:INF'	160	181	155	185	515	1019
/po:ne/	HH	'go.out:INF'	155	195	116	210	604	1164
/so:nts'e/	ML	'child'	156	146	83	117	606	1135
Totals			1652		1078		5114	10265
Means			165		108		511	1027

The Vowel /a:/

Lexeme	Melody	Gloss	V1 ms	F0 Hz	V2 ms	F0 Hz	F1 [a:] Hz	F2 [a:] Hz
/ga:ne/	LL	'wealth'	193	117	91	111	698	1616
/a:ts'e/	LL	'tooth'	176	121	94	117	811	1555
/ha:ts'e/	ML	'water'	169	134	78	105	788	1581
/ma:re/	MM	'grass'	184	137	133	141	579	1520
/ma:lt'e/	ML	'bone'	148	145	93	121	826	1495
/ma:lte/	ML	'fat'	140	128	79	112	758	1550
/pa:le/ ~[pa:le]	MM	'be.heavy:INF'	167	143	77	143	825	1549
/p'a:le/	LH	'tool (for digging)'	180	108	100	147	856	1636
/a:ke/	HL	'phlegm'	185	167	108	115	832	1573
/a:ts'e/	LL	'language' (homophone with 'tooth')	157	124	101	117	849	1599
Totals			1699		954		7822	15674
Means			170		95		782	1567

APPENDIX D

TONAL MELODIES OF THREE-SYLLABLE NOUNS

Syllable Pattern	HHH	LLL	HHL	HLL	HLH	LHH	LLH	LHL	MMM	MHH	MHL	MLL
CV.CV.CV	/gobole/ 'window'	/taɲets'e/ 'giraffe'	/ilife/ 'cooking pot'	/kufume/ 'chin'		/dabare/ 'turn'		/hakake/ 'cheek'	/ufume/ 'navel'	/ɟap'ile/ 'armpit'	/jenife/ 'Berta'	/kit'ife / 'neck'
CVC.CV.CV	/gombole/ 'mortar (pounding pot)'	/gergeɟe/ 'wall'	/mamsese/ 'fair'	/tulkume/ 'knee'	/nakneja/ 'brother'		/ɟindit'e/ 'pimple'		/wɔŋgile/ 'jackal'		/nogdowe/ 'lion'	/k'embile/ 'loincloth'
CV.CVV.CV		/ama:de/ 'in-law'			/kolo:le/ 'malaria'			/asa:ne/ 'plate'				
CV.CVC.CV			/mamisje/ 'truth'				/awande/ 'neighbor'	/agunde/ 'tooth- brush stick'			/adurke/ 'white foreigner'	
CCV.CV.CV	/k'wak'ile/ 'skin (of fruit)'			/k'wek'ife/ 'turtle; tortoise'				/k'wagire/ 'thorn tree'			/ɟwalike/ 'partridge'	
CVV.CV.CV	/ja:rkeɲe/ '5 th month; January'							/ka:ɟaje/ 'baboon'				/ma:gawe/ 'friend'
CVC.CVV.CV						/ɟundo:re/ 'donkey'		/bisma:re/ 'nail'				
CCVN.CV.CV	/kwɔŋgile/ 'fishhook'											/twɔŋgile/ 'elephant'

APPENDIX E

NORTHERN MAO-ENGLISH GLOSSARY

OF SELECTED WORDFORMS

This glossary contains only selected wordforms taken from my Northern Mao database. I have not included phrasal constructions in Northern Mao which correspond to single words in English. The verbs are included here in the realis non-future declarative form (i.e. finite verb stem + -á DECL). This is the citation form for verbs, minus the /ha-/ affirmative prefix. The AFF prefix has not been included to allow for verbs to be found near their corresponding noun or infinitive forms, in alphabetical order.

a

àbélé <i>N</i> town; city	ak'à:pè <i>N</i> kernel of corn (maize)
àbùkádè <i>N</i> avocado	ak'e <i>N</i> corn
ádàmè <i>N</i> Adam	àlàpà:nts'é <i>N</i> eclipse (moon)
àdèwèlè <i>N</i> world	alát'imè <i>N</i> ring (for the finger)
àdíké <i>N</i> belt	àlbàmbé <i>N</i> sweet potato
àdúkùmè <i>N</i> a small millet	albékelè <i>N</i> horse
àdúnijè <i>N</i> world	àlbéné <i>N</i> sickle
adúrkè <i>N</i> white man; foreigner	àlbérègè <i>N</i> flag
àdúrkàmà:nt'è <i>N</i> sugarcane	àlbèrtùkánè <i>N</i> orange
apè <i>N</i> mother's brother (uncle)	àlbírjè <i>N</i> mat (wicker)
ágè <i>N</i> ladder	àlbójè <i>N</i> paint; color
àgúndè <i>N</i> tooth stick (toothbrush)	àlbòlísè <i>N</i> police force
àhúbé <i>N</i> reed	àlbúndigè <i>N</i> gun
àhúlè <i>N</i> mole	àlbúné <i>N</i> coffee; coffee bean
aká <i>V</i> eat (meat)	àldá <i>V</i> know; learn
ákaká <i>V</i> crunch; throb (with pain)	àldé <i>N</i> knowledge; lessons
akale <i>N</i> fig	àldsísá <i>V</i> teach
akare <i>N</i> dry season	àldzà:bè <i>N</i> amulet; charm; fetish
akilwàjè <i>Proper N</i> Akilwaye (Mao clan name)	àldzìwábè <i>N</i> guava
áksitè <i>N</i> hot green pepper (like anaheim pepper)	àlègànzé <i>N</i> dragonfly
àkwángkè <i>N</i> stem; stalk (of maize, millet, etc.)	àlèmúnè <i>N</i> lemon
	àlfágajá <i>V</i> boast; brag
	àlfárjè <i>N</i> mattress (foam)
	àlfingéjè <i>N</i> cup

àlgéfè *N* pocket
 àlgémkótè *N* a roasted barley snack
 àlgénè *N* paradise; dwelling place of the dead
 algíbirè *N* tribute
 àlgúfè *N* basket
 àlhálùwè *N* guest house; small house
 àlhásànè *N* Hassan
 àlhisábè *N* arithmetic; mathematics
 àlídawè *N* holiday (annual)
 àlímè *N* turban
 àlkàràrà *N* sacrifice
 àlkó:rè *N* lump (clay; mud)
 alk'at'ájè *N* room
 àlk'àjámè *N* resurrection
 àllèmújè *N* lime; lemon
 àlmàkín tuge *N* tire (car-foot)
 àlmàkínè *N* car
 àlmàkínàsèdè *N* oil (for engines)
 àlmàndúrè *N* tomato
 àlmánjè *N* mango
 àlmá:lèkè *N* spoon (traditional)
 àlménjèlè *N* sickle
 àlmúsè *N* banana
 àlójè *N* village
 àlt'agájè skull cap
 àlùkàsè *N* cane; walking stick; club
 àlúlè *N* groundnut; peanut
 àlúlk'wak'ile *N* shell (of groundnut)
 amá *V* decrease (intr)
 àmà:dè *N* in-law; relative by marriage
 àmé *N* mother (mama)
 amój *N* Mom! (vocative)
 àmp'its'è *N* bead
 ámtè *REL. V* small

ámtmolawè *N* Saturday (little rest day)
 àná *V* be weak; be tired
 àná *V* not find; lose (tr)
 aná *V* meet
 ànànasé *N* pineapple
 ànàsá:jè *N* correct; perfect
 àndúré *N* cat
 ànègèrè *N* big drum
 ájésè *N* non-relative
 àŋk'àjè *N* false banana tree
 ángk'opè *N* crossroads; intersection
 ánts'è *N* tears
 ants'ilè *N* tongue
 ánék'opè *N* fork (in path)
 àpìlé *N* goiter
 ará *V* nurse; suckle (baby) (tr)
 áré *N* breast
 árpoze *N* nipple (of udder or breast)
 àrímè *N* rotten thing
 àrípè *N* Arab
 àrískè *N* omen; sign; luck
 ármárwa:rè *N* bra
 àrúkè *N* soul; spirit (of living person); life
 àsá *V* hide (tr)
 àsáfèrè *N* business; commerce
 àsàndógè *N* box
 àsájè *N* time
 àsá?àt *N* time; hour
 àsa:fèrá *V* barter; trade
 àsá:nè *N* plate
 ase *N* hail
 asébebè *N* quarrel
 àséédè *N* oil
 àskwéldhanjè *N* kingfisher
 àsósè *Proper N* Asosa (town)

àsúgè *N* town; city; market
 àʃà *Exclamation* shh
 áʃ'a *V* plant
 àʃoràá *V* advise
 àtámèné *N* price
 àtánè *N* flood
 àta:ná *V* flood; flow
 àtéré *N* beans
 àt'úlèn *N* duty; obligation
 awè *N* day; God
 awkezè *N* sky
 awku:lè *N* noon
 awto:kkelpòzè *N* dusk; twilight (after sunset)
 awto:kkelʃalè *N* west
 awto:kkelè *N* sunset

awto:kpaze *N* bright
 awto:kpònʃalè *N* east
 awto:kpònè *N* sunrise
 awto:kèpòzè *N* sunshine
 awto:kèts'erè *N* sunrise
 awto:kwi:ʃè *N* afternoon
 awto:kè *N* sun
 awwi:ʃèt *N* afternoon
 àwà:ndé *N* neighbour
 àwà:sè *N* horn (of animal)
 awmimìsè *N* lunch
 awʃà:ŋk'è *N* early in the morning; dawn
 awtjame *N* calendar
 àwúlè *N* mongoose
 àzàbúnjè *N* soap

a:

à:dé *N* tradition; culture
 à:jé *N* father
 á:kè *N* phlegm
 ak'à:pè *N* kernel (corn)
 á:m'á *V* knead; stir
 á:nska:re *N* moonlight
 á:nsé *N* moon; month
 à:nzé *N* gold
 à:ŋá *V* groan (with pain)
 à:ŋgé *N* duty; obligation
 á:pé *N* eye
 á:pé *N* seed (of fruit)
 á:pgimigimè *N* eyebrow
 á:pkámè *N* in front of; before

á:pkámesè *N* guide
 á:pkónts'è *N* forehead
 á:pkútè *N* eyelid
 á:pkwiint'e *N* eyelash
 á:plìp'ìʃè *N* wink; blink
 à:rá *V* be angry
 à:sá *V* hide
 á:ts'á *V* carve
 à:ts'è *N* tooth; language
 à:ts'wót'è *N* tooth decay
 à:ts'pòzmìsè *N* tooth stick; toothbrush
 á:wè *N* other one
 à:wé *N* grasshopper

b

bágè *N* sheep

bakè *N* name of bird (a type)

bàk'élé *N* bean (used for any fat bean)
 bàṅsé *Proper N* man's name (source of
 Bambassi)
 b́aré *N* generation
 bàrnèt'è *N* hat
 barsìsá *V* teach; introduce
 basá *V* go out
 bà:bé *N* father
 bá:ldé *N* bucket; pail
 bà:sá *V* love (romantically)
 bèk'amá *V* dance
 bèlgé *N* star
 bémbilá *V* mumble
 bènzíné *N* gasoline
 bèṅé *N* dung beetle
 bèt'è *N* salt
 bé:ṅ'á *V* stretch (a skin for drying)
 bé:zè *N* stick (for broom handle)
 bídébìdè *N* butterfly
 bíré *N* silver
 birinṅj́ánsè *N* mud wasp
 bìsmá:rè *N* nail
 bíf'á *V* EXIST

bíspètèlmìsè *N* mould (of pottery)
 bité *N* mead
 bitè *V* past copula/auxiliary (be:PST or
 PST:AUX)
 bòdé *N* bracelet
 bòká *V* bark (as dog)
 bòkúmé *N* impatience; zeal
 bòlòkété *N* mud block
 bó't'è *N* groin
 bó:rma:lt'è *N* shoulder blade
 bó:rè *N* shoulder
 bùb́íwè *N* storm; whirlwind
 bup'á *V* spread (disease; fire)
 búrbúfè *Proper N* Burbushe (Mao clan
 name)
 búrk'è *N* spring
 bútmí:nts'è *N* initiation (male/female);
 circumcision
 bùts'á *V* wash
 buts'á *V* feast
 búts'è *N* feast
 bùt'á *V* fear
 bú't'è *N* shame; fear

d

dabàlá *V* add
 dàbáré *N* turn
 dál'á *V* cheat
 damjà *N* misunderstanding
 dánbé *N* tradition; custom; culture
 dandàá *V* be possible
 dázé *N* three-hole recorder (for music)
 dá:bàjè *N* hardship; distress; pain;
 problem
 dà:bé *N* bread

da:bèjá *V* suffer
 da:dá:de *N* stupidity
 dà:kíyé *N* duck
 dá:l'á *V* appease; pacify; cajole
 dewèlá *V* ring (bell)
 ògè *N* greeting
 dímbílé *N* circle; round
 dípilè *N* hem
 òrínjé *N* earring
 òf'hówè *N* wandering

dí:zè *N* flute; small horn
 dí:ldá *V* bless; thank; praise
 dí:ldé *N* blessing
 dí:né *N* enemy
 dí:ŋk'é *N* back room of a traditional house
 (partitioned off)
 dobàjá *V* repent
 dòk'è *N* fermentation (of grain)
 dòk'ha:ts'è *N* yeast (with water);
 dòlé *N* down
 dòl'fálè *N* south (down-way)
 dóné *N* miracle; accident
 dóŋè *N* stool (three-legged)
 dò:ndé *N* foot rattle (musical instrument)
 dò:ŋk'é *N* mud

dúgè *N* house pole
 duká *V* dip
 dùk'ájà *N* palm tree
 dùlé *N* cane; walking stick
 dúndúlé *N* log; tree trunk
 dùnts'á *V* bump (tr); knock against
 dúr'á *V* spend time; wait; be late
 durè *N* year
 dùwá *V* be empty
 dù:lé *N* hyena
 dujá *V* fill in (a hole); cover up with dirt
 dzamèrá *V* begin
 dzà:labijè *N* robe (or long pull-over shirt
 for men)
 dzà:níbé *N* 'hell'

e

éd'á *V* wear clothes
 édtàá *V* dress (tr)
 ég'á *V* create; make
 egwá:rè *N* robe (wrap)
 ent'e *N* male
 ent'p'íjè *N* boy; son (male-child)
 epe *N* mother-in-law
 esè *N* human being; person; man

esint'e *N* attitude (person-seeing)
 éjé *N* cassava
 èspórté *N* sports; athletics
 esp'íjè *N* humanity; mankind (person-
 child)
 ewètá *V* listen
 éwètesè *N* spy

e:

é:gè *N* scorpion
 è:mé *N* touching (something)
 é:gè *N* scorpion
 è:ká *V* mix (tr)
 è:má *V* touch
 è:mgó:mè *N* sense of touch
 e:n/e: *Interjection* yes

