

REANALYSIS OF SERIAL VERB CONSTRUCTIONS IN YIMAS,
A SEPIK-RAMU LANGUAGE OF PAPUA NEW GUINEA

by

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Yimas, a Nor-Pondo language of the Lower Sepik-Ramu in Papua New Guinea, has two causative constructions and one attemptive construction that appear to have developed historically from a particular kind of serial verb construction. Although Yimas has many complex verbal constructions, including three kinds of serial verb constructions, all three novel constructions, it is argued, were reanalyzed from juxtaposition serial verb constructions (JSC). The construction specific semantics, as well as the specific verbal semantics of *tal* 'hold', *tmi* 'say' and *tay* 'see' contributed to reanalysis. It is notable that three new constructions have developed from a single source construction. I argue that the iconic closeness of the JSC helped motivate this reanalysis. It also appears possible that other derivational morphology in Yimas has developed through this route. I argue that the development of derivational morphology in Yimas is different than the development of inflectional morphology. The tight, and iconically close, relationship of juxtaposition appears to be a possible motivating factor.

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CHAPTER I

INTRODUCTION

Yimas is a member of the language family Nor-Pondo. It is spoken near the Sepik and Ramu rivers in Papua New Guinea. It is a language with complex morphosyntax and a range of complex clause constructions including coordinate clauses, several types of subordinate clauses and three types of serial verb constructions (SVCs). One type of SVC has a morpheme denoting simultaneity (SIM) that occurs between two serialized verbs, one has a sequential (SEQ) morpheme between the verbs and the final type of SVC has juxtaposed verbs (cf. Chapter 3). Using data from a grammar of Yimas (Foley 1991), I will examine three particular constructions: two causative constructions and an attemptive construction. These three constructions, I argue, have developed from one particular type of complex clause: the juxtaposition serial verb construction (JSC). I will address why it might be that the JSC is the source construction, not the myriad of other types of complex clauses in Yimas. Finally, I will briefly discuss other derivational morphemes that could have potentially had paths of development similar to those of the causative and attemptive constructions.

Yimas is a verb final language, with some freedom of word order. Verbs inflect for arguments and tense, aspect and modality (TAM). The core arguments usually occur as prefixes on the verb. One might see the following arguments affixed to the verb: the

single argument of an intransitive verb (S), the most agentlike participant of a clause (A), the under-goer or the other participant in the clause (O) and a recipient or dative-like participant (D). The argument portmanteau morpheme also includes information about number (singular, dual, paucal or plural) and word class of the noun. There are ten word classes, which are indicated with roman numerals (I-X) in example glosses. The TAM information is suffixed onto the verb. Dative-like participants are also sometimes suffixed rather than prefixed. Because so much information can be included on the verb, a verb word by itself can be a whole clause or sentence.

SVCs are “fused.” That is, the two, or more, verbs in an SVC occur as part of the same phonological word. Because the SVC is one word, argument information occurs prefixed to the first verb and TAM information occurs suffixed to the second or last verb.

Example (1-2) shows a JSC in Yimas. The two verbs in the construction are juxtaposed next to each other. In example (1), the two events are occurring at the same time. In example (2), the first event causes the second event.

- (1) *marŋki* *kia-kay-na-nanaŋ-kamat-kula-ntut*
 leaf.stem.VI.PL VI.PL.O-1PL.A-DUR-search-walk-RM.PAST

‘We walked around, looking for leaf stems’ (Foley 1991:322).

- (2) *narm* *pu-tpul-kamprak-r-akn*
 skin.VI.SG 3PL.S-hit-break-PERF-3SG.D

‘They hit and broke his skin’ (Foley 1991:324).

In the juxtaposition serial verb construction, there is no intervening material between the verbs, and they share the same arguments. In some Yimas SVCs, there is intervening material between verbs: sequential morphemes or simultaneous morphemes. The JSCs are the most syntactically tight complex clauses, because they lack any of the intervening morphemes.

One might notice here that the Yimas serial verb construction does not necessarily look like the prototypical serial verb constructions of African or Austronesian languages. The Yimas SVCs have verbs that are phonologically fused together. This is also the case for SVCs with morphemes between the verbs, as in (3) where we see a sequential SVC:

(3) *arm-n kay i-ka-ak-mpi-wul*
 water-OBL canoe.VII.SG VIII.SG.O-1.SG.A-push-SEQ-put.down

‘I pushed the canoe down into the water’ (Foley 1991:326).

This fusing may make these constructions seem like “verb compounds” rather than “serial verb constructions.” Foley (1991) uses the term serial verb constructions for these Yimas clauses and I defer to his terminology.

Now we turn to the reanalyzed clauses, looking at both lexical and grammaticalized uses of three particular verbs/morphemes: *tal~tar* ‘hold’, *tmi* ‘say’ and *tay* ‘see.’ In example (4), we see *tal* used as a single lexical verb, meaning ‘hold;’ in (5), when it occurs in a JSC, meaning ‘cause.’

- (4) *m-n* *Aympt mnta*
 NR.DIST-II.SG name then
ku-n-tal-kia-k
 X.SG.O-3SG.A-**hold**-NIGHT-IRR
 ‘Aympt held it’ (Foley 1991:485).

- (5) *kalakn* *na-n-tal-iray*
 boy.I.SG 3SG.O-3SG.A-**CAUS**-cry
 ‘He caused the boy to cry (e.g., by hitting him)’ (Foley 1991:292).

In (6) we see *tmi* used as a main verb. We see in the translation *tmi* means ‘said’ and there is no causative meaning. However, in (7), the translation ‘make’ shows that there is a causative reading.

- (6) *na-mpi-tmi-k* “*yanaw* *a,* *kappa-taw-wat*”
 3SG.O-3DL.A-**say**-IRR friend.I.SG VOC 1DL.S-sit-HAB”
ya-ka-wapat-n *kapa* *takmpi*
 come-SEQ-climb-IMP 1DL like.this
 ‘They **said** to him ‘Friend, come up here. We live like this.’” (Foley 1991:461)

- (7) *yan* *na-mpu-timi-wapal*
 tree.V.SG V.SG.O-3PL.A-**CAUS**-climb
 ‘They made him climb the tree’ (Foley 1986:267).

Finally in (8), we see *tay* used as a single verb. The translation is ‘saw’ and there is no attemptive mood here. In (26), there is no longer any semantic sense of ‘see,’ but rather, ‘try.’

(8) *tay ma narŋ aŋkayapan*

then other 1.day.removed afternoon

na-n-tay-kia-k-mpn *ikn*

V.SG.O-3SG.A-see-NEAR-IRR-3DL.D smoke.V.SG

“impa-n aympak”

I.DL-FR.DIST COP.3DL

‘And the next afternoon he **saw** their smoke “That’s them over there.”’ (Foley 1991:459)

(9) *na-mpi-kwalca-tay-ntut*

3SG.U-3DL.A-arise-ATT-RM.PST

‘They both tried to wake him up’ (Foley 1986:152)

I argue that the motivating factor for the juxtaposition serial verb construction leading to the development of three additional constructions is the close syntactic bond and that the mechanism of development is reanalysis. In chapter 2, I will examine the reanalysis of the attemptive and causative clauses in detail. In chapter 3, I will propose an explanation for why it is only the JSC that reanalyzes and not other complex clauses. Finally, in the conclusion, I will look at other derivational morphemes in Yimas that may have potentially followed the same developmental path as *tay*, *tal~tar* and *tmi*.

CHAPTER II

REANALYSIS OF *tay*, *tal* AND *tmi* IN YIMAS

In this section, I will review some literature discussing the process of reanalysis. Then in section 2.2, I will discuss the structure of the JSC, which is the source construction for the three constructions of interest. In sections 2.3 - 2.5, I will present examples of *tay*, *tal~tar* and *tmi* used first lexically and then grammatically. I will show that the lexical usages of *tal~tar* and *tmi* only occur in clause types other than the JSC, while *tay* is in an intermediate stage. Then I will show the verbs' grammatical usages which only occur in the JSC. Grammaticalization of a verb occurs in particular environments, not wholesale throughout a language. If the JSC is the only clause in which the grammatical usages of *tal~tar*, *tmi* and *tay* occur, then it is the JSC from which they must have developed. I will show the steps in the path of reanalysis that must have occurred to result in the structures that occur synchronically in the language.

2.1. Reanalysis Theory

Typically, there are several steps in grammaticalization through reanalysis. First a particular morpheme, word or construction has an ambiguous meaning, so that it can be interpreted in a concrete lexical way or a more abstract grammatical way. "The emergence of grammatical categories is the result of a few basic cognitive processes

whereby grammatical concepts are expressed in terms of some basic human experiences in relation to the way we view the world, where things are located, how they are related to each another, how actions are performed, what one does, etc.” (Heine 1994:273).

Human beings are good at understanding abstract concepts in concrete terms. This means that sometimes certain words can be interpreted in more than one way. This ambiguity allows for the possibility of reanalysis.

As in biological evolution, the early stages of grammaticalization are characterized by *functional ambiguity*. This is because functional reanalysis is the earliest step in diachronic change. It takes place instantaneously, as a spontaneous activity of individual speakers during communication, as they extend the use of old constructions (and words) to novel contexts (Givón 2002:212).

The next step is the reanalysis itself. Reanalysis is a mechanism of language change which alters the structure of an expression without necessarily, altering the surface realization of that expression (Langacker 1977, Harris and Campbell 1995, Gildea 1998, Hopper and Traugott 1993). Harris and Campbell, specifically, say that reanalysis involves change to underlying syntactic structure. This can be change in constituency, hierarchical structure, category labels, grammatical relations or cohesion. Semantic change is also often involved (1995:61). The type of syntactic change found in Yimas, is one of change in constituency and category labels.

Harris and Campbell (1995:63) give the example of the German *um zu* + an infinitive verb construction as an example of a change in constituency. This construction began as a prepositional construction. The noun (here *Wasser*) was originally part of the

prepositional phrase *um Wasser*. However, later the noun was reanalyzed as the logical object of the verb in the infinitive (here *zu holen*). Once the nominal becomes the object of the infinitive, *um* no longer has a prepositional meaning. In the reanalyzed construction, it simply introduces the noun or noun phrase that is the object of the infinitive. The reanalyzed structure is now used as a purposive construction.

(10) [er ging aus um Wasser] [zu holen]

he went out for water to fetch

‘He went out for water, to fetch (it)’ (Harris and Campbell 1995:62)

(11) [er ging aus] [um Wasser zu holen]

he went out for water to fetch

‘He went out (for) to fetch water’ (Harris and Campbell 1995:62)

Third, once reanalysis has occurred in the minds of speakers of the language, the grammatical meaning of the new construction can be extended to new environments, not just the original ambiguous contexts.

Finally, there is actualization. Actualization is the surface change in language which shows that reanalysis has occurred. Bybee (2006) states that language change comes from “specific instances of...structures that are used and reused to create novel utterances” (714). The structures that are used frequently are produced and eventually processed as an automatized unit. Eventually it is possible for the form to change as well. This is what is often referred to as actualization. Timberlake (1977:141) defines reanalysis as “the formulation of a novel set of underlying relationships and rules” and

actualization as “the gradual mapping out of the consequences of the reanalysis.”

