

THE HYBRIS OF PLANTS: REINTERPRETING
PHILOSOPHY THROUGH VEGETAL LIFE

by

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A DISSERTATION

Presented to the Department of Philosophy
and the Division of Graduate Studies of the University of Oregon
in partial fulfillment of the requirements
for the degree of
Doctor of Philosophy

June 2021

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Title: The Hybris of Plants: Reinterpreting Philosophy through Vegetal Life

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Degree awarded June 2021

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DISSERTATION ABSTRACT

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Doctor of Philosophy

Department of Philosophy

June 2021

Title: The Hybris of Plants: Reinterpreting Philosophy through Vegetal Life

This dissertation reexamines the place of plants in the history of Western philosophy, drawing on the diverse philosophical approaches of Plato, Aristotle, Goethe, Hegel, and Nietzsche, among others. I suggest that a close reading of these philosophers reveals an aspect of vegetal existence that calls for a fundamental reconceptualization of life as a manner of being: in its ambivalent encounters with philosophy, the vegetative shows itself in terms of what I call hybris. By “hybris” I mean the activity by which the plant relates a proliferative, overflowing growth with a characteristic proportionality by which the plant composes a determinate manner of existence. In Part One, I trace the emergence of “plant hybris” in Goethe and Hegel’s scientific writings and Nietzsche’s philosophy of life. In Part Two, I expand and develop this concept by returning to Plato and Aristotle’s biological works.

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Kerr, Joshua D. "Thinking Through Sound: Martin Heidegger and Wallace
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Kerr, Joshua D. "Phytology, Between φύσις and ζώη," *Kronos Philosophical
Journal* VIII (2019): 144–150.

ACKNOWLEDGMENTS

This dissertation is the product of a great deal of support and assistance. I would like to express my deepest appreciation to my supervisors, Dr. Daniela Vallega-Neu and Dr. Alejandro Vallega, for their profound belief in my abilities and unwavering commitment to nurturing them. Among so many other things, you have taught me that philosophy is impossible without friendship. I am sincerely grateful to the other members of my committee, Dr. Nicolae Morar, Dr. Peter Warnek, and Dr. Malcolm Wilson, for their assistance throughout the project. To the latter I offer special thanks: your infectious enthusiasm for the ancients is irresistible. I am also indebted to Dr. Jason Winfree, under whose inspirational mentorship I began the studies that here come to fruition.

This investigation was supported in part by two generous fellowships from the Oregon Humanities Center, the Gary E. Smith Summer Professional Development award, and a research fellowship from the Department of Philosophy. Particularly helpful to me during my studies was the enthusiastic feedback and inspirational comraderie I received from the members of the 2018 Collegium Phaenomenologicum. I am grateful to Larry Busk, Eli Portella, Martina Ferrari, Devin Fitzpatrick, Ricardo Friez, and many other colleagues at the University of Oregon for their gift of philosophical companionship.

In addition, I would like to thank Scott, Karen, and, especially, my parents. You are always there for me. Mary and David, you have brought incomparable joy. Above all, I am forever grateful to Sarah, without whose faithful strength, gentility, and patience I would be neither the thinker nor the person I have become. You are most dear.

for Sarah

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CHAPTER I

PREFACE

We call “coincidental” what holds of something and is true to say, but neither of necessity nor for the most part. It is as if, while digging a hole for a plant, one
found a treasure.
ARISTOTLE

Every dissertation topic, I suppose, has something of the coincidental involved in its selection.¹ In a certain respect, my account is without beginning, or embraces a beginning which is already underway: plants appear. We find ourselves next to a tree; there it is, rising.

There rises a tree. O pure rising-over!²

The roots are hidden beneath the earth; the crown is hidden above the branches. Already we are in the middle, situated within an interval of place and time. Many plants have outlasted—and will yet outlast—our brief lives and most enduring institutions. Who can say when or where a field of grasses begins, how long it will thrive, or whither it might grow?

Plants appear, always already situating us. And what of it? What does philosophy have to say about plants? In fact, innocuous and commonplace as they may initially appear, plants remain surprisingly recalcitrant to thought. Few philosophers have concerned themselves with vegetality, and those who have done so have found little to say on the subject.³ At the same time, each of those philosophers who takes up the question of vegetal

¹ Epigraph source: Aristotle, *Metaphysics*, 2003 1025a.