é:ns'á *V* heal; treat
 e:nsé *N* saving; healing; recovering from
 sickness
 e:ŋe *N* heart
 e:ŋkósè *N* heartbeat
 é:ŋ'màŋk'á *V* rejoice; be happy
 è:pé *N* knuckle; knot (as in wood)

f

Generally, any [f] can be pronounced as [p] and is part of the phoneme /p/. But some of my consultants prefer the wordforms in this section to be pronounced only with [f]. Elsewhere in this glossary, where an [f] is found, this is the preferred pronunciation (at least according to some speakers).

fàndilà:fè *N* the 12th month (overlaps with August)
 faràmá *V* sign (with signature)
 fà:nt'é *N* open place; clearing
 fètèné *N* test; examination

fúndmìsè *N* vine
 fúndé *N* flower; any blooming thing
 fúndmìsji:nt'e *N* tendril (of vine or flower)
 fút *Ideophone* pop

g

gaá ~ gajā *V* be enough
 gadèrá *V* (be) able (to)
 galá *V* enter
 gàrká *V* straddle
 gàskíná *V* pay (brideprice)
 gaʃá *V* put in
 gàʃá *V* belch
 gàʃé *N* burp
 gáté *N* price
 ga:bè *N* spot; place
 gá:g^lá *V* hum; in a song
 gà:lé *N* Oromo (term for the people)
 gá:n^lá *V* (be) wealthy
 gà:nè *N* wealth
 gà:nesè *N* wealthy person
 gèldé *N* honey catcher
 gèldbambúré *N* hornbill
 gélémkját'è *N* gall bladder
 géléjè *N* shoulder
 gélmé *N* bile; gall
 gemp'elá *V* cover
 gènéte *N* paradise; dwelling place of the dead
 gèpá *V* condole; comfort

gèrgèfè *N* wall
 gesè *N* friend
 gè:ndè *N* rainbow
 gè:ts'á *V* be beautiful
 gè:ts'ítè *Rel. V* beautiful
 gìbíré *N* tribute
 gildá *V* lose wealth; become poor; be poor
 gildésè *N* poor man
 gildipè *N* giraffe
 gìp'é *N* big drum
 gírbé *N* cotton
 gìré *N* work
 gise *N* time
 gíté *N* mask
 gè:nt'á *V* wipe off; sweep (mud)
 gjàldé *N* beehive (house made for bees)
 gjár^lá *V* kiss; greet
 gjétʃé *Dem* there (extra-distal)
 gjá: *Q* many
 gjá:jè *N* many
 gjá:nzé *N* elbow
 gjá:re *N* reading
 gjá:re *N* peace

gja:rìn wi:nzin *NP* reading and writing
 gjemp'elá *V* cover
 gobilá *V* poke a hole
 gobilá *V* pierce; to make a hole
 góbólé *N* window
 gòjám̄tisè *N* potato
 gólgmá:lt'è *N* larynx; Adam's apple
 gólgé *N* throat
 gómbóli:nsè *N* pestle
 gómbólé *N* mortar
 gómé *Proper N* wetland fields near Dabus
 gònè *N* big type of ant
 gòfègòfè *N* lizard
 gò:gé *N* beam; rafter
 gó:kè *N* thatch; roof
 gó:m'á *V* think
 go:mè *N* idea; plan; thought
 gó:mé *N* heap
 go:mek'è *N* embarrassment
 go:mmí:nts'è *N* determined; resolute

gó:m'le:má *V* remember
 go:ǰá *V* move; migrate (to another place)
 gúbáǰàye *N* 13th month (5-day month in Julian calendar)
 gùbé *N* bribe
 gudá *V* turn round (intr)
 gùgá *V* be fast
 gùgé *N* speed
 gúld'á *V* gnaw
 gumpá *V* dress (intr)
 gúndé *N* winnow
 gùnzá *V* be sad
 gúrdé *N* skirt
 gútè *N* crest (of bird)
 gu:dá *V* turn
 gwánségè *N* basket making
 gwà:né *N* prayer; request (of God)
 gwolá *V* slaughter; kill (animal for butchering)

h

habà' *Interjection* no
 haba:làgá *N* adultery
 hádèmàtamènè *N* labor cost
 hádèmesè *N* (domestic) servant;
 hádèmawè *N* weekday (traditionally Sat-
 Thur)
 hádèmè *N* work
 hágàmè *N* penalty; punishment
 hàkákma:lt'è *N* jaw bone
 hàkákè *N* jaw; cheek area
 halègá *V* create; make
 hambèlè *Pro* we (pl)
 hàmbèlè *N* camel

hamha:nde *N* clan
 hámmá *Adv* now
 handá *V* bleed
 hándǰáfè *N* vein
 hándé *N* blood
 hándhowè *N* pulse (literally, blood-go)
 hané *Pro* we (dual)
 háṅgálá *V* decrease; lessen
 hànìfè *N* bee
 hants'ílá *V* be smooth; be slick; slide
 háṅgílá *V* diminish
 háp'é *N* sorrow
 haràbá *V* make a mistake; commit sin; be

rotten; erase; be ruined; be spoiled
 háràbesè *N* guilty person
 háràbmí:nts'è *N* penalty; punishment;
 judgment (for crime)
 haràbùngùlá destroy (utterly)
 háts'è *N* tomorrow
 hawá *V* yawn
 háwé *Pro* you (dual)
 hàwèlè *Pro* you (pl)
 hawit'á *V* shiver; tremble
 hazile *N* morning
 ha: *Interjection* hey
 há:l'á *V* sleep
 ha:lmisè *N* rug; mat; carpet (for sleeping)
 hà:nt'á *V* forbid
 hà:nt'inqá *V* protect; defend; oppose or
 withstand someone;
 ha:ts'wakè *N* heron; all water fowl
 ha:ts'è *N* water
 ha:ts'wakè *N* duck
 háts'póts'é *N* tomorrow morning
 hélt'a *V* sharpen; bring to point (arrow)
 hék'á *V* die
 hek'ha:p'e *N* funeral
 hek'é *N* death
 hek'hék'è *N* sacrifice
 helélhelélè *Adv* slow
 hensílè *N* lance; spear
 hensíl'esè *N* soldier
 hesé *N* cattleleg (leg of cow, goat, sheep)
 hejilá *V* caress
 hèt'ifá *V* sneeze
 héz'á *V* hit; strike
 hezálùkasè *N* throwing stick; throwing
 knife

hezhá:ts'è *N* current (river; stream);
 hé:lè *N* a swarm of locusts
 híbílàjè *N* 9th month
 hijè *Pro* you (sg)
 hìk'imá *V* hiccough
 hík'imè *N* hiccough
 hìjà *N* reason
 híj'k'ifá *V* swing; shake (tr)
 híj'k'ifá *V* frighten (to scare)
 híj'k'ifá *V* wave (hand as a greeting);
 shake
 híj'kanà *N* day before yesterday
 híj'kanèjà *N* day before yesterday
 híj'khálawè *N* Monday
 híj'fì *Interjection* okay
 hi: *Exclamation* what?
 hí:ns'á *V* dig (by hand)
 hòhòwè *N* waterfall
 hój'á *V* walk; go
 hoje *N* movement
 hokó *Adv* perhaps
 hó:ŋ'á *V* be loose (intr)
 hòŋkè *N* cliff
 hòj'kíkí:mè *N* counterfeit money
 hòj'kjé *N* lie; falsehood
 hòj'kján *Adv* only
 hów'á *V* go
 ho:ésè *N* traveler
 hò:rè *N* relative (by blood); tribe; ethnic
 group
 hò:rkwé:t'é *N* 11th month
 hò:roj'kè *N* blood relative
 hò:j'òlá *V* make hole in
 hó:t'é *N* voice; yelling
 hò:t'é *N* noise, especially noise of a crowd.

ho:wé *N* journey; trip
hufé *N* brooding (of hen)
hùmbá *V* embrace; hug
hùṅgùlá *V* drop (tr); throw
húp^lá *V* brood (by a hen); (enfold by wings)
húp^lá *V* steal
hup'e *N* thief

húz^lá *V* cultivate; farm
huzésè *N* farmer
huzk'ets'e *N* field
hú:l^lá *V* encircling to attack; blitz
hú:nè *N* illness; disease
hú:ṅk^lá *V* smell (tr)
hú:f^lá *V* throb (with pain)

i

ibàá *V* weld (metal)
ííḟè *N* pot for cooking
iná *V* act; do
íné *N* action
ìné *N* mother
inint'á *V* try
ínsk^lá *V* fry
int'á *V* see
ínt'à:pè *N* pupil (of eye)
ínt'é *N* sight; seeing
int'tòwá *V* notice
ínts'^lá *V* be afraid

ints'é *N* fear
ínts'tòwá *V* be startled; be surprised; be frightened, terrified
ínzìṅè *Proper N* Inzi Mountain
íḟá *V* drink; smoke
íḟé *Dem* that (distal)
íḟè *Pro* she; he
íḟime *N* horn (animal); antenna
íḟkolè *Pro* they (pl)
íḟkuwe *Pro* they (dual)
íté *Pro* she; he (sg) (with subject case)

i:

ì:bé *N* visitor
ì:mà:fè *N* ankle
ì:mhá:ḟè *N* cowherd
ì:mkáḟè *N* ox; steer
ì:mkutè *N* hide (of cattle)
ì:mmà:lè *N* calf
ì:mnó:kè *N* cow

ì:mpólè *N* bull
ì:mwélikè *N* cow
ì:mé *N* cattle
í:nsè *N* wood; tree
í:nsk'ok'íḟe *N* bark (of tree)
í:nt'è *N* grunt

j

janzìgè *N* fireplace
jáp^lá *V* cry; wail; ululate (at funeral)

jáḟ^lá *V* trap (animal)
jáwèḟák'è *N* sorghum (dry season)

ja:ná *V* swear; curse
 já:né *N* curse
 ja:nek'á *V* be cursed
 jà:ntjà:ntiʃmìsè *N* softdrink
 jà:nt'á *V* soften (tr)
 jà:nt'á *V* be soft; be weak; be not working properly
 jà:nt'é *N* slackness; soft
 janziḡè *N* hearth
 jawìʃàsùra:nè *N* long skirt (for men) (literally, Bertha trousers)
 jawìʃè *N* Bertha
 já:kéḡé *N* 5th month
 ja:pe *N* crying; mourning
 ja:ʃè *N* trap
 jeká *V* accompany; go together; lead; guide
 jené *N* old; archaic
 jeníʃè *N* old
 jeníʃtòsè *N* historical narrative
 jéʃé *Dem* that (distal)
 jeʃimá *V* be sweet
 jéʃk'á *V* invite; call (tr)
 jeʃké *N* invitation
 jéʃkk'awá *V* revive (tr)

jè:rè *N* baby
 jè:rp'íʃè *N* baby
 jé:sé *N* stew
 jé:ʃ'á *V* collect; put things in one place
 jé:ʃé *N* honey
 jé:ʃmise *N* belongings
 jé:ts'á *V* run
 jonke *N* tail
 jónk'òt'è *N* ladle
 jofè *N* rainy season
 jó:nsésè *N* beggar
 jo:sé *N* song
 jo:ʃè *N* rainy season
 jé:ʃégè *N* beehive; beeswax
 je:ʃmìsè *N* property
 jól'á *V* fight
 jo:lk'ets'e *N* battlefield
 jo:lmìsè *N* weapons; instruments of warfare
 jó:né *N* time
 jo:nsá *V* plead; implore; beg; pray
 jó:s'á *V* sing
 jó:ts'è *N* oppressing (infinitive)

k

kàlá *V* fence-in; encircle with a fence
 kálè *N* fence; cattle pen
 kálíḡé *N* rice
 kàḡésè *Proper N* Mao clan name
 kálsé *N* socks
 kám'á *V* meet; encounter; find
 kámá *N* straight ahead; verticl
 kamè *N* fire; firewood

kàm'ók'ónts'é *N* fire ant; army ant
 kamʃókmìsè *N* charcoal burner (small stove)
 kamts'èlek'è *N* flame
 kamt'ereʃe *N* spark
 kané *N* dog
 kanmà:lè *N* puppy
 kanp'et'è *N* cattle tick

kants'k'è *N* thorn
 kánt'íʃma:lt'è *N* rib
 kánt'íʃè *N* side (of body)
 kaŋgalá *V* be dry
 káŋgílkámè *N* firewood
 káŋgílwámè *N* riverbed (dry)
 kàpé *N* shelter; grass hut
 kape *N* bird
 kapkjat'è *N* nest
 kapponsè *N* beak; bill (of bird)
 kará *V* be hot (inanimates)
 káré *N* heat
 karé *N* chisel
 kárkèmè *N* temperature
 kàróté *N* carrot
 kàrté *N* map
 kás'á *V* snatch up (violently)
 kasá *V* cook; become ripe
 kás'á *V* snatch; seize; plunder a town
 kás'á *V* pour into another's mouth; give to drink
 kase *N* small hoe
 kásé *N* ripening; cooking
 káswósè *N* unripe; immature
 káʃ'á *V* obstruct; (close); shut
 kaʃímé *N* year
 kàʃmìsè *N* door; doorway cover
 kàʃè *N* shut; closed
 káʃkàʃè *N* rattle (musical instrument for hand)
 kàʃúwè *N* medicine
 kawá *V* hang up
 kawe *N* bamboo sleeping mat
 kàwé *N* arm
 káwé *N* hanging (infinitive)

kàwè *N* cooking stone
 kàwk'énk'ets'e *N* potter's kiln
 kàwóʃkè *N* muscle
 kàwʃalè *N* north
 kazá *V* insult
 kázé *N* insult
 kà:ká *V* cackle (as of chicken)
 kà:ké *N* grandparent
 ká:k'á *V* be bitter
 ka:k'mìsè *N* alcohol (general)
 ka:k'wit'è *N* calabash
 ká:l'á *V* bake; prepare porridge
 kà:lè *N* porridge (staple food)
 ka:má *V* love (romantic)
 ká:ndé *N* warthog; wild boar
 ká:p'á *V* wrap up (in cloth)
 ká:sesè *N* Mao clan name
 kà:ʃájè *N* baboon
 ká:wé *N* white thing
 kék'è *N* appeasement
 kèmá *V* be big; become big; grow up; be important
 kémbílawè *N* evening
 kémbílawàldkját'è *N* night school
 kémbílawmimìsè *N* evening meal
 kémè *N* night
 kèmé *N* growing (infinitive); big; promotion
 kèmkásè *N* big hoe
 kèmónjòlha:ts'è *N* lake
 kénz'á *V* hoe
 kenzésè *N* farmer
 kénzhùŋgùlá *V* weed
 kenzmá:rè *N* weeds
 kep'á *V* follow