However, Timberlake says that speakers must change their output to establish that reanalysis has taken place. Surface changes show actualization of reanalysis (143). The change in underlying structure motivates the surface change.

For reanalysis to occur, the right verbal semantics are necessary in the source situation. Not all verbs undergo grammaticalization. Bybee (1998: 256) states that there are universal grammaticization paths that can be found in unrelated languages. She states that among tens of thousands of words in a language, only a small number of words are candidates for grammaticalization, and they are words that describe concepts central to the universal human experience, like deictic verbs, posture verbs, body parts and verbs of obligation and volition. She contends that linguists must look at diachronic information to inform typological facts, to see the cross-linguistic manifestation of these universal pathways of language change. Cross-linguistically, it is also verbs that allow for potential ambiguity in interpretation that are candidates for grammaticalization.

2.2. Argument Structure of the Juxtaposition Serial Verb Construction

One of the main consequences of the reanalysis of the causative and attemptive constructions in Yimas is a change in argument structure. A verb’s argument structure defines the number of participants and their relationships.

I will explicitly define some terms for the purpose of this paper, because in Yimas, the valence of a verb is not always equal to number of core arguments marked in the verbal inflection.

I will use the term **valence** to refer to the number of semantic arguments that a verb root has. A verb root is an uninflected verb. So for instance, the verb root *tay* ‘see’ is bivalent with two arguments, a see-er and thing that is seen. **Transitivity of the clause** refers to the number of participants in a clause. Usually, valence and clause transitivity will be equal in Yimas. **Transitivity of the verb word** refers to the number of arguments expressed in the verbal inflection. Due to derivational processes as well as semantic and pragmatic conditions such as givenness, transitivity of the verb word and valence are not always equal (Foley 1991:282). For example, *tay* ‘see’ is bivalent with an A (agentive) and O (object or other) argument, as seen in example (12). Here the transitivity of the clause and the verb word correspond with the valence of the verb.

(12) *pu-ka-tay*

3PL.O-1SG.A-see

‘I saw them’ (Foley 1991:205).

In example (13), however, *tay* is marked with an O and D (dative) argument, rather than an O and A. The O argument refers to ‘smoke.’ The V (fifth word class) and SG marking in the gloss of both ‘smoke’ and the O prefix show that the noun and argument prefix are referential. The A argument is simply ellipsed. It is obvious from context that the speaker is the one who saw smoke, so it not required to be included in the verbal inflection marking. The D argument comes from possessor raising. Animate possessors, here ‘your,’ are often included as arguments on the inflected verb word. So

this example¹ shows how arguments can be reduced due to pragmatic ellipsis and how arguments can be added due to a derivational process like possessor raising.

- (13) *yanawntrm, ikn na-ŋkul-cay-ŋa-t*
 friends.I.DL smoke.V.SG V.SG.O-2DL.D-see-BEN-PERF
 ‘Friends, I saw your smoke’ (Foley 1991:458).

With a serial verb construction (SVC), the picture is a little bit more complicated because two (or more) verbs interact. This discussion will serve to describe the argument structure of the JSC, which, I argue, is the source construction for the three constructions of interest. However, all SVCs have the same argument structure. The semantic difference between SVC types will be explained in sections 3.2.3 - 3.2.5.

When two monovalent verbs are expressed in a SVC, the verb word has one argument. Both verbs share the S (single) argument. This can be seen in example (14), where *iranta*, an irregular reduplicated form of *ira* ‘dance,’ and *arpal* ‘exit’ share the argument of ‘they (dual).’

- (14) *impa-iranta-arpal-k*
 3DL.S-dance(RED ira-)-exit-IRR

‘They both danced, while coming out’ (Foley 1991:322).

When a monovalent and bivalent verb root are combined in an SVC, it is the verb with the highest number of arguments that licenses the transitivity of the clause. The S of

¹ I will describe this example in further detail in section 2.3.1 on lexical uses of *tay*.

the monovalent verb will be coreferential with the A of the bivalent verb. In examples (15-16), we see the monovalent verb *kula~kulanaj* ‘walk’ as either the first or second verb in an SVC, paired with bivalent verbs *kamat* ‘search’ and *kanta* ‘follow’ respectively.

(15) *marɲki* *kia-kay-nanaŋ-kamat-kula-ntut*

leaf.stem.VI.PL VI.PL.O-1PL.A-DUR-search-walk-RM.PST

‘We walked around, looking for leaf stems’ (Foley 1991:322).

(16) *impa-n-yakal-kulanaj-kanta-k*

3DL.O-3SG.A-CONT-walk-follow-IRR

‘He was walking following those two’ (Foley 1991:322).

In example (15), the verb word is marked with an A prefix that refers to the A of *kamat* ‘search’ and the S of *kula* ‘walk.’ The O prefix refers to the O of *kamat*. In example (16), the verb word is marked with an A prefix that refers to the S of *kulanaj* ‘walk’ and the A of *kanta* ‘follow.’ The O marked on the verb word refers to the O of *kanta* ‘follow.’

When a bivalent verb root combines with a trivalent verb root, the verb word can have three verbal inflections. This can be seen in example (17).

- (17) *nawkwantrm* *kwarkwa*
 chicken.III.DL today

tma-mpi-ηkra-na-wut-mpi-ηa-kia-k

III.DL.O-3DL.A-1DL.D-DEF-boil-SEQ-give-NIGHT-IRR

‘Tonight those two will boil two chickens and give (them) to us two’ (Foley 1991:283).

In example (17), *wut* ‘boil’ is bivalent and *ηa* ‘give’ is trivalent. The verb word is marked with three argument prefixes. The A of *wut* and *ηa* is *mpi-*, ‘those two.’ The O of both verbs is ‘chickens’ marked by *tma-*. The D argument *ηkra-* is only associated with *ηa* and marks the recipient of the chickens, ‘us two.’

Finally, we can see that when two bivalent verbs appear in an SVC, the verb word will be marked with two arguments. The verbs must share the A and O arguments. In example (18), the A and O of both *kankan* ‘shoot’ and *awkura* ‘gather’ is ‘he’ and ‘ducks,’ shown with the prefixes *n-* and *kia-* respectively.

- (18) *manpakawrηki* *kia-n-kankan-awkura-kiantut*

duck.species.VI.PL **VI.PL.O-3SG.A**-shoot(RED kan-)-gather.FR.PST

‘He hunted ducks a few days ago’ (Foley 1991:322).

What should be apparent in the examples above is that Yimas SVCs have a ‘same subject’ constraint. If verbs appear in an SVC, they must share arguments. This will be seen in sections 2.3-2.5 when *tay*, *tar~tal* and *tmi* are used lexically in SVCs. However, when these same morphemes appear in the reanalyzed clauses as attemptive and causative morphemes, the argument structure is different. There is no longer a same subject constraint on the two verbs. This is one important way in which we can determine that reanalysis has occurred.

2.3. *tay* ‘see’ > Attemptive

First, we will look at ‘see’ developing into an attemptive marker. I will also explain some more general Yimas syntax in the first few examples.

2.3.1. *tay* ‘see’ as a Lexical Verb

Example (19) comes from a text, ‘Origins of Yimas Village’ about two people who eventually found the Yimas village. Here, a man is watching them build a fire in the morning. Because of the context, in addition to the gloss, we know that *tay* means ‘see.’

(19) *tay ikn mnta na-n-tay-na-k-mpn*
 then smoke.V.SG then V.SG.O-3SG.A-see-DUR-IRR-3DL.D
m-rm tumpntut
 NR.DIST-I.DL morning

‘He watched their smoke, (when) they came out and sat down in the morning’

(Foley 1991:457).

The sentence begins with a discourse particle, homophonous with *tay* that means ‘then.’ Many of the sentences in the text begin with *tay* to continue the narrative. As stated in the introduction, Yimas has ten lexical classes and four number distinctions: singular, plural, dual and paucal. In this system, the second word in the sentence, *ikn* ‘smoke’ is glossed for its lexical class (five) and number (singular). The coordinating conjunction *mnta* is usually between two clauses, but here we find it before the first clause. Yimas has a typical verb final word order, but words can be moved around to suit the discourse. The next word is the first verb in the sentence. The prefix *na-* refers to the smoke, glossed according to its lexical class marker V. This morpheme is a portmanteau morpheme that also agrees with *ikn* in number (SG) and indicates its grammatical relation of object. Foley (1991, 1986) uses a combination of O, T (theme) and U (undergoer) in his glosses. I have regularized these for the purposes of this paper, glossing all as O. The *n-* prefix refers to ‘3sg’ or the ‘smoke-watcher.’ Noun classes I and II are for people and have the same grammatical relation prefixes on verbs. Noun classes for I and II, perhaps due to their prevalence, are not glossed in Foley (1991, 1986). So, *n-* marks either class I or II, for singular agents (A). Then there is the verb *tay* or ‘see.’ Suffixed to this verb root is durative aspect marking *-na* and irrealis mood marking *-k*. The final part of this word is the suffix *-mpn*, which refers to ‘their.’ Animate possessors are often raised to arguments in the verb theme and they are marked the same way as dative arguments. ‘They’ possess the smoke and there are two of them, so this is a dative-dual suffix.

The next word *mrm* is a ‘near distal’ marker which indicates that ‘they’ are some distance from the person seeing the smoke. It is of the first lexical class (I) because the

referent is male humans, and dual because there are two of them. Next there is a word that indicates the time of the action, i.e. ‘morning.’ The final word is the verb of the second clause in the sentence. It is a serial verb construction (SVC). The prefix *imp-* refers to the two men; because it references the single argument of an intransitive clause, it has the grammatical relation S. Because both verbs in the SVC are monovalent, the clause is considered intransitive. The first verb in the SVC is *arpat* ‘exit’ and it is connected via the second verb with the sequential marker *-mpi-*. The second verb, according to Foley (1991), is reduplicated, even though it is difficult to see how *cantaw* is a reduplication of *taw*. Yimas reduplication is very complex and this verb is one of the irregular reduplicated forms (Foley 1991:72). It may help to know that the palatal stop [c] is an allomorph of [t]. Having a reduplicated verb in an SVC with a SEQ marker means, for this sentence, that ‘they’ sat several times while exiting their cave. The final suffix is also an irrealis marker. Most of this text is in the irrealis and so the mood might have to do with the fact that it is a story or legend, rather than this particular event being uncertain.

Another sentence, example (20), in the same text shows us that it is not necessary to express all of the arguments on the verb root if they can be inferred from context.

- (20) *tay mpa m-n wapat-mpi*
 then now NR.DIST-I.SG climb-SEQ
impa-n-a-mampi-munta-n “*yanawntrm*,
 3DL.O-3SG.A-DEF-again-call.out-PRES friends.I.DL
ikn na-ɲkul-cay-ɲa-t tay taŋka-mpi
 smoke.V.SG V.SG.O-2DL.D-see-BEN-PERF then where-ADV
kapwa-na-mampi-arm-pi-wa-n
 2DL.S-DEF-again-board-SEQ-go-PRES?”

‘He came up and called out to them again: “Friends, I saw your smoke. Where are you going?”’ (Foley 1991:458-459).