² *Da stieg ein Baum. O reine Übersteigung!* Rilke, *Duino Elegies & The Sonnets to Orpheus* 82.

³ On the other hand, philosophy has never ceased to remain near to plants, putting them to use in a litany of plant metaphors deployed much like decorative houseplants: adding vitality, comfort, and style to thinking.

existence does so under the conviction that plants are a particularly suitable place to begin a project of philosophical inquiry. For these thinkers, plants are worthy of thoughtful consideration because they constitute a site of fruitful beginning for the analysis of living things more generally (“φύσις” in Greek, understood as the coming to be and passing away of things⁴) and of human being specifically.

This beginning, however, remains unthought, at least insofar as these same philosophers are unable to account for the originary status of the vegetal in their thinking. In philosophy’s encounter with plants, vegetal life slips away. But in this respect, too, plant life is exemplary of φύσις.

The indefinite, the impersonal, atmospheres and oceans, are precisely what I
love; and I don’t see why, for a philosopher, they should not be the ultimate
inamorata.
WALLACE STEVENS

Plants are a *different kind* of life, stretched between element and animal.⁵ On the one hand, they possess something of the elemental monstrosity of a sheer granite cliff or the wine-dark sea; on the other hand, they display something of the delicately intelligent organization of a honey bee or a sparrow. No rock or bird’s nest is an animate creature, *living* (ζωή) in quite the same sense as a leafy stem striving up from the earth or a flower turning east during the long night to greet the morning sun. Likewise, no coyote or flock of

A study addressing this mode of proximity between plant and philosophy would be a fruitful undertaking. For some initial gestures in this direction, see Marder, *The Philosopher’s Plant*, 2014.

⁴ In this essay, I leave a small number of Greek words untranslated. I do so when my intent is to reconsider the meaning of the word in question. One such word is φύσις (another is ὕβρις). Although the usual translation, “nature,” is adequate in many contexts, for my purposes it obscures as much as it reveals (as will become evident in the following pages).

⁵ Epigraph source: Stevens, *Sur Plusieurs Beaux Subjects* 33.

birds exhibits the *elemental life* of φύσις as such in quite the same sense as a turbulent jungle or windswept prairie.

A few summers ago, while living in the Sierra Nevada Mountains near Yosemite National Park, I hiked into the wilderness with a friend to admire a grove of Giant Sequoia trees. When evening came, we sheltered in the heart of a giant that had been hollowed out by an ancient fire, falling asleep while gazing up into its immense, dark trunk. Upon awaking during the night, I discovered that the tree was mobile: the inside of the trunk was pulsing with movement, seething in the night. Only slowly did I come to realize that the tree around us churned with swarming ants, dimly illumined by the last embers of the dying fire, stretching as far up as the eye could see. Here, in the deceitful play of firelight, the tissues separating ash, tree, and ant became momentarily translucent: the glowing ants very close to plant, the silent plant very close to the ant colony, the whole assemblage sharing in the dance of flame. When I awoke again the next morning, the ants had departed.

Such experiences cultivate thinking, for they reveal—even through a deformation—the permeable boundaries that bear up our typical experience and habits of thought. The study contained in these pages attempts to attend to these more or less translucent tissues, discerning in plants a form of life that is almost imperceptible yet also emblematic of a register of being that subtends the delineation between animal life and the broader context of growing and withering that the ancient Greek thinkers addressed with the concept of φύσις.

Life never speaks simply. It shows itself in its flower, hides itself in its roots. It appears and disappears according to necessities that do not obey the opposition of “yes” or “no.” It remains in the “yes and no” of manifestation.

LUCE IRIGARAY

Socrates’ most famous encounter with plants takes the form of a disavowal: “I’m a friend of learning,” he tells Phaedruss. “The countryside and the trees are unwilling to teach me anything, whereas the people in town do.”⁶ In a dialogue whose participants pointedly leave the city to enjoy their feast of speeches reclining upon soft grass under the sheltering boughs of a tree, however, we cannot help but hear this declaration ironically. In point of fact, the countryside and trees have much to offer philosophical reflection—not least reprieve from the sophistical, misleading speeches heard in town. Socrates’ disavowal of plants therefore expresses a profound problem concerning the relation between vegetal life and philosophical discourse.