kèsman'k'e *N* elephantitis
 kèsmi'sè *N* abscess; tumor
 kés'á *V* swell (intr)
 kè'sá *V* demolish; destroy; tear down
 kè'silè *N* 2nd month
 ke'ská *V* whisper
 ké'ské *N* a whisper
 ké'ské *N* whisper; sound
 kéts'á *V* unwrap; untie
 kets'é *N* meaning; translation
 kéts't'á *V* persuade (to made clear)
 kètèmé *N* town; city
 kewe *N* bruise (wound); sore
 kezè *N* top
 kez'sawè *N* up
 ké:nt'á *V* tear (tr)
 ke:nt'é *N* rip; hole; scar
 ké:ŋk'á *V* look at disapprovingly
 ke:se *N* t'ef (a grain of the highlands)
 kí'á *V* come
 kílá *V* bow (as in greeting)
 kílé *N* corn cob
 kime *N* iron
 kimilifè *N* metal pot
 kimtúl'esè *N* blacksmith
 kínd'á *V* grind
 kindík'ùmbùlè *N* upper grinding stone
 kindí'fowè *N* lower grinding stone (larger base)
 kínsè *N* charcoal
 kìtìbáté *N* vaccine
 kit'ìfè *N* neck
 kit'ìfhàbile *N* necklace
 kit'ì'su:nts'è *N* nape of neck; back of the neck

ki:me *N* money
 ki:mtjammàrè *N* accounting (literally money-count-grab)
 kí:nts'á *V* blow nose
 ki:nts'e *N* snot; nasal mucus
 kì:fè *N* pus; any pus-filled sore
 kjakimá *V* be cold
 kjákímé *N* cold (may be used for weather)
 kjàlá *V* lay (eggs)
 kjálè *N* egg
 kjálk'okife *N* eggshell
 kjáltakòmtè *N* yolk (egg)
 kjámb'á *V* hunt
 kjambè *N* hunting
 kjámbé *N* penis
 kjambesè *N* hunter
 kjámbkéwè *N* ulcer (penis)
 kjámbà:pè *Proper N* Mao clan name
 kjánjégè *N* large container for grain (kept inside the house)
 kja'kja:lè *N* cheek of buttocks
 kját'á *V* build (house); organize; administer
 kjat'è *N* house
 kjat'esè *N* husband (literally, house-person/man)
 kjat'k'unsè *N* doorway (of a house)
 kjat'mùnts'è *N* wife (includes women who work outside the home)
 kjat'fajè *N* wall
 kjat'unsà:ŋk'è *N* compound; house
 kjázé *N* ancient
 kjemkjèmìtè *N* giant
 kògìná *V* enlarge; widen
 kògíné *N* wide
 kogìfè *N* lung

kòkólé *N* larynx; Adam's apple
 kòlé *N* slave
 kòlé *N* music
 kólè *N* news; talk
 kólò:lé *N* malaria; fever
 kónd'á *V* snore
 konésè *N* jealous person
 kònts'è *N* face
 kóhè *N* collection of the leftover grain
 after harvest
 kòpé *N* wickerwork; wicker
 korá *V* throw
 kosáwè *N* rest-day; vacation
 kós'á *V* breathe; rest
 kosé *N* breath; breathing; rest
 kòjá *V* believe; admit to wrong; obey;
 agree
 kòjé *N* permission; obedience
 kòjímùndants'ilè *N* promise; agreement
 kòjímùndkolkèjè *N* breaking a contract
 kòts'á *V* laugh
 kòts'á:ts'è *N* front teeth
 kòts'é *N* laugh
 kòt'á *V* have; possess; keep; put
 kót'ésè *N* owner
 kòwá *V* sit; dwell
 ków'á *V* roast
 kòwak'è *N* roasted corn (kernels)
 kówmìsè *N* seat; chair (general)
 ko:le *N* cave; cliff
 ko:né *N* jealousy
 ko:nt'e *N* plantain
 kò:pé *N* basket
 kó:j'á *V* chat; play
 kó:j'á *V* herd or tend (cattle, sheep)

ko:j'é *N* play; game
 ko:jímùndtòsè *N* negotiation
 ko:j'k'ets'e *N* playground
 ko:j'tòsè *N* story (tale)
 kò:tè *N* roasting
 kò:wè *N* making k'olo (roasted barley
 snack)
 kúginá *V* crawl
 kúlùmbha:lè *N* week
 kúlùmbùha:là:pkamè *N* a week ago
 kùmá *V* gather
 kùmá *V* store up; save
 kúmbé *N* elephant's trunk
 kúmé *N* gathering (tr)
 kúmmùndè *N* assembly; congregation
 kupè *N* granary
 kúp'è *N* hat
 kúp'ùlá *V* turn over (tr)
 kùrá *V* smoke (fish)
 kùrkùré *N* wrinkly skin
 kurme ~ kurume *N* bush pig
 kúrmésè *Proper N* Mao clan name
 kurummà:lè *N* piglet
 kúsdúmp'ìjè *N* thumb
 kúsé *N* hand
 kúskjakime *N* stupid person; lazy
 kúsmá:lt'è *N* wrist
 kúsnó:mè *N* finger
 kústílè *N* palm (of hand)
 kúj'á *V* wash (for hands or other body
 parts); bathe
 kújadèmaldè *N* art
 kújkját'è *N* bathing place
 kújmisè *N* stopper; plug (also a cover for
 a calabash)

kúfùmè *N* chin
 kúfùmkwint'e *N* beard
 kút'á *V* string; thread (beads)
 kute *N* skin
 kuthadèmè *N* leatherwork
 kutkwint'e *N* body hair (skin-hair)
 kut'ma:lt'è *N* spine;backbone
 kút'è *N* spine
 kúzéjà *N* civet cat
 ku:ldège *N* midnight
 ku:lè *N* place; middle
 kú:lè *Proper N* Mao clan name
 kù:mè *N* bamboo fish trap
 kù:rà *V* (be) shriveled; (be) wrinkled
 (fruit)
 ku:fá *V* stop up
 kwàgè *N* pot (for water)
 kwalla *N* yesterday
 kwánè *N* border
 kwángílt's'epfowlè *N* fishing line
 kwángílé *N* fishhook
 kwáp'é *N* wing; feather
 kwàfè *N* bridge
 k'wáts'è *N* length

kwa:ngè *N* ethnic group members
 kwa:ngé *N* shield
 kwelá *V* boil (water); bubble up
 kwelè *N* colobus monkey
 kwélt'á *V* polish; mopping
 kwets'á *V* tie (knot)
 kwè:bá *V* soar
 kwí:nt'mìskutè *N* hide (of animal)
 kwíl'á *V* advise; console; comfort
 kwìndá *V* descend; go down
 kwìndá *V* land; alight
 kwìnská *V* kneel
 kwínts'á *V* overtake; pass (tr)
 kwínz'á *V* dig
 kwíj'á *V* be dim; be shaded
 kwíjè *N* shade
 kwí:mp'á *V* tickle
 kwí:nt'mìsè *N* domesticated animal
 (literally, hair-thing)
 kwí:nt's'o:le *N* mane
 kwí:f'á *V* pay
 kwí:jé *N* payment
 kwí:jè *N* shadow
 kwón'á *V* be jealous

k'

k'abàmá *V* be grabbed;
 k'àlt'á *V* hate
 k'àmísé *N* dress
 k'àná *V* arrange; make right; fix up; draw
 (picture)
 k'àndè *N* time
 k'àné *N* arrangement
 k'ank'è *N* branch (of tree)
 k'ants'á *V* pick off (flowers or fruit,

primarily)
 k'ànts'ámé *N* crocodile
 k'ànts'é *N* cut
 k'ànts'è *N* self
 k'àngilá *V* coil (rope)
 k'àngilè *N* rolling up (infinitive)
 k'ànk'è *N* branch (of tree); palm frond
 k'àrét'é *N* tax
 k'af'áá *V* deceive; lie

k'awá	<i>V</i> wake up	k'é:ts'á	<i>V</i> burn (intr)
k'awìnè	<i>N</i> short	k'e:ts'é	<i>N</i> flower
k'á:f'á	<i>V</i> eat (corn)	k'e:ts'bèlgè	<i>N</i> shooting star; meteor
k'a:wè	<i>N</i> raw; uncooked	k'ìlbé	<i>N</i> north
k'ebè	<i>N</i> spring	k'ìlj'á	<i>V</i> abandon; leave
k'ebha:ts'è	<i>N</i> spring water; well water	k'írek'itè	<i>N</i> amputation
k'él'á	<i>V</i> choose (tr); be different	k'íjè	<i>N</i> louse
k'elàkànè	<i>N</i> naked	k'ìt'á	<i>V</i> sacrifice
k'elkare	<i>N</i> fever (not malaria)	k'ìt'misè	<i>N</i> sacrificial offering
k'elk'irmaṅk'e	<i>N</i> leprosy	k'ì:nts'á	<i>V</i> scrape; skin; peel; shell; husk (corn); crack (nuts)
k'elkúfàzà:buṅè	<i>N</i> soap (for body)	k'ì:nts'é	<i>N</i> husking corn
k'elkúf'misè	<i>N</i> wash basin	k'jàf	<i>Adv</i> full
k'elmí:nts'ámaṅk'e	<i>N</i> leprosy	k'ján'á	<i>V</i> burn
k'elnoke	<i>N</i> health	k'jánk'ìlà:pè	<i>N</i> kidney
k'embilè	<i>N</i> loincloth	k'jánt's'ìmkuse	<i>N</i> finger
k'emp'á	<i>V</i> choke	k'jà:fé	<i>N</i> udder
k'enk'éts'è	<i>N</i> okra	k'ók'è	<i>N</i> fish
k'èṅgílé	<i>N</i> discomfort; suffering	k'ok'íj'á	<i>V</i> strip off (bark)
k'èj'ká	<i>V</i> hatch	k'ók'íj'é	<i>N</i> crust
k'éts'á	<i>V</i> be lit	k'ók'já:j'kumè	<i>N</i> fish trap
k'éts'é	<i>N</i> country; floor; land; soil	k'ók'káfèsè	<i>N</i> fisherman
k'éts'ésè	<i>N</i> land-owner	k'ók'kwap'e	<i>N</i> fin
k'éts'híṅk'íj'è	<i>N</i> earthquake	k'ók'nò:kkwane	<i>N</i> pelican
k'éts'kaṅgile	<i>N</i> drought; famine	k'ók'íj'inè	<i>N</i> fishing net
k'éts't'é:nt'è	<i>N</i> earthworm	k'ómé	<i>N</i> decedent
k'èt'á	<i>V</i> swallow	k'omts'awe	<i>N</i> rag
k'ewá	<i>V</i> hear	k'onk'ìlk'ónk'ìlá	<i>V</i> slither (snake); zigzag
k'éwè	<i>N</i> butter (ghee)	k'ont'á	<i>V</i> chew
k'éz'á	<i>V</i> abstain; refuse; contradict	k'onts'á	<i>V</i> annoy; disturb
k'ezé	<i>N</i> traitor	k'ónts'è	<i>N</i> comb (of rooster)
k'ezésè	<i>N</i> stubborn person	k'òpá	<i>V</i> cut down (tree)
k'e:lé	<i>N</i> vote	k'ópè	<i>N</i> road; path
k'é:lè	<i>N</i> irrigation	k'òpé	<i>N</i> cut
k'é:ṅ'á	<i>V</i> despise; disdain	k'óp'é	<i>N</i> dumping; emptying (infinitive)
k'e:t'á	<i>V</i> put on a necklace		

k'osga:bè *N* gill
 k'ots'á *V* peck (tr)
 k'óté *N* axe
 k'owá *V* pick, pluck (fruit)
 k'ó:lé *N* owl
 k'óm'á *V* be old
 k'ò:mbá *V* bend down; stoop
 k'o:mésè *N* old man
 k'ó:p'é *N* mushroom
 k'ó:rè *N* crow
 k'ó:rè *N* looking (infinitive)
 k'o:sé *N* spirit; ghost
 k'o:sésè *N* sorcerer (male); shape-changer
 k'úm'á *V* forbid
 k'ùndá *V* dive; sink
 k'únsè *N* door
 k'únts'á *V* scratch
 k'únts'ùlè *N* clitoris
 k'ùpé *N* vulture
 k'úrkwa:nde *N* umbilical cord
 k'ùrná *V* growl; complain

k'úf ~ k'újè *Adv* only
 k'ùt'á *V* enter; go in
 k'ú:lofjè *N* buttocks
 k'ù:ndé *N* wave
 k'ù:t'á *V* mold (intr)
 k'ù:t'é *N* fungus; moss; algae; mold
 k'wàgírè *N* thorn-tree
 k'wák'ílé *N* skin (of fruit); corn husk
 k'wálè *N* fish dam
 k'wà:má *V* smile
 k'wà:nts'é *N* labor; birth pains;
 stomachache
 k'wek'ílà:kè *N* chameleon
 k'wék'ìfjè *N* turtle
 k'wensk'awè *N* right (direction)
 k'we:ndé *N* roar (of lion)
 k'winé *N* wiping (infinitive) (esp.
 excrement)
 k'wìnská *V* kneel
 k'wínts'a *V* pass
 k'wíssíhálawè *N* Friday

l

lùk'á *V* curdle (milk) (intr)

lùk'má:nts'è *N* yoghurt

m

màléj *Adv* surely; really; indeed
 máltesè *Proper N* Mao clan name
 mámísjà *N* correct; truth
 mámsésè *N* fair; faithful
 mándk'ìnts'éjà *N* 8th month
 màngìbè *N* bed
 màṅk'á *V* be sick; ill; be sweet
 màṅk'é *N* illness; disease; pain
 màṅgìbwa:rè *N* bedspread

már'á *V* hold; grab; get
 màrè *N* grabbing (infinitive)
 márìṅká *V* catch (object in air)
 màrmìsè *N* handle
 mármùndá *V* join; put together (to be
 grabbed together, literally)
 másaldè *Proper N* Mao clan name
 màsèṅk'é *N* single-stringed musical
 instrument

má:ʃá *V* ferment alcohol
 ma:ʃá *V* be drunk
 mà:ʃè *N* beer-brewing (infinitive)
 má:ʃé *N* drunkenness
 mà:wé *N* Mao
 mà:wésè *N* Mao person
 mà:zé *N* scar; scab
 ma:gèwè *N* friend
 má:lé *N* deaf person
 má:lè *N* child (of animal)
 ma:ltè *N* fat; bone
 má:má *V* carry (child) on back
 má:ndé *N* bag; quiver
 má:nt'è *N* stem; stalk
 mà:nts'è *N* milk
 ma:ràndure *N* wild cat
 ma:re *N* forest; bush
 ma:règá *V* plaster wall with mud
 ma:rkòwkjat'è *N* latrine; toilet
 ma:rmìsè *N* animal (wild)
 ma:rmìskutè *N* wild animal skin
 ma:rmìskwint'e *N* wild animal fur
 ma:rʃùndo:re *N* zebra (wild-donkey)
 ma:rt'òʃk'ets'e *N* grassland
 ma:rwa:lè *N* blade (of grass)
 ma:t'e *N* dove
 mèdábé *N* copper
 mègázé *N* saw
 mèlè *N* liver
 mèlk'á *V* indicate; point
 mènè *N* cape buffalo
 ménzilé *N* thin
 meʃá *V* sharpen (knife)
 mètá *V* dip
 mets'ehálawè *N* Thursday