In example (20), the important things to notice are that the verb *tay* ‘see’ occurs as the allomorph *cay* and that there is no A marking, only O and D. The first person A marking can be left out because the first person referent is obvious from context. The O marking refers to the smoke and the D marking refers the possessors of the smoke, i.e. who the speaker is talking to, so it is in second person. Second (and first) person dative markers are prefixed onto the verb, while third person dative markers are suffixed onto the verb.

- (21) *kikamtaj pu-ɲa-kwanan-taj-kt*
 armpit.VI.SG 3PL.A-1SG.D-badly-see-RM.FUT

‘It’s bad if they see my armpit’ (Foley 1991:302).

Example (21) has A and D marking, but no O marking. The A refers to ‘they’ or anyone that might see the speaker’s armpits. The D is a raised possessor. The verb *tay* ‘see’ normally has an O argument. The D here is only because it is a raised possessor. Here it is first person and therefore a prefix. The ellipsed O is a third person singular argument (armpit), but does not need to be prefixed to the verb because the referent has just been explicitly mentioned and is therefore obvious from context. This example also contains the adverb *kwanan* ‘badly’ in the verb theme. Adverbs, like some nouns, are often incorporated into the verb theme in Yimas.

As seen in the previous three examples (19-21), ‘see’ appears to be a verb with a valence of two arguments (A and O), which can be made ditransitive with the derivational process of possessor raising.

In example (22), *tay* only has one S argument. This is because what is ‘seen,’ is not coded with an NP (*kamtakwa* ‘empty’ is an adjective). If *tay* in this clause were marked with an A prefix, it would be *mpi-* for 3DL A. This shows us that *tay* can sometimes occur as an intransitive verb word, even if it is lexically associated with two arguments.

(22)	<i>mpa</i>	<i>impa-l-ŋka-pra-kia-k</i>	<i>parwa-n</i>
	now	3DL.S-down-travel-toward-NIGHT-IRR	dock.IX.SG-OBL
	<i>kanta</i>	<i>kamta-k-wa</i>	<i>impa-tay-kia-k</i>
	but	empty-IRR-IX.SG	3DL.S-see-NIGHT-IRR
	<i>kay</i>	<i>ta-pu-wura-kia-k-um</i>	
	canoe.VIII.SG	NEG-3-tie.up-NIGHT-IRR-PL	

‘They both came down, but saw empty [dock]. They didn’t tie up a canoe there’
(Foley 1991: 475-476).

The dock (*parwan*) does not need to be mentioned in the second clause, because it already appears in the first clause: ‘Now they came down to the dock.’ That means that ‘see’ does not have an overt O argument, so the see-er is marked as S, rather than A. The NIGHT *-kia* suffix is a special type of near future marker to mark events occurring in the evening or nighttime. Technically, this is the ‘next day’ in Yimas because days go from sunset to sunset, rather than sunrise to sunrise. However, *-kia* is not strictly a tense marker because it often occurs with the irrealis *-k* which marks events outside of time (Foley 1991:240-241). In this example we can also see that Yimas adjectives are inflected with the irrealis *-k* to show that they are out of real time or timeless. They are also inflected to agree with the noun that they modify. In this case, that is *parwan* ‘dock’ mentioned in an earlier clause.

In the previous examples we have seen *tay* as a main verb. Yimas also has very productive SVCs, especially the SVC with the *-mpi* SEQ morpheme, as seen in the

second clause of (19) and third clause of (20). In the example below, we will see *tay* occurring in this type of construction as well.

- (23) *tay na-mpi-mampi-kwalca-mpi-cay-ncut* “*narŋ*
 then 3SG.O-3DL.A-again-rise-SEQ-see-RM.PAST yesterday
m-ya-nan m-n anak
 NR.DIST-come-NR.PAST NR.DIST-I.SG COP.3SG
na-na-mampi-ya-n”
 3SG.S-DEF-again-come-PRES

‘They (dual) got up and saw him again “The one who came yesterday is coming again’ (Foley 1991:459).

In example (23) we again see the allomorph *cay*. Here it is the second verb in a SVC with sequential marking. In section 3.2, I will discuss the various types of complex clause constructions in Yimas and their semantics. For the moment, we can see that the verb word contains several morphemes, including two verbs. The first morpheme marks the object of ‘see’ which is ‘him.’ The second morpheme marks the agent of ‘see’ as well as the single argument of *kwalca* ‘rise.’ This is dual because the ‘they’ in the gloss refers to two people. The verb *kwalca* is monovalent. As mentioned in section 2.2, a SVC verb word will have the number of arguments of the verb with the highest valence. Since *tay~cay* is bivalent, there are two core arguments marked. The adverb *mampi* occurs next (again, adverbs are often incorporated into the verb word). The next morpheme is *kwalca* ‘rise’ and then the sequential marker *-mpi-* and then *cay*. The final morpheme is the remote past tense marker. There are two things important to note in this

example. The first is that *cay* occurs as the second verb in the SVC and the second is that there is literally a meaning of ‘see’ in this context.

In example (24) we have *tay* as the first verb in a sequential SVC. There are several examples like this in the ‘Origins of Yimas Village’ text, but I have chosen an example where the second verb is *kwalca* so (24) can be compared to (23).

(24) *m-um* *mnta pu-n-tay-mpi-kwalca-k*
 NR.DIST-I.PL then 3PL.O-3SG.A-see-SEQ-rise-IRR
awkura-mpi pu-n-api-k *man-an*
 collect-SEQ 3PL.O-3SG.A-put.in-IRR male.cult.house-OBL

‘Then he saw them and flew up and collected them and put them inside (his) male cult house’ (Foley 1991:468).

This example comes from a part of the story where a totemic eagle captures two men and puts them in his cult house. The first morpheme in the SVC shows that the object is plural, although based on the context of the story, it could have been a dual morpheme. The second morpheme refers to the agent. ‘Eagles’ are part of lexical class five. Because the A is a I class A and not a V class A, we know that this eagle is being marked grammatically as a person. Therefore its anthropomorphic powers are coded in the grammar. The third morpheme is *tay*, which literally means ‘see’ here, then the sequential morpheme and the second verb *kwalca* ‘rise.’ The final morpheme marks irrealis mood. An observant reader might notice that *awkura* ‘collect’ is also marked with *-mpi* SEQ. This is slightly different than the *-mpi* in sequential SVCs, because it is

used for medial dependent verb constructions (MDVCs) and other subordinate clauses. It lets the listener know that the verb is dependent (non-finite) and that person and tense marking for this verb will be on the next finite verb. Ostensibly, the source *-mpi* in SVCs comes from this dependent marker. MDVCs and subordinate clauses will be examined in more detail in section 3.2. However, the most interesting question presented by this example, in comparison with (23), is: why can *tay~cay* and *kwalca* occur in different orders? It seems that it must have to do with context. In example (23), the event is occurring in the morning as the two men are coming out of the cave where they sleep. They ‘rose’ and then ‘saw’ the man. In example (24), the eagle first flew up or ‘rose’ and then saw the two men.

2.3.2. Bridge Context

Now that we have seen some examples of *tay* meaning ‘see,’ we can look to an example from the “Origins of Yimas Village’ where *tay* could either mean ‘see’ or ‘try.’

(25) *wa-mpi-mayn-pi-tay-kia-k-mp-n*

IX.SG.O-3DL.A-fit-SEQ-see-NIGHT-IRR-VII.SG-OBL

“*kayak, mi mawŋkwat yampara-kia-k. ama mawŋkwat.*”

no 2SG other.side.SG stand-NIGHT-IRR 1SG other.side.SG

‘They both try their positions, “No, you stand on one side, me on the other”’ (Foley 1991:474).

The translation from example (25) gives *tay* an attemptive reading, rather than a literal ‘see’ meaning. This example comes from a part in the text where, after two men have been captured by an eagle, they are preparing to shoot it with their bows and arrows. They have come out of the eagle’s cult house and are getting in position to shoot the eagle. They stand up and then presumably look at (or see) their positions and then decide to switch around. This is glossed as ‘try their positions.’ The ‘try’ comes through ‘seeing’ and checking their positions. This example provides a ‘bridge context’ where we can see the type of situation in which *tay* might have started to develop into an attemptive marker. We can notice here that *mayn* ‘fit’ and *tay* ‘see’ share the O and A arguments and that the same subject constraint is not violated. Some other things to note in this example are the presence of *-pi* SEQ and *-n* OBL. The *-pi* marker is a variant of *mpi* where [m] is deleted because of the preceding [n] in *mayn*. The *-n* oblique marker is used to mark locations. Here, it is attaching to *mp*. This is the singular word class marker for *manm* ‘cult house,’ a noun which overtly occurs in a clause several sentences earlier in the text. They are in or near the cult house, which must be the reason for the presence of *-n* OBL. The *mp* does not refer to an argument, but to the word class of the *manm* location. The last important thing to note about this example is that it is a sequential SVC.

2.3.3. *tay* as an Attemptive Derivational Morpheme

Example (26) is the first example we have seen of *tay* occurring in a juxtaposition SVC. Here, it has a clear attemptive meaning.

(26) *ya-n-a-armarm-tay-n* *kacmpt*

VIII.PL.O-3SG.A-DEF-board(REL:*arm*-)-try-PRES canoe.VIII.PL

‘He tries to board the canoes’ (one after another) (Foley 1991:333).

In this example, there are two verbs, but no intervening morphemes. This makes it look like a juxtaposition SVC; however the meaning of ‘see’ is not present, rather there is a meaning of ‘try.’ The verb *arm* ‘board’ is bivalent. The arguments in the verb word are the lexical arguments of *arm*: the A of ‘he’ and the O of ‘canoes,’ what he is trying to board.

If *tay* occurs in a different construction, it cannot mean ‘try.’ However, it can occur in a JSC and still mean ‘see’ (Foley 1991:334) as seen in example (27). This shows us that complete actualization has not taken place and that the attemptive construction is in an intermediate stage.

(27) *impa-mpu-yakal-irm-tay-ncut*

3DL.O-3PL.A-CONT-stand-see-RM.PST

‘They were standing up and watching those two’ (Foley 1991:334).

Why would ‘see’ become attemptive? The semantics of ‘see’ should allow a connection with ‘try’ for this process to happen. It seems that in many languages, ‘see’ is used as an attemptive marker. In English, the use of the verb ‘see’ plus an irrealis clause gives an attemptive reading (28, 30), similar to using the verb ‘try’ itself (29, 31).

English:

(28) *I'll see if I can fix it.*

(29) *I'll try to fix it.*

(30) *Let's see whether we can make this recipe.*

(31) *Let's try to make this recipe.*

Other languages have attemptive auxiliaries with ‘see’ sources, showing that they have grammaticalized the semantic connection between ‘see’ and ‘trying.’ For example, for languages in the Turkic family, including Tuvan, Tofa and Turkmen, the lexical verb *see* (32) has become an attemptive auxiliary verb (33-35).

Tuvan (Turkic)

(32) *ol kino-nu kör-üp ka-an men*

that film-ACC see-CV PERF.AUX-PST 1

‘I’ve already seen that film’ (Anderson 2006:354 citing Anderson and Harrison 1999:64).