Unlike many of Plato’s other dialogues, the dramatic structure of the *Phaedrus* considers human beings not in relation to the city only but also—in fact, primarily—in relation to the country outside of the city. Weary of speeches, and gripped by an enfeebling paralysis after sitting with Lysias since early morning, Phaedruss sets out on an aimless stroll outside the city, having heard from his friend that such a walk is more refreshing than one within the walls. Socrates joins him, and the two end up reclining on the grass beneath a tall plane tree. In a comically exaggerated paeon, Socrates praises the tree, “lofty and wide-spreading in its abundance,” and the attendant flora.⁷ The particular qualities upon which Socrates remarks concern the *unobtrusive* character of this vegetal space. On a sweltering day at high noon, reflection and conversation would be difficult if the conversants were exposed. It is because one can sit on the soft grass without noticing it (in contrast to the uncomfortable hardpan) and can rest beneath the boughs of the tree

⁶ Plato, *Phaedrus*, 2017 230d. Epigraph source: Irigaray, *In the Beginning, She Was* 33.

⁷ Plato, *Phaedrus*, 2017 229e-230a.

without thinking of them (in contrast with the blistering heat of the sun) that the plants offer to Socrates and Phaedrus a suitable place for their dialogue to unfold unhindered. The role of plants here is peculiar: the trees and grass open a space for philosophy by *withdrawing*, receding from awareness. In praising the “breath of the place,” Socrates achieves poetic precision: just as breath gives way for the words it bears, the space beneath the plane tree gives way for the encounter it shelters.⁸

Although plants comprise over eighty percent of the total planetary biomass,⁹ much of our encounter with—and understanding of—plants accords with this Platonic trajectory. The soft grass disappears underfoot; the shade-casting tree disappears overhead. The predominance of “house plants” and “landscaping”—which constitute the primary relation to living plants for many people today—attest to the unobtrusive character of vegetal life. Plants have an elusive presence that is rarely confronted in thought: they give way and make space, allowing other things to appear and move to the forefront of our attention.¹⁰ For the philosopher interested in vegetal life, the *imperceptibility* of plants, their hidden and unobtrusive character, is not something to be overcome, for this would betray the plant in its living occurrence. Instead, the task is to understand this mute withdrawal which belongs essentially to the unfurling of vegetal life in the world.

From this perspective, Socrates’ declamation of any role for plants in his love of learning expresses not only irony but also an important claim: plants are a condition of learning precisely *because* they do not want to teach. While plant life gives space to thinking, it does not itself have a place in thought, and *this is the condition* of its giving space to thinking.

⁸ Plato, 229e-230a. One who is “out of breath,” by contrast, cannot speak: her panting breaths are far *too present*, interfering with speech.

⁹ Bar-On, Phillips, and Milo, “The Biomass Distribution on Earth.”

¹⁰ This is one reason why understanding plants is not a task which properly belongs to the domain of the special sciences. Whereas it is the task of the special sciences to lay bare as many biological facts as can be produced, analyzed, and instrumentalized—and they have done so, it should be added, with astounding success—philosophy does not wish to control.

Yet, does not plant life inevitably obtrude upon thinking, precisely by giving it such a space? In addition to the plane tree under which Socrates and Phaedrus recline and converse, the dialogue also portrays the plant as a “potent herb” (φάρμακον). “You seem to have discovered a potent herb to entice me into walking outside the city,” Socrates tells Phaedrus. “Just as one dangles green branches or fruit of some kind in front of a hungry beast to lead him on, so you are likely to lead me through all of Attica or anywhere you want, simply by holding words in a book in front of my nose.”¹¹ As φάρμακον, the plant possesses an intense and even excessive power: the power to drug or to heal, the power to awaken desires and transform Socrates into a hungry animal. This speaks to a certain monstrosity belonging to plant life—an indeterminate, multi-valent power reminiscent of the tumultuous “hundred-headed Typhon” to which Socrates compares himself and whose attack forced even the gods to turn into animals and flee.¹² Socrates’ word for this aspect of plant life is “ἀμφιλαφής”—abundant, wide-spreading, prodigal.¹³ Under this aspect, plant life escapes determination, participating in a manner of growth that composes itself in excess of its own limits. This manner of existence is what I will call the *hubristic* dimension of vegetal life, which also bears us up, gives us a place, and subtends our human manner of being and thinking.