mets'ek'áŋk'itè *N* square
 mé:nt'á *V* show; tell
 mé:ntájá *V* explain; announcement
 mè:ʃá *V* divine; prophesy (in Mao, 'to do the work of a K'alicha)
 mè:ʃá *V* bewitch; cast spell
 mé:ʃésè *N* medicine man; traditional healer
 mé:ʃtòsè *N* folktale; story
 mé:zé *N* wisdom
 mí'á *V* eat (general)
 mí'ek'á *V* be worn out; be eaten up
 mìkjat'è *N* restaurant
 mìmìnsà:pè *N* seed for crop; stone; pit
 mìmìsè *N* food
 mìsá *V* spread out (maize) (tr)
 mìsá *V* dry (in the sun)
 mìsè ~ mìnsè *N* thing
 mìsé *N* drying in the sun (infinitive)
 mìsé *N* fig tree
 mìsírè *N* lentils
 mìt'àmá *V* hurt oneself
 mìt'mìsè *N* scale
 mì:mé *N* mosquito
 mì:mhànt'mìsè *N* mosquito net
 mì:nts'á *V* decide; cut; punish (with a fine)
 mì:nts'è *N* cutting (infinitive)
 mì:nts'mìsè *N* cutting tool
 mì:t'á *V* measure; weigh
 mì:t'á *V* give pain; hurt (tr)
 mì:t'mìsè *N* measuring tool; scale; ruler
 mògé *N* namesake
 mògírè *N* jigger; sand flea
 moláwè *N* weekend; rest days

molgmgolǵá *V* slither (snake)
 molkját'è *N* menstruation house
 molpònè *N* menstrual period
 moské *N* semen; dream
 móttè *N* answer; response
 mot'á *V* finish (tr)
 mótt'é *N* finishing (infinitive)
 mòts'é *N* grass
 mòzá *V* (be) engaged; (be) betrothed
 mòzkòt'pa:lt'è *N* fiancée; girlfriend;
 betrothed
 mo:le *N* rust

mo:tá *V* prohibit; impede; forbid
 mó:ts'á *V* poison
 mò:ts'è *N* venom (of snake); poison (esp.
 of arrow)
 múkésku:lè *N* everywhere
 mùk'á *V* suck
 múnts'è *N* woman; wife
 muŋe *N* palm tree
 muŋkánts'k'è *N* palm needle
 mùngùlá *V* throw away; get rid of
 mújùlè *N* roof point
 mú:késmìsè *N* everything

n

nà *Dem* this (proximal demonstrative)
 náfsé *N* breath; life
 náft'é *N* diesel fuel
 nàgádé *N* trader
 nàknéjà *N* brother
 nak'ìfè *N* husband
 nà:ŋk'è *N* dew
 ná:ré *N* brideprice
 ná:sé *N* crocodile
 nè *V* present copula (be.PRES or
 NPST:AUX)
 nègájè *N* peace
 nègúsè *Proper N* Negussie
 néjé *N* 3rd month
 nelgìfè *N* cowrie shell
 nèpé *N* needle
 nèt'élé *N* scarf; wrap; head covering (for
 woman)
 ne:ŋe *N* brother-in-law (wife's brother;
 sister's husband)
 ník'á *V* be hungry

níkè *N* father
 níke *N* hunger; starvation
 nìknéjà *N* sister (elder/younger) my sister
 níŋk'a *V* step; step on; trample
 nit'it'è *N* father's brother (uncle)
 nit'it'p'ìfè *N* cousin (paternal)
 nogdówè *N* lion
 noká *V* be good
 nóké *N* good (infinitive)
 noke *N* beginning (infinitive)
 nókìŋè *N* goodness; kindness
 noktàá *V* succeed
 nóm'á *V* exchange; move from place to
 place; substitute
 nó:k'á *V* begin
 no:kè *N* mother
 no:kpélk'è *N* 10th month
 no:khá:ts'è *Proper N* Dabus River
 (literally, big river)
 no:kkurùmè *N* sow
 no:kwá:kè *N* hen

no:mpòmbè *N* detour
nó:n'á *V* argue; grumble; complain
numbà:pesè *N* fortune-teller; diviner
numbhá:lè *N* day after tomorrow

numbuhálawè *N* Tuesday
nu:nts'e *N* mouse
nú:ɲk'á *V* rise up; stand

o

òbdé *N* threshing floor
óbè *N* brother
ópé *N* pus
ògorá *V* rule over; dominate
ògórè *N* chief; headman; leader
òkóté *N* pot (for water)
ònsá *V* cough
oɲgòlha:ts'è *N* pool

opé *N* pus
óɲk'á *V* skin
oɲkt'e:nt'è *N* maggot (meat-worm)
oɲtmìsè *N* important
ósúmé *N* pumpkin; squash
oɲkɲénùngùlesè *N* butcher
oɲkè *N* meat
ótiɲká *V* prevent

o:

ò:dé *N* prophecy
ò:k'á *V* stutter
ó:lé *N* surprise
ò:sá *V* flee; run away from; disappear; be lost
ó:ɲ'á *V* win; conquer; exceeded

o:ɲé *N* first; winner
ó:t'á *V* leave (tr)
o:tè *N* piece; left-over; remainder
o:tmimìsè *N* leftovers

p

pagènè *N* anteater
páj'á *V* be empty
pákè *N* injera
pákkótè *N* roasted bread snack (in bits)
pàk'é *N* cobra
pàk'é *N* spitting cobra; poisonous snake
pàlè *N* antelope; bushbuck
pànosé *N* lamp; torch
páns'á *V* fly
pápìnè *N* horn (musical instrument)
pàsá *V* move away; migrate

pàsá *V* let go; release
pàsùngùlá *V* divorce
paɲá *V* make a loud noise; squeak
páɲmìsè *N* bell
pàt'wáne *Adv* again
pats'e *N* shoot (new plant)
pá:l'á *V* worsen; be heavy; be bad
pa:le *N* weight; splendour; glory
pá:ltáá *V* respect; honor
pa:lt'butmí:nts'è *N* excision (female)
pa:lt'è *N* girl; daughter

pa:lt'mòzkòt'sàwisè *N* fiancée;
 betrothed; boyfriend
 pà:nt'á *V* clear (land for planting)
 pá:nté *N* underwear
 pa:njá *V* swim; float
 pà:pájà *N* papaya
 pà:p'è *N* ambush
 pèká *V* fall (intr)
 pèmbá *V* shake; flap (wings)
 pénz'á *V* pull; drag; kidnap a girl (for
 marrying)
 pèṅè *N* bed
 pé:s'á *V* be sated
 pe:já *V* load
 pé:k'á *V* bake; prepare porridge
 pe:k'è *N* frog
 pè:mbé *N* dusting off (mats; clothing)
 (infinitive)
 pè:ǰá *V* slap
 pé:ǰè *N* slap
 pí'á *V* kill; murder; paint (apply ointment)
 pí:kòt'á *V* paint a house
 pílpísé *N* bow (for hunting)
 pílpísjint'ponsè *N* head of arrow
 píǰké *N* whistling (infinitive)
 píǰkìlè *N* caterpillar
 píǰkìlèkyat'è *N* cocoon
 pítílá *V* rub
 pí:ns'á *V* shell (nuts)
 pí:rè *N* tasting and giving thanks for food
 (esp. grain, meat) (by elders)
 pjáldé *N* piece (of wood)
 pja:ts'á *V* plaster wall with mud
 pjá:ts'è *N* plaster
 pjá:znà *N* last year

pogè *N* den; lair; hole
 poká *V* stack up (tr)
 pok'alá *V* miscarriage
 pok'e *N* frog (lives in the grass)
 pòlálbekèlè *N* stallion
 pòlkurùmè *N* boar (male pig)
 pòlè *N* male (for animals)
 pole *N* outside
 pòlwa:kè *N* rooster (cock)
 pònd'á *V* send (tr); order; command
 pondésè *N* messenger
 pònsè *N* mouth
 pònsk'ekálboyè *N* lipstick
 pònsk'ekè *N* lip
 pór'á *V* forget
 poré *N* forgetting (infinitive)
 pórè *N* crab grass (used for grazing)
 pòskìná *V* crawl (baby)
 pòǰá *V* steer; drive
 pòǰá *V* chase; drive away
 pòts'á *V* scrape; scratch; peel
 pòts'é *N* morning; dawn
 pots'é *N* bruise
 pót'è *N* hip; thigh
 pòwè *N* anus
 pòz'á *V* divide up
 poza:nse *N* 13th month (5-day final month
 in Julian calendar)
 pò:k'á *V* carry (in arms)
 pò:mbé *N* path; road
 pò:ná *V* go out; exit; arrive
 pò:nsè *N* edge
 pò:zé *N* light; dawn; brightness; light
 color; shining
 puṅk'èpuṅk'é *N* lizard

pùlá *V* break or burst open
 púmbulá *V* singe
 púnsk'á *V* crumble (tr)
 pùṅá *V* be bent over (hunchback); be curved
 púrné *N* bread
 púsè *N* ashes
 púj'á *V* blow (horn)
 puʃmìsè *N* bellows

p'à:lé *N* small hand hoe
 p'á:t'á *V* help; serve; compromise
 p'a:te *N* help (infinitive)
 p'elk'é *N* study; research
 p'enk'á *V* chop into pieces; slice open
 p'érk'é *N* lightning flash (in sky, not striking)
 p'i:nts'á *V* wring out (water)
 p'ip'its'á *V* be narrow
 p'ip'its'è *N* narrow
 p'íj'á *V* give birth
 p'íʃe *N* child
 p'íʃmá:m'wa:rè *N* baby sling (used on the back)

ràzá *V* melt (intr)

samket'há:lt'a:nse *N* full moon
 sasip'è *N* drool
 sa:pá *V* go blind; become dark
 sá:pè *N* darkness
 sá:pìṅè *N* nocturnal (literally, of the night)

putè *N* silk; hair of corn
 púwé *N* traditional beer
 púwkyát'è *N* tavern; pub
 pu:rá *V* apply (ointment); besmear
 pú:r'á *V* crush to pieces; pulverize
 pù:rè *N* flour
 pú:rè *N* applying ointment (infinitive)
 pú:rmìsè *N* paint

p'

p'íʃtílè *N* womb; pregnancy; fetus
 p'jansá *V* increase (intr); continue; resume; add
 p'jáʃè *N* tattoo
 p'olkiʃá *V* wring; twist
 p'ók'è *N* crevice
 p'ówé *N* ford; crossing point (for anything)
 p'ó:l'á *V* wrap up (with clothing)
 p'ò:ʃá *V* clap (hands)
 p'o:wá *V* cross (river)
 p'ùk'é *N* dust
 p'uʃè *N* straw; chaff

r

rèkíné *N* problem

s

sá:nts'è *N* bed
 sá:pkapè *N* bat
 sèt'éné *N* demon; evil spirit; satan
 sèwísè *N* young man
 se:mé *N* finding (infinitive)

sè:pé *N* sword; machete
 sé:rè *N* law
 sìbá:gò *N* string
 sîgàrifè *N* cigarette
 sílké *N* telephone
 sìmbìdò:rè *N* ostrich
 sìrnsìráté *N* celebration
 sísé *N* inside
 sísíṅhè *N* internal (of the inside)
 sítè *N* berbere (hot spice mix)
 softe *N* toilet paper

sóg'á *V* limp
 sogé *N* limping (infinitive)
 sòsòbílè *N* ginger root
 so:nts'è *N* child
 sùdánè *N* Sudan
 súnìsìlame *N* Sunni Islam
 sú:fìsìlame *N* Sufi Islam
 sù:k'é *N* small shop; store
 su:nts'è *N* lower back; waist

Ɲ

Ɲábàhèsè *N* few
 Ɲak'é *N* goat
 Ɲak'mà:lè *N* kid (of goat)
 Ɲak'nó:kè *N* she-goat; nanny goat
 Ɲak'pólè *N* he-goat; billy goat
 Ɲak'Ɲògìnè *N* flock
 Ɲalè *N* way; toward
 Ɲálé *N* flea
 Ɲáŋk'é *N* front room (of house); foyer
 Ɲàŋk'é *N* leopard
 Ɲáp'á *V* growl; complain; grumble; be angry
 Ɲape *N* sharp
 Ɲapkówè *N* shoe; sandal
 Ɲap'ílé *N* armpit
 Ɲafè *N* tendon
 Ɲafè *N* root
 Ɲafwàyè *Proper N* Mao clan name
 Ɲawè *N* way
 Ɲáwè *N* sand
 Ɲawèt'è *N* squirrel
 Ɲà:lá *V* pant (dog)

Ɲà:mbé *N* stomach (internal organ)
 Ɲa:mè *N* collard greens
 Ɲa:pak'è *N* maize; corn which is drying
 Ɲa:pè *N* roof; perch (for chickens)
 Ɲébé *N* loitering (infinitive)
 ƝékíƝmà:la:nse *N* 7th month (vervet monkey-baby month)
 Ɲèk'è *N* odor; smell
 Ɲék'íƝé *N* vervet monkey
 Ɲél'ek'á *V* be cloudy
 Ɲèmízé *N* shirt
 Ɲén'á *V* buy
 Ɲené *Adv* before
 Ɲènts'owe *N* expensive
 Ɲénùngùlá *V* sell
 Ɲengilá *V* get well; recover
 Ɲepilá *V* evade; escape
 Ɲèrmút'mùnts'è *N* prostitute
 Ɲewá *V* pour
 Ɲe:lé *N* cloud
 Ɲè:má *V* (be) lying down
 Ɲe:mè *N* crab (freshwater)