Tuvan (Turkic)

(33) *bo xem-ge balıkta-p kör-dü-vüs*

this river-D fish-CV ATT-PAST.II-1PL

‘We tried to fish in this river’ (Anderson 2006:355 citing Anderson and Harrison 1999:64).

Tofa (Turkic)

(34) *bis ında ayna-p kör-dü-vüs*

we there hunt-CV² ATT-REC.PST-1PL

‘We tried to hunt here’ (Anderson 2006:355 citing Rassadin 1978:196).

Turkmen (Turkic)

(35) *otur-ik gor-mek*

sit-CV ATT-INF

‘to try to sit’ (Anderson 2006:355 citing Hansar 1977:168)

² CV here means converb

Several other languages of Papua also have a verb that means ‘see’ which can be used to mean ‘try.’

Asmat (Asmat-Kamoro):

(36) *yitim-por*

arise-see

'try to awaken somebody' (Foley 1986:152 citing Drabbe 1959a)

Hua (Gorokan):

(37) *ke hu-ko-mana*

talk do.I-see-OTHER.INCONSEQUENTIAL

'I tried to talk (but to no avail)' (Foley 1986:152 citing Haiman 1980).

Ekagi (Ekari-Wolani-Moni):

(38) *maki-dou*

put-see

'try on' (Foley 1986:153 citing Doble 1962)

Examples (28-38) show that ‘see’ can mean ‘attempt’ or ‘try’ in many languages, but it still not clear why this is the case. I hypothesize that ‘see’ often has a metaphorical sense. We can ‘see’ something in our minds, that is, we can imagine it. What we imagine is unreal, and, at least in English, this is reflected in the irrealis coding of the

subordinate clauses that occur with ‘see’ meaning ‘try’ (cf. 28, 30). It is impossible for me to theorize about what is going on in the minds of Yimas speakers, but we have some additional evidence of *tay* meaning a type of metaphorical ‘see’ to Yimas speakers.

When *tay* is reduplicated, it means ‘clear,’ ‘free’ or ‘loose.’

(39) *na-n-a-taray-yawra-n?*

3SG.O-2SG.A-DEF-clear(RED:*tay*-)-pick.up-PRES

‘Can you understand him?’ (Foley 1991:319)

Although Yimas’ phonological rules make it somewhat opaque, *taray* is a partial reduplication of *tay*. With the partial reduplication, *taray* means ‘free, clear, loose’ (Foley 1991:339). This shows us that it is possible for Yimas speakers to interpret reduplicated *tay* metaphorically. A different metaphorical interpretation of *tay* must have occurred for it to be reanalyzed as an attemptive marker. The presence of *taray* shows that Yimas speakers can use ‘see’ as a mental type of ‘seeing.’

When looking at the attemptive construction (26), we noticed that the form is that of a juxtaposition SVC: person-person-verb-verb-TAM. The second verb in this construction is the attemptive marker, so: person-person-verb-ATT-TAM. The similarity in the syntax of the constructions leads me to believe that the attemptive construction is a reanalysis of a juxtaposition SVC that had *tay* as its second verb.

An additional attemptive construction can be seen in example (40).

(40) *na-mpi-kwalca-tay-jcut*

3SG.O-3DL.A-rise-ATT-RM.PST

‘They both tried to wake him up’ (Foley 1991:333).

The first verb in this construction, *kwalca*, is monovalent. That means that *tay* adds an argument to the clause and increases transitivity. We should also notice here that the same subject constraint found in SVCs is violated here. The S of *kwalca* ‘rise’ is the coded here in this construction as the O grammatical role, not the A we would expect if the same-subject constraint was in place. The A of *tay* verb root is the A of the clause. The O of the verb root *tay* is the O of the clause. Normally, in an SVC, the S of the monovalent verb should correspond with the A of the transitive verb. That is not what we find here, showing that the argument structure has changed in this reanalyzed clause.

We can contrast example (40) with example (26). In example (40), attemptive *tay* occurs with a monovalent verb. The same-subject constraint is violated. In example (26), attemptive *tay* occurs with a bivalent verb root. The same-subject constraint is not violated. Both verbs are bivalent and they share both the A and O arguments.

2.3.4 *tay* Reanalysis Summary

We can imagine that the underlying reanalysis looks like the template below (41), and happened in a series of three steps (2.3.4.1-2.3.4.3).

(41) INFL + main verb + main verb + INFL -> INFL + main verb + auxiliary + INFL

2.3.4.1. *tay* ‘see’

At an earlier point in the Yimas language, *tay* would have occurred as the second verb in a JSC and only meant ‘see.’ We know that sometimes *tay* still does mean ‘see’ as the second verb in a JSC due to examples like (27).

2.3.4.2. Semantic Reanalysis in Ambiguous Contexts

In this step, we imagine that there were semantically ambiguous situations where it would be possible to interpret *tay* ‘see’ as ‘try,’ such as in example (25). This would be circumstances where someone could literally see the result of a tried action. In certain situations like these, the lexical verb and the ambiguous verb are processed together as part of the single predicate in the juxtaposition SVC.

2.3.4.3. Morphological and Syntactic Reanalysis

In this third step, the underlying structure of the construction changes. That is: main verb + main verb > main verb + aux verb. The meaning of *tay* has become grammatical. In this step, the same-subject restriction for JSCs is lost, as in example (40). If attemptive *tay* occurs with a monovalent verb root, it increases the transitivity of the verb root and of the clause.

2.3.4.4. A New Construction

The language of Yimas has gained a new construction with this reanalysis. When *tay* occurs with a lexical verb in constructions other than the new auxiliary verb construction (24, etc.), there is no attemptive meaning. It is only in one particular construction that the meaning has grammaticalized. For complete actualization, we would expect that all occurrences of *tay* in a verb-verb construction would mean ‘try,’ but

this is not the case, as seen in example (27). At some point in the future, however, it is possible that JSCs with *tay* as the second verb may always be confused with the auxiliary construction. That would be a possible motivation to let the JSCs with *tay* fade out of use, just leaving the attemptive auxiliary construction.

2.4. *tal~tar* ‘hold’ > Causative

2.4.1. *tal~tar* as a Lexical Verb

The verb ‘hold’ has allomorphic variants of *tar* and *tal*. In the example below (42), the two sentences are part of a story where two people are preparing to shoot an eagle with bows and arrows. In the first sentence, the verb *art* ‘draw’ occurs as a fully inflected verb. The lexical verb *tar* ‘hold’ occurs as in the second sentence as the main, final verb of a medial dependent verb construction. In this second sentence, the verb *art* ‘draw’ occurs again and has a subordinating suffix which shows that it is dependent on the main verb *tar* for tense information. Person marking is not included on *tar* because it has just been stated in the previous sentence where *art* was a main verb.

- (42) *pucmp-n* *muntawktn* *tma-mp-art-kia-k*
 time.VII.SG-OBL at.first V.DL.O-3DL.A-draw-NIGHT-IRR

art-mpi *tar-kia-k*
 draw-SEQ **hold**-NIGHT-IRR

‘At this time, they first drew (their bows). They drew them and held them’ (Foley 1991:475).

We can see in (42) that *tar* literally means ‘hold’ in this context. Shortly after in the story, example (43) occurs.

- (43) *na-mp-apan-kia-k* *parmpantrm*
 3SG.O-3DL.A-shoot-NIGHT-IRR bow.V.DL
 tma-mp-ak-tar-kia-k
 V.DL.O-3DL.A-pull-**hold**-NIGHT-IRR

‘They both shot him; they pulled and held their bows’ (Foley 1991:475).

This is a JSC in which *tar* ‘hold’ occurs as the second verb. It literally means hold and is not a causative morpheme. However, we saw in example (5) that when *tar~tal* occurs in a JSC that it is a causative morpheme. There is a structural difference between (5) and (43). In (43), *tar* is the second verb in the construction. This simply shows that it is the action that occurs in a tight sequence right after *ak* ‘pull.’ In (5), *tal* is the first verb. In this position, as we shall see in later examples, it is a derivational morpheme meaning CAUSE.

The morpheme *tal~tar* seems to have another gloss besides ‘hold’ in some cases. In example (44) it is glossed as ‘start.’

- (44) *na-mpu-pampay-iranta-tal-k*
 3SG.O-3PL.A-KIN-dance(RED:*ira*-)-**start**-IRR

‘They started to dance with it’ (carrying it) (Foley 1991:317).

This meaning occurs when it is the second verb in a JSC. There cannot be an intervening morpheme such as *-mpi* or *-ra* (Foley 1991:333). Another interesting part of this clause is *pampay* ‘kinetic.’ This is a valence increasing morpheme normally

associated with carrying. This is a derivational morpheme that comes from a frozen, now non-productive, reduplication of *pay* ‘carry.’ I will look at some other derivational morphemes in chapter 4.2, but we can notice already that *pampay* is in the verb theme occurring juxtaposed next to another verb. This also looks very similar to a JSC. This shows that *pampay* could have had a development path as *tay* (and *tar~tal*, *tmi*) as a valence increasing morpheme.

2.4.2. Bridge Context and Contrasting Causatives

Causation is a type of force. An agent of cause forces a causee to perform a caused action. Holding is a type of physical force. In the JSC, sometimes the first verb is the cause that results in effect of the second verb (cf. example (2)). We can imagine a sequence of verbs *tal-V₂* where ‘holding’ results in another action. If this happened often enough, it would have been possible to reanalyze *tal* as causative.

The causative morpheme *tar~tal* sometimes retains its meaning of ‘physically manipulate’ (example (45)), which contrasts with causative constructions with *tmi* which only mean ‘cause by verbal commands or requests’ (example (46)).

(45) *na-ŋa-tar-kwalca-t*

3SG.A-1SG.O-CAUS-rise-PERF

‘She woke me up’ (Foley 1991:291).

(46) *na-ŋa-tmi-kwalca-t*

3SG.A-1SG.O-CAUS-rise-PERF

‘She woke me up’ (Foley 1991:291).

In example (45), someone has been woken up by being shaken or another physical manipulation. In contrast, in example (46), someone has been woken up by a verbal act, such as having their name called or hearing yelling (Foley 1991:291). We can also see *tar~tal* meaning ‘cause through physical force’ in example (5). Now, *tar~tal* is the more common and unmarked causative morpheme (Foley 1991:292).

Another difference between *tar~tal* and *tmi* is that the former is only used with monovalent verb roots. The latter can be used with bivalent verb roots, as will be seen in section 2.5.

2.2.3. *tal~tar* as a Causative Derivational Morpheme

The causative morpheme retains the *tal~tar* allomorphy of the lexical verb ‘hold,’ but can sometimes reduce further to *t* before words beginning with *ar*.

As mentioned earlier, Yimas allows SVCs to have as many core arguments as licensed by the verb with the highest valence. For instance, if two monovalent verb roots are serialized, one core argument will be marked. If a monovalent and bivalent root are serialized, there will be two core arguments marked.

(45) *na-ŋa-tar-kwalca-t*

3SG.A-1SG.O-CAUS-rise-PERF

‘She woke me up’ (Foley 1991:291).