ʃé:mé *N* shin
ʃé:mè *N* across; horizontal
ʃér'á *V* winnow; throw in air (grain)
ʃe:ràsa:nè *N* bowl
ʃe:rè *N* soup; broth
ʃè:rkjá *V* drop in (for a visit)
ʃé:ʃ'á *V* urinate
ʃe:ʃe *N* urine
ʃé:ʃhá:ts'è *N* waterhole
ʃé:ʃkòt'á *V* paint
ʃe:ʃts'ekè *N* bladder
ʃe:wá *V* pour (water)
ʃíjè *N* excrement
ʃiká *V* scatter (tr); sprinkle; disperse
ʃike *N* knife
ʃíkjat'è *N* latrine; toilet
ʃikʃwáp'ʃípè *N* sheath making
ʃík'á *V* break wind; fart
ʃik'é *N* fart
ʃilá *V* be tired
ʃílimé *N* elephant's trunk
ʃilmùnts'è *N* first wife
ʃilp'íʃè *N* firstborn
ʃindit'é *N* pimple
ʃinè *N* hunting net; spider web
ʃiŋá *V* greet; take leave
ʃiŋek'á *V* accompany
ʃiŋkiná *V* accuse
ʃíŋk' *Adv* even
ʃíŋk'àré *N* ant (little)
ʃipá *V* dry up
ʃíp'á *V* sew; weave
ʃipè *N* peace
ʃiʃè *N* bush (general name for bush);
 thorn-tree

ʃíʃka *V* rub
ʃiʃkants'k'è *N* hornbush (general name
 for bush)
ʃit'á *V* wither (plant)
ʃit'é *N* mosquito
ʃíw'á *V* blow (of wind)
ʃiwe *N* air; wind
ʃiwilá *V* faint
ʃi:ge *N* valley
ʃík'á *V* become closer; approach
ʃi:lé *N* tiredness (infinitive)
ʃi:nt'é *N* nose
ʃi:nt'sú:nts'è *N* bridge of nose
ʃògíné *N* herd
ʃògùlá *V* stab ground (with stick, for
 planting)
ʃoká *V* sow; plant
ʃók'á *V* stink
ʃoŋè *N* krar (stringed instrument)
ʃòŋkùrmà:nt'è *N* sugar cane
ʃóp'á *V* be angry
ʃówè *N* mountain; stone
ʃowé *N* frontier; boundary (of field or
 country)
ʃòwènè *N* spider
ʃòwènʃinè *N* spider web
ʃowt'e *N* antelope
ʃo:lè *N* rope
ʃó:mé *N* sniffing (infinitive)
ʃó:ʃé *N* snake
ʃó:ʃʃukùmè *N* snake whistle (sound of
 snake)
ʃò:tá *V* uncover
ʃo:t'e *N* big antelope
ʃufè *N* bottom

ʃùndó:ré *N* donkey
 ʃùndó:rt'it'ilè *N* hemorrhoids
 ʃúk'ùm'á *V* whistle
 ʃupè *N* under; below
 ʃú:mbhek'è *N* vagina
 ʃù:ŋé *N* bad reputation; gossip; slander
 ʃú:r'á *V* be sleepy
 ʃú:ʃé *N* drizzle (spitting rain)
 ʃwàldá *V* skin (animal)
 ʃwaldwawè *N* green beans

ʃwìgá *V* twist
 ʃwilá *V* polish; sweep
 ʃwílé *N* wipe off; sweep
 ʃwalíkè *N* partridge
 ʃwanè *N* pity (think sadly)
 ʃwilhézi:nsè *N* paddle
 ʃwílmisè *N* broom
 ʃwìlè *N* canoe
 ʃwí:ndé *N* deep; depth

t

tàá *V* give
 tàgá *V* argue
 tàgé *N* argument
 tàjá *V* pack; send
 tálk'è *N* headpad
 tándílé *N* floor
 tàŋèts'è *N* giraffe
 taŋkiʃe *N* bedbug
 táś'á *V* sting; bite
 táw'á *V* be first
 tàwé *N* flooding of the Dabus river
 tá:k'é *N* small millet
 tèkèlá *V* keep; save; put; hire
 téns'á *V* divide; separate (tr); subtract
 tép'é *N* near
 tera *N* turn
 téskìlè *N* testicle
 téw'á *V* straighten up; make smooth;
 arrange
 téwè *N* python
 te:ne *N* chest
 te:nmá:lt'è *N* breast bone
 té:ŋ'á *V* recline; lean against

té:sé *N* other side; yonder
 té:ʃé *N* sister-in-law; brother's wife
 tè:zá *V* look after; guard; wait
 tè:zé *N* waiting (infinitive); guard; caution
 te:zèk'áŋk'itè *N* triangle
 te:zhálawè *N* Wednesday
 tìgè *N* wicker container used in brewing
 beer
 tìgégè *N* beer-brewing pot (from bamboo)
 tíjé *Pro* I (sg)
 tíl'á *V* be pregnant (in early stages)
 tilé *N* abdomen (external)
 tilk'wànts'è *N* stomachache; upset
 stomach
 tilmí:nts'è *N* intestines
 tilt'é:nt'è *N* intestinal worm
 tìmtímé *N* 1st month
 tìnè *N* behind
 tín'ʃawè *N* backward (direction)
 tinzè *N* patient
 tisá *V* shave
 tísé *N* shaving (infinitive)
 tísmisè *N* razor

títiz'á *V* be patient
 tízsisá *V* condole; comfort
 tí:ŋká *V* scoot along the ground (with
 buttocks to the ground)
 tjamá *V* count
 tjamé *N* counting (infinitive)
 togíts'mùnts'wose *N* polygamy
 tók'á *V* be first
 toŋk'ofá *V* squat
 tòsá *V* speak; talk
 tòsá:ts'è *N* language (speak-tooth)
 tòsé *N* talk; speech
 tòsp'élk'è *N* grammar; language study
 tòstòsè *N* speech; discussion among many
 people
 tòswole *N* proverbs; sayings
 tòswoswi:ǰá *V* answer; reply
 to:kake *N* headache
 to:kborè *N* brain; top of skull
 to:kkwi:nt'e *N* hair (of head)
 to:kkwi:ntk'ànmisè *N* comb
 to:kkwi:nt'mí:nts'kǰat'è *N* barbershop
 to:kma:lt'è *N* skull
 tò:kmisè *N* load; burden
 to:kǰwa:mè *N* top of the skull; crown of
 head
 to:kt'a:re *N* baldness
 to:kwá:t'è *N* plait; braid (hair)
 to:kè *N* head
 to:kǰàmǰare *N* head covering (for
 women)
 to:kǰarbe *N* head covering (for women)
 to:kǰa:ǰe *N* head covering (for women)
 tò:lá *V* bounce
 tó:ló *Adv* now

to:nsè *N* smaller antelope
 tó:tò:wè *N* skin blemishes (often caused
 by the sun)
 tùdá *V* push
 túgbùkè *N* any large swelling on the
 leg/foot
 túgé *N* foot; leg
 túgé *N* name
 túghàlbè *N* ankle ring; bangle
 túǰjèkè *N* naming ceremony
 túǰkéwè *N* ulcer on leg
 túǰnó:mè *N* toe
 túǰsise *N* sole (foot-inside)
 túǰǰá:ǰè *N* veins of leg (esp. varicose
 veins)
 túǰwánzibè *N* hoof; claw; toenail
 túǰǰurabe *N* socks
 túǰtákè *N* heel
 tùlá *V* enjoy a cigarette; take a drag
 túlk'ùmè *N* knee
 tuma:nse *N* new moon
 tumbák'k'ut'è *N* tobacco pipe
 tumésè *N* stranger (new-person)
 tummùnts'esè *N* groom
 tumbák'è *N* tobacco
 tume *N* new
 tumkáǰime *N* new year
 tummùnts'è *N* bride
 turá *V* was; PAST AUX
 túsá *V* coagulate; clot
 tufá *V* fold
 tùwànè *N* corpse
 tú:la *V* pound; crush; forge
 tu:lé *N* pounding (coffee, grain, etc.)
 (infinitive)

tu:lmìsè *N* hammer
tu:lmìsè *N* pestle; pounding stick
tu:r'é *N* pushing (infinitive)
tú:r'fálè *N* south

twàg'é *N* bushbuck; deer; stag
twanḡila:ts'è *N* elephant tusk
twanḡilè *N* elephant
twi:r'é *N* nape of neck; back of head

t'

t'ál'á *V* tangle
t'alá *V* inherit
t'àná *V* stretch; make taut
t'ant'á *V* be sticky
t'at'á *V* tie up tightly
t'atílá *V* flatten
t'á:lé *N* inheritance
t'edá *V* step
t'émá *V* taste
t'ént'á *V* be barren
t'ent'mùnts'è *N* barren woman
t'épìlè *N* patch; mend; repair
t'èrmúsé *N* bottle
t'ét'á *V* drip (intr)
t'et'é *N* drip
t'e:nt'è *N* worm
t'írk'inè *N* calf of leg
t'it'ilè *N* wart; small tumor
t'jámé *N* taste (infinitive)

t'olk'é *N* diarrhea
t'ónk'àjesè *N* magician
t'ofá *V* sprout
t'ósfé *N* sprouting (infinitive)
t'ósmisá'k'ets'e *N* garden
t'ò:rá *V* shoot
t'ó:f'á *V* vomit
t'o:fé *N* vomit
t'ulk'è *N* pit (of fruit)
t'únt'é *N* bud
t'úp'ùlè *N* knot
t'úf'á *V* tie up; fasten; bind; strap down
t'ùfè *N* bundle
t'ùfè *N* strap (infinitive)
t'ùsmisè *N* strap
t'ut'ufè *N* stump
t'u:nt'è *N* fishing worm
t'wa:sè *Proper N* Mao clan name

ts'

ts'ágè *N* a type of tree
ts'aká *V* break (tr)
ts'amengìlè *N* porcupine
ts'áp'íné *N* termite
ts'a:k'á *V* cease; stop
ts'á:ldé *N* bone marrow
ts'a:lè *N* vagina
ts'á:mé *N* taboo

ts'a:ḡá *V* kick
ts'á:wé *N* cloth
ts'égé *N* credit
ts'ègé *N* bad
ts'ér'á *V* pierce; stab
ts'eré *N* hippopotamus
ts'èrè *N* stabbing (infinitive)
ts'érè *N* splitting bamboo into quadrants

(infinitive)
 ts'éréme *N* cricket
 ts'èrmisè *N* stabbing pain (e.g. from a
 sickness)
 ts'èrmisè *N* poking tool
 ts'èréŋk'et'è *N* leech
 ts'ets'é *N* praise
 ts'é:gé *N* debt
 ts'e:giŋká *V* borrow (for oneself)
 ts'e:gtàá *V* lend
 ts'é:l'á *V* perspire; sweat
 ts'e:lá *V* finish; complete (tr)
 ts'é:lìŋè *N* last thing
 ts'é:lkú:lè *N* point
 ts'e:mpá *V* strain (food)
 ts'ík'é *N* pottery clay
 ts'ík'hadèmesè *N* potter
 ts'ík'ilifè *N* clay cooking pot
 ts'ínè *N* moth
 ts'ínè *N* fly
 ts'jok'á *V* be proud
 ts'óg'á *V* gather (tr); pick up; choose
 ts'ogé *N* collecting (infinitive)
 ts'ók'á *V* lick
 ts'olá *V* jump
 ts'ólpondè *N* traitor (literally, 'one who

jumped out')
 ts'onpa:lt's'o:nts'ole *N* Big Dipper
 (constellation)
 ts'oné *N* whole; full
 ts'ótè *N* tight (infinitive)
 ts'owá *V* be strong
 ts'ówé *N* hard; solid
 ts'ówhadèmè *N* physical labor; hard
 work
 ts'ók'á *V* be sour
 ts'ók'é *N* sour
 ts'ón'á *V* fill
 ts'ò:ŋk'á *V* stalk
 ts'ó:wé *N* strength; hardness
 ts'úgùnè *N* wild cat
 ts'uk'è *N* stumbling block; obstruction
 ts'úmé *N* fist; clenching (infinitive)
 ts'ùp'á *V* soak
 ts'urá *V* spit
 ts'uré *N* saliva
 ts'urhùŋgùlá *V* spit downward or away
 ts'uwá *V* evaporate
 ts'úwé *N* smoke
 ts'úk'é *N* fat (a person)
 ts'wi:t'á *V* pluck (feather)

u

úd'á *V* accumulate; pile up in a head (tr)
 udè *N* heap
 úgùmè *N* snail
 umbot'jápè *N* thunder
 úmbùlá *V* give a gursha (i.e. to place a
 bite of food in another's mouth)
 umbùlp'ifè *N* adopted child

umbut'e *N* rain
 úŋk'ùfá *V* dig up
 up'á *V* bury (a person)
 up'á *V* fill in (a hole); cover up with dirt;
 bury
 úp'è *N* termite mound; bump (on skin)
 úrè *N* hump (on back of cow or camel)

ufimek'úmp'é *N* centipede
ufno:kè *N* mother's sister (aunt)
úfùlá *V* roll

ù:né *N* twin
ù:nfé *N* bubble
ù:nfole *N* foam

wàgá *V* make oath
wàgé *N* oath
wágè *N* house pole
wàkè *N* far
wákùngùlè *N* bale out (canoe, boat)
(infinitive)
wálésè *Proper N* Mao clan name
wame *N* river
wampwónsè *N* river bank
wanzìbè *N* fingernail; claw; hoof
wanzìbkusma:lt'è *N* finger bone
waŋgile *N* jackal
wapá:ts'è *N* molar tooth
wapé *N* cheek
wapké:ntè *N* facial scar
wapóŋkè *N* molar area of face (cheek-
skin)
waŋlè *N* hare
wàwàt'f'è *N* mole
wájè *N* sesame
wájè *Proper N* Mao clan name
wa:ke *N* chicken
wa:kmàlè *N* chick (of hen)
wa:knó:kè *N* hen
wa:kpólè *N* rooster (cock)

ufume *N* navel
ufumkésè *N* hernia (umbilical)

u:

u:nt'è *N* twitching (infinitive)
u:ŋkùrá *V* be suffocated

w

wa:kógìfè *N* 4th month
wà:lè *N* ear; leaf
wà:lŋjè *N* earwax
wà:lt's'érè *N* piercing ears (infinitive)
wà:rbùts'kjat'è *N* laundry place (esp.
building)
wà:rè *N* clothing
wà:régèsè *N* weaver
wà:rŋowlè *N* thread
wá:t'á *V* harvest; pull up
wèlgelá *V* enter into contract
wèmpá *V* fan
wèmpmìsè *N* fan
wéngèlá *V* be open (by lifting a lid)
wèngil'jávè *N* left (direction)
wèngilwéngilá *V* be confused
wèŋk'á *V* open (tr)
wèŋá *V* look for
wèts'k'è *N* earthworm
wèzè *N* crazy; madness
wèzesè *N* mad person
wé:kè *N* guinea fowl
wé:nd'á *V* spill (liquid); leak
wé:r'á *V* boil
wìndwìndè *N* wandering (infinitive)

wints'k'è *N* father's sister (aunt)
 wít'è *N* calabash
 wi:á *V* say; order
 wí:jé *N* word; command
 wí:nzé *N* writing (infinitive)
 wí:f'á *V* return; turn (intr)
 wi:tàá *V* allow; permit
 wók'^lá *V* draw (water)
 wòpè *N* pit; hole
 wòp'figè *N* canyon; ravine
 worá *V* climb
 wosá *V* take
 wosiŋká *V* accept; receive
 wosjá *V* take; carry away
 woskjá *V* bring
 woskwìndá *V* unload; lower (tr)
 wosnu:ŋk'á *V* raise; lift (with hands)
 wospòná *V* take out (from container)
 woswi:f'á *V* return (tr); give back

(literally, take-turn)
 wò:fè *N* shaman; type of traditional healer
 wò:fká *V* deny
 wót'^lá *V* spoil (food) (intr)
 wò:k'è *N* pouring (infinitive)
 wó:l'á *V* want; desire
 wo:rá *V* ride
 wó:rkà:gè *N* galloping on a horse
 (infinitive)
 wó:sé *N* marriage (state of wedlock);
 taking (infinitive)
 wó:sga:bè *N* wedding (ceremony)
 wo:smùndandá *V* copulate (a
 euphemism) (literally, they took each other)
 wò:ts'á *V* ask; request (also 'plead' or
 'implore', 'beg')
 wó:ts'é *N* request
 wùt'^lá *V* cry out; grunt; yell

Z

zéŋgélé *N* thin (infinitive)
 zè:p'è *N* together
 zìlá *V* start a fire
 zògá *V* follow (walk along) a river or
 mountain

zùlé *N* juice
 zúmbfo:fe *N* green mamba
 zúmé *N* song of praise

APPENDIX F

SELECTED NORTHERN MAO TEXTS

Each line of these texts begins with a practical orthographic representation (which I and a small set of Northern Mao speakers have been using--there is not yet a government approved orthography). Immediately below the orthographic line is a phonemic representation (the same as used throughout the grammar) with full interlinearization and free translation. In some cases, word-boundaries in the phonemic representation are not represented in the practical orthography (e.g. the progressive constructions). In these cases, the phonemic representation more strictly adheres to the phonological evidence for boundaries while the practical orthography incorporates native speaker preferences and intuitions. Tonal downstep is also not represented in the practical orthography.

“The Leopard and the Bushbuck”

As told by Lelia Gichile (of Muts'a Mado, near Bambassi)

This story was recorded during a session of story-telling, where women had gathered to offer stories for textual analysis. The stories were recorded in the home of Yasin Ibrahim and Lelia Gichile, in Muts'a K'ebele to the east of Bambassi. The story was recorded on February 29, 2008. This is text 07 in the database.

01

Mééshtòs tòsgàf tíwóólbishá.

mé:ʃ-tòs tòs-gàf tí-wó:l biʃ-á

healer-story talk:INF-COMP 1S-want NPST:AUX-DECL

I am wanting to tell a story.

02

Pàlmàlàn shàngk'màlàn

pàl-màl-àn fàŋk'-màl-àn

bushbuck-child-CONJ leopard-child-CONJ

Baby bushbucks and baby leopards

03

koosh kóóshin kóóshin kóóshin kóóshin kóóshin hówin kèmin,

ko:ʃ kó:ʃ-in kó:ʃ-in kó:ʃ-in kó:ʃ-in hów-in kèmin

game play-SS:NF play-SS:NF play-SS:NF play-SS:NF go-SS:NF spend.day-SS:NF

played and played games together all day long,

04

kíinín pàlmàlìsh kíin nooknà, “Amói! shàngk'màlolen kóóshin hamkèamá!”

kí-in-in pàl-màl-ìʃ kí-in no:k-nà

come-SS:NF-CONJ bushbuck-child-SBJ come-SS:NF mother-OBJ

am-ói! ʃàngk'í-màl-ol-an kó:ʃ-in ham-kèm-á

mother-VOC leopard-child-PL-COM play-SS:NF 1PL-spend.day-DECL

And then they came (home); the baby bushbuck(s) came and said to the mother, “Oh Mom! We spent the whole day playing with the baby leopards!”

05

híwiish “Núúngàsh hàwkooshbishàà? Íshìsh hambèling akmìsnè, táà!”

hí-wi:ʃ nú:n-gàʃ hàw-ko:ʃ biʃ-à:

3SG-say-DS:NF what-COMP 2PL-play NPST:AUX-INTR

ìʃ-ìʃ hambèl-ìŋ ak-mìsn-è táà

3SG-SBJ 1PL-GEN eat:INF-thing-TV Exclamation

And she (the mother) said (to the baby bushbucks), “Why were you all playing? They are the very things that eat us!” (Literally, “They are our eat-things”.)

06

híin hiwiiá pàlnookìshá.

hí-wi:-n hi-wi:-á pàl-no:k-ìʃ-á

3SG-say-SS:NF 3SG-say-DECL bushbuck-mother-SBJ-TV

and that's what she said, the mother of the bushbuck.

07

Ee shàngk'màlòlishín, “Àmá hambèlish pàlmàlèn kóóshin kèmin hamkiá.”

e: ʃàŋk'í-màl-ol-íʃ-ín, àm-á hambèl-íʃ pàl-màl-àn
yes leopard-child-PL-SBJ-CONJ mother-VOC 1PL-SBJ bushbuck-child-COM

kó:ʃ-in kèmin-in ham-ki-á
play-SS:NF spend.day-SS:NF 1PL-come-DECL

Just like that. And the baby leopards, also, (said to their mother) “Mom! We came from spending the whole day playing with the baby bushbucks.”

08

“Íshíshíní ham ak mìnànè. Núúnish yekín kiáwèèzàà?”

íʃ-íʃ-íní ham ak-mìsn-è
DIST-SBJ-CONJ 1PL eat-thing-TV

nú:n-íʃ jek-ín ki-á-w-è:z-à:
why-SBJ go.together-SS:NF come:INF-NEG-2PL-FUT:AUX-INTR
“*Those are our food. Why didn't you all come (here) together?*”

09

híwiin shàngk'nóókè.

hí-wi:n ʃàŋk'-nó:k-è
3SG-say-SS:NF leopard-mother-TV
she said, the leopard-mother.

10

Híwiit àsaàt

hí-wi:t àsa-àt
3SG-say-REL time-LOC

At the time, when she said this,

11

híwiit giset híwiit yoonet, shàngk'íng màlòlishín téését bítittín

hí-wi:t gis-et hí-wi:t jo:n-et, ʃaŋk'-íŋ màl-ol-iʃ-ín

3SG-say-REL time-LOC 3SG-say-REL time-LOC leopard-GEN child-PL-SBJ-CONJ

té:s-ét bí-tit:-ín

yonder-LOC EXIST-PF-SS:NF

After she said this, and after the baby leopards were out yonder (in the bush)

12

ee, pàlmàlòlishín nà ʃal téését bítittín,

e: pàl-màl-ol-iʃ-ín nà ʃal té:s-ét bí-tit:-ín,

yeah bushbuck-child-PL-SBJ-CONJ PROX way yonder-LOC EXIST-PF-SS:NF

and the baby bushbucks also, after they went back out yonder,

13

“Hìngkíwà! hamkooshtà!” wiísh,

hìŋkí-wà ham-ko:ʃ-tà wi:i-íʃ,

come-2PL:IMP 1PL-play-JUSS say-DS:NF

“Come! Let's play!” they said.

14

“Hì nookìshín hàwèllà hímééntt mìsnà hamnookìshín hambèllà haméénta.”

hì no:k-ìʃ-ín, hàwèl-là hí-me:nt-t mìs-nà

2SG mother-SBJ-CONJ 2PL-OBJ 3SG-tell-REL thing-OBJ

ham no:k-ìʃ-ín hambel-là ha-mé:nt-¹á

1PL mother-SBJ-CONJ 1PL-OBJ AFF-tell-DECL

“Your mother, the thing that she told to you, our mother, also, told to us.”

15

wiín wiín shikmùndandá. Wííshandá.

wi-ín wi-ín ʃik-mùnd-and-á wí:ʃ-and-á

say-SS:NF say-SS:NF scatter/disperse-RECIP-NSG-DECL return-NSG-DECL

And after saying this, they dispersed one another and returned home.

16

Pàt' kooshándwéyà.

pàt' ko:ʃ-ánd-wé-jà

again play:INF-NSG-NEG-FUT:AUX

They never played (together) again.

“On the Endangered Northern Mao Language”

A personal perspective from Yasin Ibrahim (of Must'a Mado, near Bambassi)

This narrative was recorded in Addis Ababa, with a small group of Northern Mao speakers present. This text was recorded on August 7, 2008. This is text 20 in the database; various excerpts are cited in the grammar.

01

Tísh tòsgàsh tíwóolbitìshé.

tí-ʃ tòs-gàʃ tí-wó:l-bi-t-ìʃ-é

1SG-SBJ speak:INF-COMP 1SG-want-NPST:AUX-REL-SBJ-TV

I am wanting to speak.

02

Tísh yàsín ìbràhím tíwiiek'á.

tí-ʃ jàsín ìbràhím tí-wi:-ek'-á

1SG-SBJ Yasin Ibrahim 1SG-say-PASS-DECL

I am called Yasin Ibrahim.

03

Mùs'á Mádét típ'íshèk'a. Íshét tíkía.

mùts'á màd-ét tí-p'í-^lek'-á

Mus'a Mado-LOC 1SG-give.birth-PASS-DECL

í-ét tí-kí-^lá

DIST-LOC 1SG-come-DECL

I was born in Mus'a Mado (a large k'ebele southeast of Bambassi town). I come from there.

04

Tòsgàsh tíwóolbitìshé.

tòs-gàʃ tí-wó:l-bi-t-í-é

speak-PURP 1SG-want-NPST:AUX-REL-SBJ-TV

I am wanting to speak.

05

Hamk'es'età Màwésìsh gyáá bishwá, nís'esìsh íshkol bit àrètí,

ham k'ets'-età màw-és-íʃ gǎ: biʃ-wá

1PL land-LOC maw-person-SBJ many EXIST:INF-NEG:NF

níts'es-íʃ íʃ-kol bi-t àrè-t-é

few-SBJ 3-PL EXIST-REL reason-LOC-TV

In our country, there are not many Mao people, because they are few in number.

06

àldkyát'etìn Àmàrìnyáás'àn Gàláás'àn tòsin, íshkol k'opèt shíngk',
àld-kját'-et-ìn àmàrìnj-á:ts'-àn gál-á:ts'-àn
know:INF-house-LOC-CONJ Amharic-language-CONJ Oromo-language-CONJ

tòs-ín íʃ-kol ^hk'op-èt ʃíŋk'
say-SS.NF 3-PL road-LOC even

And in the schools, (the Mao people) speak the Amharic and Oromo languages, even when they're on the road.

07

àldkyát'èt íshkoltòstòsìn, íshkol tòsbit tòsané.
àld-kját'-èt íʃ-kol-tòs-tòs-ìn
know:INF-house-LOC 3-PL-speak-speak-SS:NF

íʃ-kol-tòs-bi-t tòs-àn-é
3PL-speak:INF-NPST:AUX-REL speak:INF-INS-TV

Whenever they (our children) speak in the schools, someone else's language is how they speak.

08

Màwéswoité Àmàrìnyán Gàláás'àn k'ú àldín,
màw-és-wol-té àmàrìnj-án gál-á:ts'-àn k'ú àld-ín
maw-people-PL-SBJ Amharic-CONJ Oromo-language-CONJ only know-SS:NF
The Mao people only know (use) Amharic and Oromo in the schools (because the teachers and non-Mao children don't understand Mao).

09

Màwésìsh numbu teezè íshkolhowshìn, paalt'sóóns'ishé
màw-és-ìʃ numbu te:zè íʃ-kol-how-ʃìn pa:lt'-só:nts'-iʃ-é
maw-person-SBJ two three 3PL-go-COND girl-child-SBJ-TV
When two or three Mao people are going down the road, girls,

10

es gaabèt shíngk', esish páájíbít kuulèt shíngk',
es ga:b-èt ʃíŋk' es-ìʃ pá:j-bí-t ˈku:l-èt ʃíŋk'
person place-LOC even person-SBJ NEG.EXIST-NPST:AUX-REL place-LOC even
*even at a place where there are other Mao people (they use Amharic or Oromo), even if
it's a place where no one else is!*

11

íshkol aas'nà k'íltittín tòstòsbishandá. Nàshín kómísìng ààwí?
íʃ-kol ˈa:ts'-nà k'íl-tit:-ín tòs-tòs biʃ-and-á
3-PL language-OBJ leave-PF-SS:NF speak-speak NPST:AUX-NSG-DECL

nà-ʃ-ín kó-mís-ìŋ à:wí
PROX-SBJ what-thing-GEN Exclamation

*Having abandoned their language, they are just speaking (other languages). What
manner of thing is this?!*

12

Íshét Māwésìsh gyáá paa gyáá bishwá,
íʃ-ét māv-és-ìʃ gjá: ˈpa: gjá: biʃ-wá
DIST-LOC maw-person-SBJ many disappear:INF many EXIST:INF-NEG:NF
(Because) there are not many Mao there (in Bambassi)

13

ááw gìnsòlish gyáá bít gìnsòlishé. Ìshkol aas' k'úsh tòsín, íshkol bit àrèté,
á:w ˈgìns-òl-ìʃ gjá: bí-t ˈgìns-òl-ìʃ-é
other nationality-PL-SBJ many EXIST-REL nationality-PL-SBJ-TV

íʃ-kol a:ts' k'úʃ tòs-ín íʃ-kol-bi-t àr-èt-é
3-PL language only speak-SS:NF 3-PL-EXIST-REL reason-LOC-TV

*Other nationalities are numerous; they (the Mao girls) only speak their (other
nationalities') languages because of this;*

14

“ham Mâwes aas'nán àldek'és aas'è,”

ham màw-es a:ts'-n-án àld-ek'-és †a:ts'-è

1PL maw-person language-OBJ-CONJ know-PASS-NEG:REL language-TV

“Our Mao language is a language that is not known,”

15

hambèllà núú wiiandgàmnaà wiín

hambèl-là nú: wi:-and-gà-m-n-à: wi:-ín

1PL-OBJ how.much say-NSG-FUT-3-NPST:AUX-INTR say-SS:NF

How long (how much) will they say (this) to us?

16

Íshkol eengìsh dìsh k'ashàtàásh, Mâwés aas'nà k'íltittín,

íʃ-kol e:ŋ-íʃ dìʃ k'aʃà-tà-áʃ màw-és †a:ts'-nà k'íl-tit:-ín

3-PL heart-SBJ just lie-APPL-DS:NF maw-person language-OBJ leave-PF-SS:NF

Their hearts simply lie about it, having abandoned their language

17

Gàláás'àn Àmàringé, íshkoltòsbit tòsish.

gàl-á:ts'-àn àmàrìn-ŋé íʃ-kol-tòs-bi-t tòs-íʃ

Oromo-language-CONJ Amharic-GEN 3-PL-speak-NPST:AUX-REL speak:INF-SBJ

And, it's just the Oromo language and the Amhara's (language) that they are speaking.