Looking again at example (45), we can see the change in argument structure for the causative construction. The verb *kwalca* is monovalent (Foley 1991:333).

Synchronically, this means that the causative morpheme is increasing the valence of the verb theme. The base S of *kwalca* is coded on this verb word with an O prefix. The causer is the added core argument and it occurs as the A prefix. We see that there is no longer a same subject requirement for the two verbs. Diachronically, we know that the verb *tal* is bivalent and therefore is the verb that licenses the argument prefixes. The A marker *na* comes from the 3SG ‘holder’ and the 1SG O marker *ŋa* denotes the ‘held,’ even though the ‘holding’ semantics is gone. This means that, synchronically, in the causative construction, the causer is coded as the A and the causee is coded as the O.

When the morpheme *tar~tal* occurs as the first verb in a JSC, it has a causative meaning. Though in the preceding section we saw that *tal~tar* can indicate physical force, it is not the case that the causation must be a physical manipulation. This shows that the CAUS meaning has developed beyond its original source semantics of ‘hold/physically manipulate’. In ‘The Flood,’ a text found in Foley (1991), a man causes a flood to come as a revenge for his murder.

(47) *tay waca-k-nmaj mnta n-aypu-kia-k mnta*
 then small-IRR-II.SG then 3SG.S-sleep-NIGHT-IRR then
pia-n-ηa-kia-k-nakn tac-t-nti-ηan
 talk.O-3SG.A-give-NIGHT-IRR-3SG.D dream-NFN-act-OBL
 “*kapwa ηarη tpwi tumpntut*
 2DL 1.day.removed sago.pancake.X.PL morning
naηk-apapi-tal-kia-na-y. ama arm
 IMP.DL-put.in(RED:api-)-start-NEAR-IMP-X.PL.O 1SG water
tal-kwalca-k”
 CAUS-rise-IRR

‘The little sister was sleeping, and he gave her this in a dream “Tomorrow morning you both start frying sago pancakes. I will raise the water’ (Foley 1991:479).

This is a very complex utterance because the two sentences in quotations are the object of *ηa* ‘give.’ The important part of this example for our purposes, is the last clause. Here, ‘raise’ or ‘make-rise’ is expressed as *kwalca* with the causative morpheme *tal*. The force here is magic, not a physical, hands-on force. This shows the development and extension of the causative meaning (the observant reader might notice *tal* ‘start’ occurring in the first sentence of the quotation. This is the other lexical meaning of *tal*).

The causative morpheme *tal-tar* can also be used for ‘caused states.’ The *tmi* causative is not used with states. To express a caused state, a series of derivational processes take place. There are very few adjective in Yimas and they must occur with a

nominalizing suffix if they will be used as a predicate. This first step can be seen in example (48), where *kpa* ‘big’ is used in a copular construction.

- (48) *maŋkaŋkl kpa-ŋkl aklak*
 arm.VI.DL **big-VI.DL** COP.VI.DL
 ‘(His) arms are big’ (Foley 1991:293).

Then an inchoative state is derived by using the verb *tɨ* ‘do.’

- (49) *maŋkaŋkl kla-kpa-ŋkl-tɨ-ntuk-nakn*
 arm.VL.DL VI.DL.S**big-VI.PL-become**-RM.PAST-3SG.D
 ‘His arms become big’ (Foley 1991:293).

Inchoative states can occur with *tal~tar* ‘CAUS.’ The causative morpheme can occur before *tɨ* (50) or before the adjective (51).

- (50) *irpm mu-ka-kpa-m-tal-ci-t*
 coconut.palm.IV.SG IV.SG.O-1SG.A-**big-IV.SG-CAUS-become**-PERF
 ‘I grew the coconut palm to be big’ (Foley 1991:294).

- (51) *irpm mu-ka-tal-kpa-m-tɨ-t*
 coconut.palm.IV.SG IV.SG.O-1SG.A- **CAUS -big-IV.SG -become**-PERF
 ‘I grew the coconut palm to be big’ (Foley 1991:294).

2.4.4. *tar~tal* Reanalysis Summary

The underlying reanalysis of structure can be summarized in the template below.

- (52) INFL + main verb + main verb + INFL -> INFL + CAUS + main verb + INFL

We can hypothesize that the change happened in five steps (2.4.4.1-2.4.4.5), parallel to the development of *tay*.

2.4.4.1. *tar~tal* ‘hold’

At a previous point in the Yimas language, *tar~tal* must have occurred as the first verb in a JSC and meant ‘hold.’ We have no direct evidence of this in the modern language, but we can assume this must have been the case.

2.4.4.2. Semantic Reanalysis in Ambiguous Contexts

In the first step in the development there are semantically ambiguous contexts where *tal~tar* can be interpreted as ‘hold’ or CAUS, such as in (45). This could be read as ‘I held and woke him’ or ‘I woke him up by holding him’ or simply ‘I woke him up.’

2.4.4.3. Morphological and Syntactic Reanalysis

In this step, the underlying structure of the construction changes: main verb + main verb > CAUS + main verb. The morpheme *tal~tar* is now interpreted as a causative morpheme. The same subject requirement for serial verbs is lost.

2.4.4.4. Extension into Non-physical Environments

The fourth step in this development is the spread of this construction to apply to other situations, so that speakers can use the causative meaning of *tal~tar* when the cause is not a physical manipulation, such as the stative causatives in examples (50-51). Unlike the extension of *tay*, which seems unrestricted, *tal~tar* is still somewhat semantically constrained. This is because speakers can choose to use either *tal~tar* or *tmi* as their causative. As seen in section 2.5, *tmi* is used for situations in which the causer uses verbal force rather than physical force to cause an occurrence.

2.4.4.5. Phonological Reduction

As mentioned above, *tal~tar* will reduce to *t* when occurring before [ar].

2.4.4.6. A New Construction

The Yimas language has a new construction after the occurrence of this reanalysis. The causative reading of *tal~tar* does not result if the verb is used in situations other than as the first verb in a simple juxtaposition SVC. However, Yimas no longer has any JSCs with *tar~tal* ‘hold’ as the first morpheme. If the morpheme occurs as the first verb in a JSC-type structure, it is a causative morpheme.

2.5. *tmi* ‘say’ > Causative

2.5.1. *tmi* ‘say’ as a Lexical Verb

When the verb *tmi* is used lexically, it seems to usually have quoted speech as its O argument. It therefore is usually marked with the prefix *pia-* used specifically for Os that have something to do with talking. Other verbs such as *i* ‘tell’ also occur with this O prefix. The verb *munta* ‘call out’ takes quoted speech as complements, but does not occur with the *pia-* prefix.

- (53) *pia-mpi-tmi-k* “*mpa kwarkwa na-ηkra-na-apan-η*”
 talk.O-3DL.A-say-IRR now today V.SG.O-1DL.A-DEF-shoot-IRR

‘They both said “We both will shoot him today’ (Foley 1991:470).

- (54) *pia-mpu-tmi-k* “*ka-ŋkul-awkura-mpa-n.* *naŋk-walŋa-n.*”
 talk.O-3PL.A-**say**-IRR LIKE-2DL.O-collect-IMM-IMP IMP.DL-light-IMP
 ‘They (the villagers) said “He must collect you now. You must be light”’ (Foley 1991:472).

The verb *tmi* does not always have a quotation as a complement, as seen in example (55). Here, however, the object prefix is still *pia-*. In this example, the person being spoken to is coded as a dative argument.

- (55) *m-n* *pia-ŋa-taŋ-tmi*
 NR.DIST-1SG talk.O-1SG.D-COM-**say**
 ‘He talked with me’ (Foley 1991:305).

2.5.2 Bridge Context

As stated earlier, causation is a type of force that results in an action. That force can be verbal. Someone can tell or order someone else to do something.

- (56) *tay* *mpa* *tkt* *na-mpi-ŋa-k-nakn*
 then now chair.V.SG V.SG.O-3DL.A-give-IRR-3SG.D
na-mpi-tmi-cantaw-k *tpuk*
 3SG.O-3DL.A-**say**-sit (RED: *taw-*)-IRR sago.pancake.X.SG
ku-mpi-ŋa-k-nakn
 X.SG.O-3DL.A-give-IRR-3SG.D
 ‘They gave him a chair and **told** him to sit down, and they gave him some sago’
 (Foley 1991:461).

In example (56), two people tell someone else to sit. That person sits down and then is given some food. We can see here that the ‘telling’ is the force that causes the causee to sit. Presumably this sequence occurred often enough so that *tmi-V₂* was reanalyzed as a causative sequence. There is no *pia-* prefix on this verb because the object is no longer one of speech in the attemptive construction. The causee is the object of the causative construction.

Languages spoken nearby the Yimas community also have ‘say’ serial verb causatives. Enga has a causative formed with verb compounding where one of the verbs means ‘say.’

(57) énda dóko Wápaka pe-ná I-é-a
 woman the Wabag go-3sg say-IM.PST-3SG

‘He caused the woman to go to Wabag’ (Foley 1986:154).

Barai, another language in the region, also has the verb ‘say’ used in SVCs to express causation:

(58) na k-ia e ije va-e
 I say-3PL U.person the go-PAST

‘I caused them to go’ (Foley 1986:154).

It is well-known that language communities in Papua New Guinea have had extensive contact over an extensive time-depth. It is probably not possible to determine which language developed this ‘say’ causative first, but it is probable that the other

languages borrowed the construction. This means that, potentially, analogy also might have played a part in the development of the Yimas *tmi* causative

2.5.3. *tmi* as a Causative Derivational Morpheme

There are really three separate causative constructions with *tmi*. There is one causative construction with a monovalent verb. This construction has the agent of cause coded as the A argument and the causee coded as the O argument. There are two causative constructions with bivalent verbs. In one, the agent of cause is coded as the A and the causee is coded as the O. In the other, the agent of cause is still the A, but the causee is coded as the D argument and the effected object is coded as the O. I will go through each of these constructions in turn.

When *tmi* is used as a causative morpheme, it does not occur with a *pia*- prefix. If it occurs with a monovalent verb such as *wapal* ‘climb’ as in example (59), the O prefix codes the causee and the A prefix codes the causer. This is the same as when *tar~tal* is the causative morpheme. The causative prefix increases the valence of the lexical main verb root. The lexical verb and causative construction has the same A, here *mpu*-. However, unlike with *tar~tal*, the O of the lexical verb *tmi* ‘say’ does not really correspond to the O of causative construction. The boy is not ‘said.’

- (59) kalakn irmp-un na-mpu-**tmi**-wapal
 boy.I.SG coconut.palm.IV.SG-OBL 3SG.O-3PL.A-CAUS-climb
 ‘They made the boy climb the tree’ (Foley 1991:292).

This shows that the core arguments of the causative *tmi* construction are different than the core arguments of the source construction. This is a structural change in the new grammaticalized construction. It is possible that this structural change is due to analogy with the *tar~tal* causative constructions. If the *tar~tal* construction developed first in Yimas, speakers may have been used to having the causer as an A and the causee as an O. If this were the case, speakers may have then used that same argument structure with the new *tmi* causative construction. There is no evidence for this conclusion, but it is a possible story. The causative with *tal~tar* is likely to be older because it 1) can phonetically reduce and 2) be used in more situations.