18

Kómísiŋg híbishshìn, nàsh nókwéjà.

kó-mís-ìŋ hí-biʃ-ʃìn nà-ʃ nók-wé-jà

what-thing-GEN 3SG-EXIST-COND PROX-SBJ be.good:INF-NEG-NFUT:AUX

This is not good, if such things are done.

19

Áápkámìng shalèt ham kwangìsh àldín,
á:p-kám-ìŋ ʃal-èt ham kwaŋ-ìʃ àld-ín
eye-fire-GEN way-LOC 1PL descendent-SBJ know-SS:NF
Our descendents know the way forward,

20

hamìng aas'ish àldkyát'èt winzek'ín ham took hamàldgàshnà
ham-ìŋ a:ts-ìʃ àld-kját'-èt
1PL-GEN language-SBJ know:INF-house-LOC

winz-ek'-ín ham to:k ham-àld-gàʃ-nà
write-PASS-SS:NF 1PL head 1PL-know-PURP-OBJ
Our language will be written in schools, in order for us ourselves to learn.

[At this point, the speaker shifts to speaking directly to the Mao people present.]

21

Màwés aas' p'élk'in dìshná wiit hampètèl bishá.
màw-és ʋa:ts' p'élk'-in dìʃ-ná wi:t ham-pètèl biʃ-á
maw-person language study-SS:NF just-OBJ say-REL 1PL-go.out NPST:AUX-DECL
We will move on, studying the Mao language like this.

22

nà-nà hàwàldshìn
nà-nà hàw-àld-ʃìn
PROX-OBJ 2PL-know-COND
If you all know this,

23

ins' ins'wá esàn hábit kuulèt shíngk', esàn bishwá hábit kuulèt shíngk'.

ints' ints'-wá es-àn ha-bí-t ¹ku:l-èt ʃíŋk'
fear fear-NEG:NF person-COM AFF-EXIST-REL place-LOC even

es-àn bíʃ-wá ha-bí-t ¹ku:l-èt ʃíŋk'
person-COM EXIST-NEG:NF AFF-EXIST-REL place-LOC even

you will not be afraid (to speak the Mao language) whether you are in a place with people or in a place where there are no people.

24

Hóólès dèmòkrasish mábtísh núúsés ginsish ísh aas'àn tòsin,

hó:lès dèmòkrasíʃ mábt-íʃ nú:sés gins-íʃ íʃ ¹ats'-àn tòs-ín,
now democracy right-SBJ every nationality-SBJ 3SG language-INS speak-SS:NF
Current democratic rights, every nationality speaks in its own language;

25

ísh aas'àn ísh tookàn tòsmùndín kòwmùndín bíshgàná. Wiit nè.

íʃ ¹ats'-àn íʃ ¹to:k-àn tòs-mùnd-ín kòw-mùnd-ín
3SG language-INS 3SG head-INS speak-RECP-SS:NF sit-RECP-SS:NF

bíʃ-and-gà-m-n-á wí:t nè
EXIST-FUT-3-NPST:AUX-DECL say-REL be.PRES

with their own languages, independently, they will live, speaking with one another and sitting together. This is what is said.

26

Pòmbish bíshá. Íshná k'ewingkín hàwàldbishá, àldkyát'ètà.

pòmb-íʃ bíʃ-¹á íʃ-ná k'ew-iŋk-ín
road-SBJ EXIST-DECL DIST-OBJ hear-REFL-SS:NF

hàw-àld bíʃ-á àld-kját'-ètà
2PL-know NPST:AUX-DECL know:INF-house-LOC

There is a way. You have heard that yourselves and know it from school.

27

hòshk-án hábit gaabèt shíngk' esàn hábit gaabèt shíngk'
hòʃk-án ha-bí-t ga:b-èt ʃíŋk'
nobody-COM AFF-EXIST-REL place-LOC even

es-àn ha-bí-t ga:b-èt ʃíŋk'
person-COM AFF-EXIST-REL place-LOC even
even in a place with no one or even in a place with people,

28

hàw aas'àn hátòswà!
hàw a:ts'-àn há-tòs-wà
2PL language-INS IMPR-speak:INF-2PL:IMP
all of you, speak in our language!

29

Hàwtàásh kèmtínè! Kyat'èt kyat'èt shíngk'wáne,
hàw-tà-áf kè-m-t-í-nè
2PL-CAUSE-DS:NF be.big-JUSS-3-NPST:AUX

kjat'-èt kjat'-èt ʃíŋk'w-án-e
house-LOC house-LOC even-CONJ-TV
Raise up (your children speaking Mao)! And even in every house,

30

hàw nikol unsèt shíngk', k'ófèt shíngk'wáne.
hàw nik-ol uns-èt ʃíŋk' k'óf-èt ʃíŋk'w-án-e
2PL father-PL home-LOC even road-LOC even-CONJ-TV
and also in your fathers' homes and also on the roads.

31

Ham aas'ish àldkyát'èt hawèèngék'gàmbìshá.

ham a:ts'-iʃ àld-kját'-èt ha-wè:ŋ-ek'-gà-m-biʃ-á

1PL language-SBJ know:INF-house-LOC AFF-open-PASS-FUT-3-NPST:AUX-DECL

Our language will start being used in the schools (Literally, 'will be opened up').

32

Nàna tòsnà, tín ánàwwiishnà! Ánàwins'nà!

nà-nà tòs-nà tín án-àw-wi:ʃ-nè

PROX-OBJ speak:INF-OBJ back NEG-2PL-return-NPST:AUX

án-àw-ints'-nè

NEG-2PL-be.afraid-NPST:AUX

Speaking like this: Please don't turn back! Please don't be afraid!

33

Hàwèllà tíwiibishá.

hàwèl-là tí-wi: biʃ-á

2PL-OBJ 1SG-say NPST:AUX

I am saying (this) to all of you.

APPENDIX G

ABBREVIATIONS

The abbreviations below are used in glosses throughout the grammar. In general, I have used abbreviations which follow the Leipzig Glossing Rules (2008). In some cases, however, I have, for a variety of reasons, felt the need to create my own. Where two abbreviations must be combined to form a complex gloss for a single form, I have joined the two with a colon (e.g. SS:NF, same-subject non-final verb marker).

1	first person
2	second person
3	third person
A	agent-like argument of transitive verb
APPL	applicative
AUX	auxiliary
AWAY	translocative directional
CAUSE	causative
COM	comitative (postposition, same form as INS)
COMP	complementizer
COMPL	completive
COND	conditional
CONJ	coordinating conjunction
COP	copula
DECL	declarative
DEF	definite
DEM	demonstrative
DET	determiner
DISJ	disjunctive marker
DIST	distal
EDIST	extra-distal
DU	dual
DUR	durative
DS	different-subject
F	feminine (not used for Northern Mao)
FOC	focus
FUT	future
GEN	genitive
GOAL	goal (postposition, same form as OBJ)
h	high tone register
H	high tone
HAB	habitual
HRSY	hearsay
HYP	hypothetical

IMP	imperative
IMPR	impersonal
INF	infinitive
INS	instrumental (postposition, same form as COM)
INTR	intransitive
JUSS	jussive
l	low tone register
L	low tone
LOC	locative (postposition, same form as SOURCE)
M	masculine (not used for Northern Mao)
M ₁	mid tone 1 (derived from H tone)
M ₂	mid tone 2 (derived from L tone)
MED	medial (demonstrative)
N	noun
NEG	negative marker
NF	non-final
NP	noun phrase
NPST	non-past
NSG	non-singular (dual and plural)
NUM	number
OBJ	object (same form as GOAL postposition)
OBL	oblique
P	patient-like argument of transitive verb
PASS	passive
PF	perfect
PL	plural
POSS	possessor
PRES	present
Pro	pronoun
PROG	progressive
PROX	proximal
PST	past
PURP	purposive
Q	question marker
RC	relative clause
RECP	reciprocal
REFL	reflexive
REL	relativizer
S	single argument of intransitive verb
SS	same-subject
SBJ	subject
SG	singular
SOURCE	source (postposition, same form as LOC)
TI	temporally-integrated

TOWARD	cislocative directional
TR	transitive
TV	terminal vowel
UNCERT	uncertain (conditional)
V	verb
VOC	vocative

APPENDIX H

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REFERENCES CITED

- Ahland, Michael. 2009. Aspects of Northern Mao phonology. *Linguistic Discovery* 7.1-38. Online: <http://journals.dartmouth.edu/cgi-bin/WebObjects/Journals.woa/2/xmlpage/1/article/332>.
- Ahland, Michael and Mary Pearce. 2009. Tonal behavior in the Northern Mao possessive construction: Downstep and double downstep? Paper presented at the Sixth World Congress of African Linguistics (WOCAL 6), Köln.
- Aikhenvald, Alexandra Y. 1999. Serial constructions and verb compounding: evidence from Tariana (North Arawak). *Studies in Language* 23.469-498.
- Aikhenvald, Alexandra Y. 2006. Serial verb constructions in typological perspective. *Serial verb constructions: A cross-linguistic typology*, ed. by Alexandra Y. Aikhenvald and R.M.W. Dixon, 1-68. Oxford: Oxford University Press.
- Andvik, Erik. 1999. *Tshangla grammar*. Eugene, Oregon: University of Oregon dissertation.
- Azeb Amha. 2001. *The Maale language*. Leiden: Research School CNWS, Leiden University.
- Azeb Amha and Gerrit J. Dimmendaal. 2005. Secondary predicates and adverbials in Nilotic and Omotic: a typological comparison. *Secondary predication and adverbial modification: The typology of depictives*, ed. by Nikolaus P. Himmelmann and Eva F. Schultze-Berndt, 299-321. Oxford: Oxford University Press.
- Azeb Amha and Gerrit J. Dimmendaal. 2006. Converbs in an African perspective. *Catching language: The standing challenge of grammar writing*, ed. by Azeb Amha, Gerrit J. Dimmendaal, Felix K. Ameka, Alan Dench and Nicolas Evans, 393-440. Berlin/New York: Mouton de Gruyter.
- Baye Yimam. 2006. A general description of Mao. *ELRC Working Papers* II/2.166-225.
- Baye Yimam. 2007. Mao of Bambasi. *Encyclopaedia Aethiopica* III, ed. by Siegerth Uhlig et al., 760-761. Wiesbaden: Harrassowitz.
- Beachy, Marvin Dean. 2005. An overview of Central Dizin phonology and morphology. Arlington: University of Texas at Arlington MA thesis.

- Bender, M. Lionel. 1971. The languages of Ethiopia: a new lexicostatistic classification and some problems of diffusion. *Anthropological Linguistics*, 13.165-288.
- Bender, M. Lionel. 1975a. The beginnings of ethnohistory in western Wellegga: the Mao problem. *Patterns in language, culture and society: Sub-saharan Africa. OSU Working Papers in Linguistics* 19.125-141.
- Bender, M. Lionel. 1975b. Omotic: a New Afroasiatic language family. *University museum series* 3. Carbondale: Southern Illinois University Press.
- Bender, M. Lionel. 1985. Gumuz, Koman, Mao and Omotic. *Studies in African Linguistics* (supplement) 9.19-21.
- Bender, M. Lionel. 1990. The limits of Omotic. *Omotic language studies*, ed. by Richard J. Hayward. London: School of Oriental and African Studies, University of London.
- Bender, M. Lionel. 1996. *The Nilo-Saharan languages: A comparative essay*. Munich: Lincom Europa.
- Bender, M. Lionel. 1997. Upside-down Afrasian. *AAP* 50.19-34.
- Bender, M. Lionel. 2000. *Comparative morphology of the Omotic languages*. Muenchen: Lincom Europa.
- Bender, M. Lionel. 2003. *Omotic lexicon and phonology*. (Published by author.)
- Benishangul-Gumuz Language Development Project. 2007. *Bertha-English-Amharic dictionary*. Addis Ababa, Ethiopia: SIL Ethiopia.
- Bryan, Margaret A. 1945. A linguistic no-man's land. *Africa* 15.188-205.
- Cerulli, Ernesta. 1956. *Peoples of the southwest Ethiopia and its borderlands*. London: International African Institute.
- Comrie, Bernard. 1976. *Aspect. Cambridge textbooks in linguistics*. Cambridge: Cambridge University Press.
- Comrie, Bernard. 1978. Ergativity. *Syntactic typology: Studies in the phenomenology of language*, ed. by Winfred P. Lehmann, 329-394. Austin: University of Texas Press.
- Comrie, Bernard. 1981. *Language universals and linguistic typology: Syntax and morphology*, 158-177. Chicago: University of Chicago Press.

- Comrie, Bernard. 1989. *Language universals and linguistic typology*, 2nd edition. Chicago: University of Chicago Press.
- Corbett, Greville. 2000. *Number*. *Cambridge Textbooks in Linguistics*. Cambridge: Cambridge University Press.
- Creissels, Denis. 2009a. Construct forms of nouns in African languages. *Proceedings of Conference on Language Documentation and Linguistic Theory 2*, ed. by Peter K. Austin, Oliver Bond, Monik Charette, David Nathan and Peter Sells, 73-82. London: School of Oriental and African Studies, University of London.
- Creissels, Denis. 2009b. Uncommon patterns of core term marking and case terminology. *Lingua* 119.445-459.
- Cristofaro, Sonia. 2010. Semantic maps and mental representation. *Linguistic Discovery* 8.35-52
- Croft, William A. 2001. *Radical construction grammar: Syntactic theory in typological perspective*. Oxford: Oxford University Press.
- Davis, Angela, Linda Jordan and Hussein Mohammed. 2004. Survey of Northern Mao, Kwama and Komo. SIL Electronic Survey Reports, 2011-043. Dallas: SIL International. Online: <http://www.sil.org/silesr/abstract.asp?ref=2011-043>.
- DeLancey, Scott. 1985. The analysis-synthesis-lexis cycle in Tibeto-Burman: A case study in motivated change. *Iconicity in Syntax*, ed. by John Haiman, 367-389. Amsterdam/Philadelphia: John Benjamins Publishing Company.
- DeLancey, Scott. 1991. The origins of verb serialization in Modern Tibetan. *Studies in Language* 15.1-23.
- DeLancey, Scott. 2005. Adpositions as a non-universal category. *Linguistic diversity and language theories*, ed. by Zygmunt Frajzyngier, Adam Hodges and David S. Rood, 185-202. *Studies in Language Companion Series*, 72. Amsterdam/Philadelphia: John Benjamins Publishing Company.
- Dimmendaal, Gerritt. 2003. Locatives as core constituents. *Motion, direction and location in languages: in honor of Zygmunt Frajzyngier* ed. by Erin Shay and Uwe Seibert, 99-109. *Typological Studies in Language*, 56. Amsterdam/Philadelphia: John Benjamins Publishing Company.

- Diessel, Holger. 1999. Demonstratives: Form, function, and grammaticalization. *Typological Studies in Language*, 42. Amsterdam/Philadelphia: John Benjamins Publishing Company.
- Dixon, Robert M.W. 2004. Adjective classes in typological perspective pp. 1-49 of *Adjective classes*, ed. by Robert M.W. Dixon and Alexandra Y. Aikhenvald, 1-49. Oxford University Press.
- Ehret, Christopher. 1995. *Reconstructing Proto-Afroasiatic: vowels, tone, consonants and vocabulary*. *University of California Publications in Linguistics*, 126. Berkeley: University of California Press.
- Ehret, Christopher. 2001. *A historical-comparative reconstruction of Nilo-Saharan*. Köln: Rüdiger Köppe Verlag.
- Fillmore, Charles J. 1986. Pragmatically controlled zero anaphora. *Berkeley Linguistics Society* 12.95-107.
- Fleming, Harold C. 1969. The classification of West Cushitic within Hamito-Semitic, *Eastern Africa history*, ed. by Daniel McCall, 3-27. New York: Praeger.
- Fleming, Harold C. 1974. Omotic as an Afroasiatic family. *Studies in African Linguistics*, supplement 5.81-94.
- Fleming, Harold C. 1983. Chadic external relations. *Studies in Chadic and Afroasiatic linguistics*, ed. by Ekkehard Wolff and Hilke Meyer-Bahlburg, 17-31. Hamburg: Buske.
- Fleming, Harold C. 1984. The importance of Mao in Ethiopian history. *Proceedings of the Seventh International Conference of Ethiopian Studies*, ed. by Sven Rubenson, 31-38. Uppsala: Scandinavian Institute of African Studies..
- Fleming, Harold C. 1988. Mao's ancestor: Consonant phonemes of Proto-Mao stage one. *Proceedings of the Ninth International Congress of Ethiopian Studies*, ed. by A.A. Gromyko, 35-44. Moscow: Nauka.
- Fleming, Harold C. 2007. Mao. *Encyclopaedia Aethiopica* III, ed. by Siegert Uhlig et al., 755-756. Wiesbaden: Harrassowitz.
- Foley, William and Olson, M. 1985. Clausehood and verb serialization. *Grammar inside and outside the clause*, ed. by Johanna Nichols and A. Woodbury, 17-60. Cambridge and New York: Cambridge University Press.
- Genetti, Carol. 2005. The participial construction of Dolakhā Newar: Syntactic implications of an Asian converb. *Studies in Language* 29.35-87.

- Girma Mengistu. 2007. The morphosyntax of verbal functional categories of Diddessa Mao. Addis Ababa: Addis Ababa University MA thesis.
- Givón, T. 2001. *Syntax: An introduction*. Amsterdam/Philadelphia: John Benjamins Publishing Company.
- González-Ruibal, Alfredo. 2006. Order in a disordered world: the Bertha house (Western Ethiopia). *Anthropos* 101.379-402.
- Greenberg, Joseph. H. 1963. *The languages of Africa*. Bloomington: Indiana University Center in Anthropology, Folklore and Linguistics.
- Greenberg, Joseph H. 1970. Some generalizations concerning glottalic consonants, especially implosives. *International Journal of American Linguistics* 36.123-145.
- Greenberg, Joseph H. 1981. Nilo-Saharan moveable-k as a stage III article (with a Penutian typological parallel). *Journal of African Languages and Linguistics* 3.105-122.
- Grice, H.P. 1975. Logic and conversation. *Speech Acts*, ed. by P. Cole and J.L. Morgan, 41-58. New York: Academic Press.
- Grottanelli, Vinigi. 1940. *I Mao. Centro studi per l'Africa orientale Italiana; missione etnografica nel Uollega occidentale*, 1. Rome: Reale Accademia d'Italia.
- Güldemann, Tom and Manfred von Roncador. 2002. Preface. *Reported discourse: A meeting ground for different linguistic domains. Typological Studies in Language*, 52, ed. by Tom Güldemann and Manfred von Roncador, vi-ix. Amsterdam/Philadelphia: John Benjamins Publishing Company.
- Haiman, John. 1983. On some origins of switch-reference. *Switch reference and universal grammar. Typological Studies in Language*, 2, ed. by John Haiman and Pamela Munro, 105-128. Amsterdam/Philadelphia: John Benjamins Publishing Company.
- Haiman, John. 1987. On the origins of medial verb morphology in Papuan languages. *Studies in Language* 11.347-364.
- Haspelmath, Martin. 1995. The converb as a cross-linguistically valid category. *Converbs in cross-linguistic perspective: Structure and meaning of adverbial verb forms*, ed. by Martin Haspelmath and Ekkhard König, 1-55. Berlin: Mouton de Gruyter.

- Hayward, Richard J. 1984. *The Arbore language: A First investigation. Cushitic Language Studies*, 2. Hamburg: Helmut Buske.
- Hayward, Richard J. 1988. Remarks on Omotic sibilants. *Papers from the International Symposium on Cushitic and Omotic Languages* (Köln), ed. by Marianne Bechhaus-Gerst and Fritz Serzisko, 263-299. Hamburg: Helmut Buske Verlag.
- Hayward, Richard J. 1990. *Omotic language studies*. London : School of Oriental and African Studies.
- Hayward, Richard. J. 1991. Concerning a vocalic alternation in North Omotic verb paradigms. *Bulletin of the School of Oriental and African Studies* 54.535-553.
- Hayward, Richard J. 1998. Is there a language with an indefinite nominative – Burji? *Proceedings of the Eighth International Conference of Ethiopian Studies*, ed. by Taddese Beyene, 679-696. Addis Ababa: Institute of Ethiopian Studies, and Frankfurt am Main: Frobenius Institute, Johann Wolfgang Goethe-Universität.
- Hayward, Richard J. and Yoichi Tsuge. 1998. Concerning case in Omotic. *Afrika und Übersee* 81.21-38.
- Hayward, Richard J. 2000. The ‘empty quarter’ of Afroasiatic. *Research in Afroasiatic grammar II: Selected papers from the Fifth Conference on Afroasiatic Languages* (Paris), ed. by Jacqueline Lecarme, 241-61. Amsterdam: John Benjamins Publishing Company.
- Hayward, Richard J. 2002. Case or postposition? *AAP* 71.55-73.
- Heine, Bernd and Tania Kuteva. 2002. *World lexicon of grammaticalization*. Cambridge: Cambridge University Press.
- Hellenthal, Anne-Christie. 2008. Sentence types in Sheko. Paper presented at the Omotic Mood, Modality and Utterance Types Conference, Leiden.
- Hellenthal, Anne-Christie. 2010. *A grammar of Sheko*. Utrecht: LOT.
- Hengeveld, K. 1992. *Non-verbal predication: theory, typology, diachrony*. Berlin: Mouton de Gruyter.
- Hirut Woldemariam. 2003. *The grammar of Haro with comparative notes on the Omoto linguistic group*. Addis Ababa: Addis Ababa University dissertation.
- Hofmeister, Lorianne 2010. Ganza language learning manual. Sudan: SIM-Sudan, MS.

- Holt, P.M. 1970. *The Mahdist State in Sudan, 1881-1898*. Oxford: Clarendon Press.
- Hyman, Larry M. and Joyce T. Mathangwane. 1998. Tonal domains and depressor consonants in Ikalanga. *Theoretical aspects of Bantu tone*, ed. by Larry M. Hyman and Charles W. Kisseberth, 195-229. Stanford: CSLI Publications.
- Jacobsen, William H. Jr. 1983. Typological and genetic notes on switch-reference systems in North American Indian languages. *Switch reference and universal grammar. Typological Studies in Language, 2*, ed. by John Haiman and Pamela Munro, 151-184. Amsterdam/Philadelphia: John Benjamins Publishing Company.
- Keenan, Edward L. 1976. toward a universal definition of 'subject.' *Subject and topic*, ed. by Charles Li, 303-333. New York: Academic Press.
- König, Christa. 2006. Marked nominative in Africa. *Studies in Language* 30.655-732.
- König, Christa. 2008. *Case in Africa*. Oxford: Oxford University Press.
- Krell, Amy. 2011. A sociolinguistic survey of Ganza, Komo and "Baruun be Magtole" language group. SIL Electronic Survey Reports, 2011-039. Dallas: SIL International. Online: <http://www.sil.org/silesr/2011/silesr2011-039.pdf>.
- Kutsch Lojenga, Constance. 2000. *Depressor consonants in African languages*. Presented at the Conference on Tone and Pitch Accent, Tromsø, Norway.
- Ladefoged, Peter. 2001. *Vowels and consonants: An introduction to the sounds of languages*. Malden, MA: Blackwell.
- Lamberti, M. 1991. Cushitic and its classifications. *Anthropos* 86.552-561.
- Lehmann, Christian. 1985. Grammaticalization: synchronic variation and diachronic change. *Lingua e Stile* 20.303-318.
- Lehmann, Christian. 1988. Towards a typology of clause linkage. *Clause combining in grammar and discourse*, ed. by John Haiman and Sandra A. Thomspon, 181-225. Amsterdam/Philadelphia: John Benjamins Publishing Company.
- Levine, Donald. 1974. *Greater Ethiopia: Evolution of a multi-ethnic society*. Chicago: University of Chicago Press.

- Longacre, Robert. 1985. Sentences as combinations of clauses. *Language typology and syntactic description: complex constructions*, ed. by Timothy Shopen, 235-286. Cambridge: Cambridge University Press.
- Mann, William C. and Sandra A. Thompson. 1987. Rhetorical structure theory: A framework for the analysis of texts. *IPRA Papers in Pragmatics* 1.79-105.
- Matisoff, James. 1969. The verb concatenation in Lahu: The syntax and semantics of 'simple' juxtaposition. *Acta Linguistica Haniensa* 12.69-120.
- Mithun, Marianne. 1995. On the relativity of irrealis. *Modality in grammar and discourse*, ed. by Joan Bybee and Suzanne Fleishman, *Typological Studies in Language*, 32, 367-388. Amsterdam/Philadelphia: John Benjamins Publishing Company.
- Montandon, Georges. 1913. Au pays Ghimirra: récit de mon voyage à travers le massif éthiopien (1909-1911). Société neuchâteloise de géographie, Bulletin. Neuchatel, Imprimerie Attinger Frères, 330-32; 356.
- Moreno, N.M. 1940. *Manuale di Sidamo*. Milan: Mondadori.
- Mulugeta Seyoum. 2008. *A grammar of Dime*. Utrecht: LOT.
- Palmer, F.R. 1986. *Mood and Modality*. Cambridge: Cambridge University Press.
- Payne, Doris L. forthcoming. Color-term systems: Genetic vs. areal distribution in sub-Saharan Africa. *Handbook of African Languages*, ed. by Rainer Vossen.
- Payne, Thomas E. 1997. *Describing morphosyntax: A guide for field linguists*. Cambridge: Cambridge University Press.
- Pearce, Mary. 1998. Consonants and tone in Kera (Chadic). *Journal of West African Languages* 27.33-70.
- Rapold, Christian. 2006. *Towards a grammar of Benchnon*. Leiden University: The Leiden University Centre for Linguistics.
- Rapold, Christian J. 2007. Defining converbs ten years on - a hitchiker's guide. *Converbs, medial verbs, clause chaining and related issues*, ed. by Sascha Völlmin, Azeb Amha, Christian Rapold and Silvia Zaugg-Coretti, 7-30. Köln: Rudiger Köppe Verlag.

- Sasse, Hans-Jürgen. 1984. Case in Cushitic, Semitic and Berber. *Current progress in Afro-Asiatic linguistics*. ed. by James Bynon, 111-26. Amsterdam/Philadelphia: John Benjamins Publishing Company.
- Shibatani, M. (ed.) 2002. *The grammar of causation and interpersonal manipulation*. Amsterdam/Philadelphia: John Benjamins Publishing Company.
- Siebert, Kati, Ralph Siebert and Klaus Wedekind. 1993. Survey on languages of the Asosa-Begi-Komosha area. S.L.L.E. Linguistic Report, 11. Addis Ababa: Institute of Ethiopian Studies, Addis Ababa University.
- Siebert, Ralph, Charlotte Wedekind and Klaus Wedekind. 1994. Third S.L.L.E. survey on languages of the Begi/Asosa area. S.L.L.E. Linguistic Report, 15. Addis Ababa: Institute of Ethiopian Studies, Addis Ababa University.
- Smidt, Wolbert. 2003. Anfillo ethnography. *Encyclopaedia Aethiopica* I, ed. by Siegert Uhlig et al., 262-264. Wiesbaden: Harrassowitz.
- Smidt, Wolbert. 2007. Mao ethnography. *Encyclopaedia Aethiopica* III, ed. by Siegert Uhlig et al., 756-760. Wiesbaden: Harrassowitz.
- Snider, Keith. 1998. Phonetic realisation of downstep in Bimoba, *Phonology* 15.77-101.
- Starosta, Stanley. 1985. Relational nouns as a source of case inflection. *Oceanic Linguistics Special Publications* 20.111-133.
- Stassen, Leon. 2000. And-languages and with-languages. *Linguistic Typology* 4.1-54.
- Tosco, Mauro. 1994. On case marking in the Ethiopian language area (with special reference to the subject marking in East Cushitic). *Sem, Cam, Iafet Atti della 7a giornata di Studi Camito-Semitica e Indeuropci*, ed. by Vermondo Brugnatelli, 225–244. Milano: Centro Studi Camito-Semitici.
- UNESCO's Ad Hoc Expert Group on Endangered Languages. 2003. Language Vitality and Endangerment. Paris: UNESCO, MS. Online: <http://www.unesco.org/culture/ich/doc/src/00120-EN.pdf>.
- Wedekind, Charlotte and Klaus Wedekind. 1993. Survey on languages of the Asosa Begi-Komosha area, part II. S.L.L.E. Linguistic Report, 12. Addis Ababa: Institute of Ethiopian Studies, Addis Ababa University.

- Welmers, William Everett. 1974. *African language structures*. Los Angeles: University of California Press.
- Woldemariam, Hirut. 2003. The grammar of Haro with comparative notes on the Ometo linguistic group. Addis Ababa: University of Addis Ababa Ph.D. Dissertation.
- Wright, S. and Givón, T. 1987. The pragmatics of indefinite reference: Quantified text-based studies. *Studies in Language* 11.1-33.
- Yip, Moira. 1980. *The tonal phonology of Chinese*. New York: Garland Publishing.
- Yip, Moira. 2002. Tone. *Cambridge Textbooks in Linguistics*. Cambridge: Cambridge University Press.
- Zealelem Leyew. 2005. Gwama: a little-known language of Ethiopia: a sketch of its grammar and lexicon. *ELRC Working Papers* I/1.1-52.