Foley (1991:292) states that it is rare for a bivalent verb root to occur with a causative morpheme, but it can occur, and apparently it can occur only with *tmi*. Example (60) shows *tmi* occurring with the bivalent verb *ampa* ‘weave.’ The O of *ampa* is *irwa* ‘a mat.’ This argument is not included as a prefix in the verb word. If it were included, we would see the verbal inflection prefix *wa-*, instead of *na-*.

(60) *irwa* *ɲaykum* *na-mpu-tmi-ampa-t*
 mat.IX.SG woman.II.PL 3SG.O-3PL.A-CAUS-weave-PERF

‘The women got her to weave a mat’ (Foley 1991:292).

There are only two core arguments marked on the verb word in example (60). This means that the transitivity of the verb word has not really increased, even though the transitivity of the clause has increased. The argument corresponding to the affected object is left out of the verbal inflection.

In the final type of *tmi* causative, the transitivity of both the verb word and the clause increases to three arguments in examples (61, 62).

- (61) tpuk ku-ka-na-**tmi**-am-nt-akn
 sago.pancake.X.SG X.SG.O-1SG.A-DEF-**CAUS**-eat-PRES.3SG.D

‘I made him eat a sago pancake.’ (Foley 1991:292).

In example (61), the causer is marked by the first person singular A *ka-*. The causee, here third person singular, is coded as a D, or dative argument. The O of *am* ‘eat’ is *ku-* ‘the sago pancake,’ which is also the O of the causative construction. The same core argument structure is found in example (62). However in this example, the D occurs as a prefix rather than a suffix because it is a speech act participant.

- (62) kpa-m nma-mpu-ŋa-**tmi**-wark-t
 big.I.PL house.O-3PL.A-1SG-D-**CAUS**-build-PERF

‘The elders made me build a house.’ (Foley 1991:292).

If *tmi-* increases the valence of a bivalent verb, the A will be the causer, the O will be the object affected and the D will be causee. The D argument corresponds to the source semantics of *tmi-* ‘say.’ It is the person being talked to that does the caused action. The participant who is spoken to, is coded as the D of the lexical verb *tmi* ‘say’ (cf. example 55). The O argument in this type of clause does not correspond with the complement of speech, as is also the case with the other two types of *tmi* causatives. It does however, refer to a different type of O participant than in the other two types of *tmi* causatives. Perhaps because there are three types of participants in this type of construction, and speakers know that the D of lexical *tmi* ‘say’ is the person spoken to,

and because the A is always the agent of cause in causatives, that leaves the affected object to be coded as an O.

Through these examples, we see that there are three sub-types of *tmi* causatives:

1) *tmi* causative with a monovalent verb, which is transitivity increasing for both the verb word and the clause, 2) *tmi* causative with a bivalent verb that is only transitivity increasing for the clause and 3) *tmi* causative with a bivalent verb, which is transitivity increasing for both the verb word and the clause.

2.5.4. *tmi* Reanalysis Summary

The development of the *tmi* causative is roughly the same as that of the *tal~tar* causative. It can be summarized in three steps (2.5.4.1-2.5.4.3). The change from the underlying structure (63) looks the same.

(63) INFL + main verb + main verb + INFL -> INFL + CAUS + main verb + INFL

2.5.4.1. *tmi* ‘say’

Before reanalysis, *tmi* must have appeared in a JSC and meant ‘say.’ Presumably in these constructions, the O was always an object of speech, and therefore the verbal inflection included the *pia-* prefix.

2.5.4.2. Semantic Reanalysis in Ambiguous Contexts

In the next step of *tmi*’s development, there are ambiguous situations where the verb can be interpreted as either ‘say’ or ‘cause’ by hearers, such as in (61), where the construction could be read as ‘I told him to eat a sago pancake’ or ‘I made him eat a sago pancake by telling him to’ or ‘I made him eat a sago pancake.’ In these situations, there

must be someone who can make someone else do something, just by telling them to, such as in (62) where elders give an order.

2.5.4.3. Morphological and Syntactic Reanalysis

The change here is the same for *tal~tar*: main verb + main verb > CAUS + main verb. The morpheme *tmi* is now interpreted as a valence increasing causative morpheme. Additionally, we see that if the *tmi* causative construction occurs with a two arguments on the verb word, speakers will code the causer as an A prefix and the causee as an O prefix. This is not what is expected based on the lexical usage of *tmi*. It is possible that this is an analogy based on the *tar~tal* causative construction. If the *tmi* causative occurs with three arguments inflected on the verb word, the causee will be a D affix. The O prefix will be whatever is affected as a result of the caused action.

2.5.4.4. Three New Constructions

As seen in the quotative examples, *tmi* continues to mean ‘say’ in many places in the language; it is only when it occurs in this particular construction that the causative meaning results. With the reanalysis of *tmi*, Yimas has gained three new constructions. Whenever *tmi* is the first verb in a JSC-type construction, it is a causative morpheme.

2.6. Yimas JSC Renalyses Summary

The ambiguous semantics of the verbs *tmi*, *tay*, and *tal~tar* have allowed for the possibility of reanalysis. Speakers can interpret the verb in more than one way. The juxtaposition serial verb construction itself also has specific semantics. It often denotes a

cause and effect relationship between two verbs. The verbal semantics and the construction semantics together allow reanalysis to be possible.

We can also see through these examples of grammaticalization in Yimas that it is entire constructions that grammaticalize, not just individual morphemes. “Construction reanalysis actually changes the syntactic function of an entire construction; all of its component parts thereby take on new syntactic functions, but only when they occur in the reanalyzed construction. Outside of this specific construction, the individual morphological forms retain their etymological meaning/syntactic function” (Gildea 1998:39). The occurrence of *tar~tal*, *tay* and *tmi* in a the juxtaposition SVC, when they occur in a certain order, gives a the causative or attemptive reading. Elsewhere, these morphemes retain their lexical meaning.

Perhaps at a later point in Yimas’ history, if the language survives to develop, we will also see changes of pronunciation in *tay* and *tmi*, as we do currently with *tal~tar* sometimes occurring at *t*.

CHAPTER III

BI-VERBAL CONSTRUCTIONS IN YIMAS

Yimas has a variety of bi-verbal construction types, such as coordinated clauses, subordinated clauses with main verbs and serial verb constructions. Typologically, many different types of bi-partite or complex clauses have been sources for grammaticalization. However, in Yimas, one construction type, the Juxtaposition Serial Verb Construction (JSC), is the source construction for the three constructions detailed in Chapter 2. In section 3.1 of this chapter, I will present some data from other languages showing a variety of structures that have been sources for grammaticalization. In section 3.2, I will present a variety of bi-verbal constructions found in Yimas. In section 3.3, I will argue that a potential reason for JSC being a source construction three-times over is that it has the tightest grammatical connection between its verbs. The tight grammatical link could emphasize the strong semantic link and so possibly influence speakers to reanalyze *tay*, *tal-tar* and *tmi* in the JSC, rather than in other construction types.

3.1. Bi-verbal Sources of Grammaticalization

Cross-linguistically, it is very common for both bipartite and monoclausal multi-verb structures to have one verb that develops into a more grammatical meaning, taking into account, of course, of the semantics of the verbs.

For example, we see an example of a coordinated clause developing into an auxiliary verb construction (AVC) in this example from Heine (1993:37) in Danish:

(64) Jeg **sad** **og** skrev da han kom ind

I **sat** **and** wrote when he came in

‘I was writing when he entered’ (Koefoed 1958:188).

Looking at the meanings of the individual morphemes and the sentence as a whole, we can see that *sad og* ‘sat and’ is giving a progressive meaning to the verb *skrev* ‘write.’

An example of a subordinate clause grammaticalizing into an AVC can be found in Venda (Bantu, Niger-Congo). In example (65a) we see *dzula* ‘live’ used in a monoclausal sentence. In example (65b) we see *dzula* with a subordinated clause. When paired with the subordinated clause, *dzula* now means ‘continuous’ and functions as an auxiliary.

(65a) Vha dzula Tshakhuma (65b) Vha dzula vha stshi vhala
 3.PL live Tshakhuma 3.PL CONT 3.PL DEP read

‘They live in Tshakhuma’ ‘They always or continuously read’ (lit: they stay while reading)

(Heine 1993:37 citing Poulos 1990:325).

Other languages, such as Iatmul, reanalyze medial dependent verb constructions. Example (66) is a MDVC. The first verb is marked with a morpheme meaning ‘sequential’. It is a type of dependent marker that indicates that the verb is dependent on the next verb for person marking. In the gloss, we see that both lexical meanings of the verbs are present.

(66) vi-laa yə-win

see-SEQ come-1SG

‘Having seen it, I came’ (Foley 1986:182 citing Staalsen 1972).

Example (67) has grammaticalized and is an AVC. The first verb is marked with another type of dependent marker *vat* ‘purpose’. The second verb in this construction is an auxiliary with a desiderative function. It still carries the person marking information. In the gloss we see that there is no lexical meaning of ‘say’ present. The verb *wə* now has a grammatical function.

(67) klə-vat wə-ntə

get-PURP say-3SG.M

‘He wanted to get’ (Foley 1986:157 citing Staalsen 1972).

Yimas has coordinated, subordinated, and MDVCs in addition to serial verb constructions. However reanalyses have only occurred from one particular type of SVC source construction. Moreover, this construction has been reanalyzed more than once, with at least three different verbs. In the next section we will see examples of the main types of Yimas’ bi-verbal constructions. We will look at the structure and semantics of

the constructions and hopefully see why the JSC in particular has been a rich source for grammaticalization.

3.2. Yimas Bi-verbal Constructions

In this section, I will describe the various complex clauses and bi-verbal sentences present in Yimas. It is not possible here to cover these in intricate detail, but I recommend to the interested reader to visit Foley's (1991) grammar of Yimas, which is quite thorough and clear. However, I would like to describe these clause types somewhat so that it is possible to see potential sources of grammaticalization, ones that have not been utilized for the three new constructions of interest.

3.2.1. Coordinating Clauses

Yimas has only two coordinating conjunctions: *mnta* 'then' and *kanta* 'but.' The conjunction *mnta* can also be used to conjoin subordinate clauses to main clauses. The conjunction *kanta* is only used to link two finite clauses (Foley 1991:450). Coordinated clauses have fully inflected independent verbs, which do not have to have the same agreement markers or TAM inflection (example (68)). However, coordinated clauses usually do have the same agreement and TAM information (example (69)).

(68) *pia-kay-i-c-mpun* *mnta pu-taw-t*
 talk.O-1PL.A-tell-PERF-3PL.D **then** 3PL.S-sit-PERF

'I told them and they stayed' (Foley 1991:451).

(69) *impa-l-ŋka-pra-kia-k* *parwa-n* *kanta*

3DL.S-down-go.by.land-toward-NIGHT-IRR dock.IX.SG-OBL **but**

kamta-k-wa *impa-tay-kia-k*

empty-IRR-IX.SG 3DL.S-see-NIGHT-IRR

'They both came down to the dock, but saw that it was empty.' (Foley 1991:450)

3.2.2. Subordinate Clause plus an Independent Clause

In a subordinated clause, the dependent verb is marked with the *-mpi* suffix and is dependent on the following verb for most of its inflectional information. There is a sequential, temporal relationship between non-final and final verbs. When a dependent verb occurs with an independent final clause, it is sometimes called a medial dependent verb construction (MDVC), or clause chaining.

In Yimas, prototypically, the non-final verbs take no other inflections but the sequential marker, although it is possible for them to co-occur with the *-kia* 'NIGHT/NEAR' tense and the *-k* 'IRREALIS' mood suffixes, or argument agreement prefixes, but they will not occur with tense and aspect marking. They take their specifications for tense and aspect from the following verb. Usually the dependent verb and final verb share the same core arguments as well (as in example (70)) but this is not required (as in example (71)).

- (70) *kaprak-mpi yaŋi-ŋan na-mp-ayŋ*
 cut.up-SEQ pot.VIII.SG-OBL V.SG.O-3PL.A-put.in
 ‘Having cut (it) up, they put it in a pot’ (Foley 1991:447).

- (71) *tmal kray-mpi ya-kay-am-wat amtra*
 sun.V.SG dry-SEQ V.PL.O-1PL.A-eat-HAB food.V.PL
 ‘The sun having dried it, we always eat the food’ (Foley 1991:447).

In example (70), *kaprak* shares the same arguments as *ayŋ*. What is being cut is the object *na-* and the people doing the cutting are the agent, marked by *mp-*. However, in (71) ‘the sun’ dries, but ‘we’ eat. So, only the O argument ‘food’ is shared, marked by the prefix *ya-* on the finite, second verb *am*.

Finally, there can be intervening words between the two verbs. This seems obvious, but it is a syntactic distinction between subordinated clauses and SVCs.

- (72) *kay i-ka-ak-mpi arm-n*
 canoe.VIII.SG VIII.SG.O-1SG.A-push-SEQ **water-OBL**
i-ka-wul
 VIII.SG.O-1SG.A-put.down

‘I pushed the canoe and put it into the water’ (Foley 1991:327)

Through the previous examples, it should be clear that subordinated clause has a tighter syntactic link with an independent clause than two independent clauses have with each other. However, the syntactic link between subordinated and independent clauses is

not as tight as found in SVCs because words can occur between verbs and verbs can have different arguments.

Another type of subordinate clause in Yimas is the complement clause.

Complement clauses basically function as arguments of a matrix verb. Complementation is done through nominalizing a clause so that it can be an argument of the verb. The complement verb is marked with *-ru ~ -tu* to indicate that it is nominalized and non-finite. There are also several specialized complementation suffixes used on the complement verb in addition to nominalization. These suffixes code complements of speech *-mpwi*, complements of desire *-wampun*, complements of action *-nti*, and complements of customary action *-wal*. These come from words meaning ‘talk,’ ‘heart,’ ‘act,’ and ‘custom,’ respectively. It is the matrix verb that determines what kind of suffix will occur on the complement verb. The object marking on the matrix verb agrees with the complement verb suffix. So argument marking for a complement of desire is via *na-* since this is the word class V singular object marking and ‘heart’ *wampun* is a class V noun.

- (73) *tpuk* *am-tu-wampun* *na-n-kacapal*
 sago.pancake.X.SG eat-NFN-**heart.V.SG** **V.SG.O-3SG.A**-forget
 ‘He lost interest in eating sago’ (Foley 1991:385).

The matrix verb in (74) has *pia-* as an argument prefix to refer back to the complement verb’s suffix *-mpwi*, as *kacapal* ‘forget,’ which patterns as a speech matrix verb in Yimas.

- (74) *tpuk* *am-tu-mpwi* *pia-n-kacapal*
 sago.pancake.X.SG eat-NFN-talk talk.O-3SG.A-forget

‘He forgot to eat his sago’ (Foley 1991:386).

Other words can intervene between the nominalized verb and the finite verb as seen in (75). Additionally, the matrix verb can precede the complement verb although this is a rarer order, also seen in (75).

- (75) *tia-ka-na-ayakapiŋa-n* *God-na* *anti*
 act.O-1SG.A-DEF-know-PRES God-POSS ground.VIII.SG
 papk-t-wal
 carve-NFN-custom.V.SG

‘I know how God made the world’ (Foley 1991:390).

3.2.3. SVC with *-mpi* Sequential Marker

SVCs with the *-mpi* sequential morpheme describe events that occur sequentially, but with no strong link between them. This is the most frequently occurring SVC type in Yimas. The morpheme *-mpi* is probably a suffix because Yimas prefers verb final word order, but also because in dependent clauses, from which this SVC seems to have developed, *-mpi* is a suffix on V_1 , not a prefix on V_2 . The SVC with *-mpi* is a monoclausal structure that contrasts with dependent clauses, that also take a *-mpi* morpheme (cf. section 3.2.2.). For the SVC with *-mpi* (like the SVCs with the *-ra* SIM morpheme)

TAM and person marking can only occur once and nothing other than *-mpi* (or *-ra*) can intervene between the serial verbs.

(76) *arm-n kay i-ka-ak-mpi-wul*

water-OBL canoe.VII.SG VIII.SG.O-1.SG.A-push-SEQ-put.down

'I pushed the canoe down into the water' (Foley 1991:326).

(77) *mampar-ηkat ya-mpu-park-mpi-wark-it*

branch-I.PL I.PL-3PL.A-split-SEQ-tie-PERF

'They split, broke into pieces and tied together the branches' (Foley 1986:117).

(78) *awt ηa-kra-yara-mpi-warasa-ηa-n*

fire.SG IMP-1PL-get-SEQ-return-give-PRES

'Bring back fire for us!' (Foley 1986:117)

3.2.4. SVC with *-ra* Simultaneous Marker

In SVCs with a *-ra* simultaneous morpheme, two verbs denote two events that occur at the same time. The semantics is the same as the juxtaposed serial verbs, except that the events have complete overlap in their time frame. The *-ra* morpheme makes it explicit that the events overlap in time. There can be no intervening nouns or adverbs between the serial verbs. The argument and tense morphology can only occur once. This

shows us that this is a monoclausal structure, not biclausal like the coordinate and subordinate constructions.

(79) *na-n-munta-ra-wapal-k*

3SG.O-3SG.A-call-SIM-ascend-IRR

‘She called out to him while going up’ (Foley 1991:325)

(80) *yarayɣkat na-yakal-apapan-ra-kula-ntut*

lizard.V.PL 3SG.S-CONT-shoot(RED apan-)-SIM-walk-RM.PST

‘He was shooting lizards while walking around’ (Foley 1991:325).

3.2.5. Juxtaposition Serial Verb Constructions

JSCs are used to indicate that events are simultaneous (81), or have a cause and effect relationship (82, 83). In the latter type of relationship, the first verb is the cause and the second is the effect. This is also the pattern found in the causative constructions with *tal~tar* and *tmi*. It is possible that the cause-effect meaning is part of the construction itself.

(81) *ura-n-irm-wampaki-pra-k*

fire.O-3SG.A-stand-throw-toward-IRR

‘He stood throwing fire toward them’ (Foley 1991:323).

(82) narm pu-tpul-kamprak-r-akn

skin.VI.SG 3PL.S-hit-break-PERF-3SG.D

‘They hit and broke his skin’ (Foley 1991:324).

(83) nawn ya-ŋa-awa-ta-n

who V.PL.-1SG.D-excrete-put-PRES

‘Who is urinating on me?’ (Foley 1991:324).

Without historical and sociological records, it is difficult to determine why it was the JSC in particular that developed into three different new constructions. However, it is clear that the JSC is the most linguistically tight bi-verbal structure in Yimas. Arguments and TAM inflection are shared by both verbs and no words or morphemes intervene between the two verbs. Cross-linguistically, if a language has more than one type of SVC, the closer the verb roots are to each other, the more likely they are to undergo lexicalization or grammaticalization (Aikhenvald 2006:50).

Human beings tend to group alike things together and they tend to group parts of the same whole together. This tendency is part of a larger goal to process things quickly and efficiently (Givón 1991). The grouping of alike things and the grouping of parts of wholes is a common occurrence. So much so, that when things are grouped together often enough, over time, human beings may begin to associate non-necessarily alike grouped things with the possibility that they are indeed alike. Or they may begin to

believe that two things that are grouped together are parts of an overall whole. This may be the cognitive force behind the grammaticalization occurring in Yimas juxtaposition serial verb constructions. Two verbs which occur next to each other, as part of the same phonological word, may have begun to be thought of as part of the same whole, even though they were not originally. Of course, because it is a serial verb construction, the two verbs are already part of the same predicate. And I would argue that the development of serial verb constructions themselves is motivated by this type of cognitive grouping. Now however, the two verbs are even more closely grouped together because they are part of the tightest serial verb construction. For all the serial verb constructions, Yimas speakers know that two verbs can be part of the same predicate, even if there is an intervening morpheme. So if there is not even an intervening morpheme, perhaps the two verbs are even more closely grouped together, first syntactically and then cognitively.

In the new constructions, only one verb remains as part of the lexical predicate. The other verb, because of its semantics, is distilled down to a grammatical meaning such as causative or attemptive. Once this pattern is established in a few pairings, the causative or attemptive meaning becomes reinforced. Once its meaning is reinforced, there are now homonymous morphemes which occur in different constructions. If the *tal-tar* morpheme occurs in the juxtaposition SVC, it must be the CAUS morpheme. From there the morpheme can spread to other lexical pairings and become productive.

It seems as though there is something in the structure of the JSC that makes it ripe for reanalysis. There is a tight conceptual connection between the events coded in the

JSC because events must be simultaneous or connected through cause and effect. There is also a tight syntactic connection in the code itself because verbs share inflectional marking and are juxtaposed in the same word. Although the simultaneous SVC also has a tight conceptual connection, there are no derivational morphemes that occur with a *-ra* morpheme. The reanalysis only occurred in constructions that had both a tight conceptual, and tight structural connection between verbs.

CHAPTER IV

CONCLUSION

4.1 Conclusions of this Study

This paper has detailed three potential processes of grammaticalization from one particular type of source construction. It is unfortunate that we lack any of the historical information to confirm or refute these processes with absolute certainty. It is also unlikely that we will see the future development of these or other Yimas constructions as Yimas is an endangered language. What we have is one snapshot in time of this language and all we can do is use the clues left behind by past development to try to piece together its path. However, I believe that the clues that we have are strong.

I have argued that the process that occurred here is reanalysis from the JSC which is a structure where verbs are very tightly bound. I hypothesized that it is this tight syntactic connection that may have influenced speakers to think of the simple juxtaposition SVC as more semantically bound than any of the other complex clauses. Then certain verbs ‘hold,’ ‘say,’ and ‘see,’ allowed for some semantic ambiguity in the meaning of the clauses, which in turn allowed for the process of reanalysis to occur.

I have argued that the reanalysis of these morphemes has allowed the transitivity of the verb word and/or the transitivity of the clause to increase. The reanalysis fundamentally changed the argument structure of the JSC. No longer is there a same subject restriction for the juxtaposed verbs. That is because they are no longer both lexical descriptions of events. I argued that in the reanalyzed construction, only one verb provides the lexical information. The other verb (*tay*, *tar~tal* or *tmi*) provides more grammatical information. The grammatical information adds a core argument to the clause and therefore that added argument can be a different A or S than the A or S of the lexical verb.

It is interesting that there are two causative constructions that develop from one particular SVC type, especially when a (now opaque) morphological causative is available to speakers. It may be the case that these two new morphological causatives developed together, presenting two choices to speakers who wanted to make a semantic distinction between more direct, physical and more indirect causation. However, we do notice that the *tar~tal* causative seems to be further on the path of grammaticalization. This could be due to a speaker preference for the more direct causative. If it is used more frequently, it would make sense that it is more grammaticalized. However, it could also be due to an earlier start which then later influenced the development of the *tmi* causative.

4.2 Directions of Future Research

Looking at other derivational, valence increasing morphemes in Yimas, we can see that many come from verbs. They are juxtaposed next to other verbs in an SVC,

rather than occurring outside the verb theme. The construction structure makes it seem possible that these derivational morphemes were also part of JSCs when they were reanalyzed. It is possible that this is a common process in Yimas to get derivational morphemes.

There are two valence increasing morphemes that are transparently related to source verbs: benefactive *-ŋa* and kinetic *-pampay*. In addition to these morphemes, there are others that do not have clear sources, but also appear juxtaposed to main verbs and increase valence.

The benefactive morpheme *-ŋa* is transparently related to the verb *-ŋa* ‘give’ (Foley 1991:309). We can see this in examples (84-86) below. In example (84), *ŋa* is the second verb in a SVC. It has its lexical meaning of ‘give.’ Because *ŋa* is a trivalent verb, three argument affixes are present. The dative suffix marks the recipient.

(84) *tpuk* *ku-n-awl-mpi-ŋa-r-akn*
 sago.pancake.X.SG X.SG.O-3SG.A-take-SEQ-give-PERF-3SG.D

‘She took a sago pancake and give it to him’ (Foley 1991:309).

In example (85), *-ŋa* is a benefactive suffix. The structure of this sentence is the same as the structure of the attemptive construction. The grammatical morpheme is juxtaposed with a verb. The presence of *-ŋa* licenses three arguments even though *r* ‘cut’ is a bivalent verb. In this way, it is a valence increasing morpheme. The dative suffix here marks the beneficiary.

(85) *yara ya-ka-kra-ŋa-r-akn*

tree.V.PL V.PL.O-1SG.A-cut-BEN-PERF-3SG.D

‘I cut trees for him’ (the wood will belong to him) (Foley 1991:309).

(86) *awt ŋa-kra-yawra-mpi-waraca-ŋa-n*

fire IMP.1-1PL.D-pick.up-SEQ-return-BEN-IMP

‘Bring back fire for us’ (Foley 1991:309).

In example (86), we see *-ŋa* suffixed onto a verb in a SVC with the *-mpi* morpheme. This does not look like the attemptive construction because of the presence of the *-mpi* morpheme. However, we notice that the benefactive is still suffixed onto a verb. It does not occur directly after *-mpi*. Suffixing onto a verb in another type of SVC may be a further stage of development for this morpheme. The benefactive may have only initially appeared in clauses like example (85). If this were the case, we may expect *tay* to later occur as the attemptive marker in other constructions beside the JSC, suffixed onto a verb.

Another derivational morpheme is *pampay*. It labeled ‘KINETIC’ and it used when someone is carrying something. The person carrying something is added as a core argument. This can be seen in example (87). Foley (1991:316) states that this morpheme is a fossilized reduplication of *pay*, a verb meaning ‘carry.’

(87) *na-mpu-pampay-wapal-kia-k*

3SG.O-3PL.A-KIN-climb-NIGHT-IRR

‘They came up with her (carrying her)’ (Foley 1991:316).

The verb *wapal* is monovalent, but *pampay-* increases the valence of the clause to two. This construction looks like a JSC and it is possible that it was reanalyzed from one.

Some other derivational morphemes are presented in the Yimas grammar, which do not have clear sources. Comitative *taŋ-* and allative *ira-* appear inside the verb theme, juxtaposed to a verb, and increase the valence of the clause, in much the same way as *tal*, *tmi*, *tay*, *ŋa* and *pampay*.

- (88) *ma ŋarŋ pu-kra-mampi-taŋ-wa-k*
 other 1.day.removed 3PL.A-1PL.O-again-COM-go-IRR

‘On another day, they went with us’ (Foley 1991:303).

- (89) *yaŋkuraŋ k-mp-ira-aykapiŋa-k-nakn*
 thoughts.VI.SG VI.SG.O-3DL.A-ALL-know-IRR.3SG.D

‘They both think about her’ (Foley 1991:313)

It is possible that reanalysis for JSCs was an influencing factor in the development of all of these constructions. I leave it to future research to determine the paths of reanalysis of these constructions.

If reanalysis of the JSC is the source of all of these constructions, we see a strong correlation between compounded, serialized verbs and the creation of derivational, transitivity increasing morphology. It would be interesting to look at the transitivity increasing morphology in other serializing languages and compare those paths of development to those found in Yimas.

APPENDIX

ABBREVIATIONS

1	first person	DUR	durative
2	second person	FR.DIST	far distal
3	third person	HAB	habitual
I	noun class 1	IM.PST	immediate past
II	noun class 2	IMP	imperative
III	noun class 3	INF	infinitive
IV	noun class 4	IRR	irrealis
V	noun class 5	JSC	juxtaposition serial verb construction
VI	noun class 6	KIN	kinetic
VII	noun class 7	MDVC	medial dependent verb construction
VIII	noun class 8	NEAR	near
IX	noun class 9	NEG	negative
X	noun class 10	NFN	non finite
A	agentlike participant	NIGHT	night (mood)
ACC	accusative	NR.DIST	near distal
ADV	adverb	NR.PAST	near past
ALL	alliative	O	other argument
ATT	attributive	OBL	oblique
AUX	auxiliary	PAST	past
BEN	benefactive	PERF	perfective
CAUS	causative	PL	plural
COM	comitive	POSS	possessive
CONT	continuous	PRES	present
COP	copula	PURP	purposive
CV	converb	REC.PST	recent past
D	dative	RED	reduplicated
DEF	definite	RM.FUT	remote future
DEP	dependent	RM.PST	remote past
DL	dual	S	single argument

SEQ	sequential	TAM	tense, aspect, and mood
SG	singular	VIS	visual
SIM	simultaneous	VOC	vocative
SVC	serial verb construction		

BIBLIOGRAPHY

- Aikhenvald, A. (2006). *Serial verb constructions: a cross-linguistic typology*. Oxford: Oxford University Press.
- Anderson, G. (2006). *Auxiliary Verb Constructions*. Oxford: Oxford University Press.
- Bolinger, D. (1977). *The form of language*. London: Longmans.
- Bybee, J. (1998). A functionalist approach to grammar and its evolution. *Evolution of Communication*, 2, 249-278.
- Bybee, J. (2006). From usage to grammar: The mind's response to repletion. *Language*, 82(4), 711-733.
- Crowley, T. (2002). *Serial Verbs in Oceanic*. Oxford: Oxford University Press.
- Dixon, R. (1991). *A new approach to English grammar, on semantic principles*. Oxford: Clarendon Press.
- Doble, M. (1962). Essays on Kapauku grammar. *Nieuw-Guinea Studien*, 6, 152-298.
- Donohue, M. (1999). *A Grammar of Tukang Besi*. Berlin: Mouton de Gruyter.
- Drabbe, P. (1959). *Grammar of the Asmat language*. Syracuse, Indiana: Our Lady of the Lake Press.
- van Engelenhoven, A. (1995). *A Grammar of Leti as Spoken in Tutukei*. Riderkerk: Offsetdrukkerij Ridderprint.
- Foley, W. A. (1986). *The Papuan Languages of New Guinea*. Cambridge: Cambridge University Press.
- Foley, W.A. (1991). *Yimas*. Stanford: Stanford University Press.

- Gildea, S. (1993). The rigid VS order of Panare (Cariban): a historical explanation. *International Journal of American Linguistics*, 59(1), 44-63.
- Gildea, S. (1998). *On Reconstructing Grammar: Comparative Cariban Morphosyntax*. New York: Oxford University Press.
- Givón, T. (1991). Isomorphism in the grammatical code: cognitive and biological considerations. *Studies in Language*, 15(1), 85-114.
- Givón, T. (2002). *Bio-Linguistics*. Amsterdam: John Benjamins.
- Haiman, J. (1980). *Hua: a Papuan language of the Eastern Highlands of New Guinea*. Amsterdam: Benjamins.
- Hansar, O. (1977). *Turkmen Manual: Descriptive Grammar of Contemporary Literary Turkmen, Texts, Glossary*. (Beihefte zur Wiener Zeitschrift für die Kunde des Morgenlandes). Vienna: Verlag des Verbandes der wissenschaftlichen Gesellschafter Österreichs.
- Harris, A. & L. Campbell. (1995). *Historical syntax in cross-linguistic perspective*. Cambridge: Cambridge University Press.
- Haspelmath, M. (1999). Why is grammaticalization irreversible? *Linguistics*, 37(6) 1043-1068.
- Heine, B. (1993). *Auxiliaries*. Oxford: Oxford University Press.
- Heine, Bernd. (1994). Grammaticalization as an explanatory parameter. In W. Pagliuca (Ed.), *Perspectives on Grammaticalization* (pp. 255-287). Amsterdam: John Benjamins.
- Heine, B. & T. Kuteva. (2002). *World Lexicon of Grammaticalization*. Cambridge: Cambridge University Press.
- Heine, B. & M. Reh. (1984). *Grammaticalization and reanalysis in African Languages*. Hamburg: Helmt Buske Verlag.

- Hopper, P. & E. Traugott. (1993). *Grammaticalization*. Cambridge: Cambridge University Press.
- Hyman, L. (1971). Consecutivization in Fe'fe. *Journal of African Languages*, 10(2) 29-43.
- Kangasmaa-Minn, E. (1998). Mari. In D. Abondolo (Ed.), *The Uralic Languages* (pp. 219-248). London: Routledge.
- Koefoed, H. A. (1958). *Teach yourself Danish*. London: English Universities Press.
- Langacker, W. (1977). Syntactic Reanalysis. In C.N. Li (Ed), *Mechanisms of Syntactic Change* (pp. 57-139). Austin, TX: University of Texas Press.
- Poulos, G. (1990). *A linguistic analysis of Venda*. Hatfield: Via Afrika Limited.
- Pullum, G. & D. Wilson. (1977). Autonomous syntax and the analysis of auxiliaries. *Language*, 53, 741-788.
- Rassadin, V.I. (1978). *Morfologija tofalarskogo jazyka v sravnitel'noj osveščanii. (The morphology of Tofalar in a comparative light)*. Moscow: Nauka.
- Staalsen, P. (1972). Clause Relationships in Iatmul. *Pacific Linguistics*, A(31), 45-69.
- Timberlake, A. (1977). Reanalysis and actualization in syntactic change. In C.N. Li (Ed.), *Mechanisms of Syntactic Change* (pp. 141-177). Austin, TX: University of Texas Press.