Concealment is the companion of φύσις.
HERACLITUS

¹¹ Plato, *Phaedrus*, 2017 230d-e. For other examples of this aspect of plant life in the dialogue, see 229b-c, 249d, 248d, and 249b; compare also the myth of the cicadas at 259a-d.

¹² Plato, 230a.

¹³ Plato, 230b. From ἀμφί, “around, on both sides,” and λάφυρα, “booty, spoils” (Beekes and Van Beek, *Etymological Dictionary of Greek* 94-95, 838).

Plant life both exceeds and withdraws from the philosophical reflection to which it gives space and context.¹⁴ Vegetal life therefore appears as a beginning for philosophy, an originary space from which philosophical inquiry occurs. At the same time, it is a beginning which remains hidden, a difficult form of life which occurs as a movement that exceeds or subtends our usual demarcations.

It is this nexus of tensions that I pursue in this study. Plato's plant is a "potent herb," consisting of "words in books" that are like a "leafy shoot" that could lead Socrates all over Attica—and have been enticing Plato's readers for thousands of years.¹⁵ This study traces my own hungry pursuit: my attempt to inhabit the movements of certain texts in such a way as to make evident the "leafy greens" that operate implicitly—and sometimes explicitly—at the center of philosophy's encounter with whatever grows and withers, comes to be and passes away.

¹⁴ Epigraph source: Kahn, *The Art and Thought of Heraclitus*, DK 123.

¹⁵ Plato, *Phaedrus*, 2017 230d.

CHAPTER II

INTRODUCTION

Life is found in animals and plants. But in animals it is manifest and clear,
whereas in plants it is hidden and does not show itself. To determine its
existence, much seeking is first necessary.

PSEUDO-ARISTOTLE, *On Plants*

The first recorded appearance of the word φύσις in Greek literature is found in the tenth book of Homer's *Odyssey*.¹ Odysseus' companions have been turned to swine through the treachery of Circe's plants, the "evil herbs" (κακὰ φάρμακ').² Hermes comes to Odysseus' defense, explaining the danger and offering as a ward a mysterious plant with black root and white flowers:

So spoke the Argos-slayer and gave to me the herb,
drawing it from the ground, and showed me its φύσις.
At its root it was black, but its flower was white as milk:
"μῶλυ" the gods call it. It is difficult for mortal men
to dig it up; but the gods have power to do all things.³

By consuming the plant, Odysseus will remain human, avoiding the fate of the pigsty. In fact, he will mingle rather with the divine.⁴ Hermes' contrary plant, the "noble herb" (φάρμακον ἐσθλόν), secures the boundary between human and animal that Circe's "baneful herb" (φάρμακον οὐλόμενον) had undone.⁵ In order to do this work, however,

¹ Epigraph source: Pseudo-Aristotle, "On Plants" 815a.

² Homer, *Odyssey*, 1995 10.213.

³ Homer, 10.302-6.

⁴ Homer, 10.333-5.

⁵ Homer, 10.287, 10.276.

the plant must do more than merely appear. In the first place, it must appear in such a way that its φύσις is made manifest by the god (μοι φύσιν αὐτοῦ ἔδειξε). The primary etymological sense of φύσις is growth (from φύομαι, to grow). This is why the μῶλυ must be uprooted: to be shown the φύσις, Odysseus must see the movement of growth that extends from its rootedness in the earth to its fruitful blossom. The φύσις is therefore beyond mortal knowledge, for although the white flower is readily visible, the dark root is difficult (or dangerous) for mortals to unearth. Even once dislodged by the god, the root retains some of the darkness of the ground. The nature of the plant is to have one part submerged in the black opacity of the soil and one part unfurled brightly in the light of day. Its φύσις appears as the movement of growth that encompasses both the hidden origin and the white blossom.

In the second place, the plant must appear in such a way as to vanish: the μῶλυ must be uprooted, deprived of life, and consumed by Odysseus in order to work its magic. It must be pulled from its place in the dark earth and drawn into the economy of human and divine concerns. In this sense, its φύσις appears only too late: the growth of the plant is manifest only in deprivation of the soil on which it depends for growth; growth appears only alongside withering. Likewise, the plant is revealed only to be consumed, to disappear in the service of securing the boundary between human and swine that Circe's sorcery has transgressed.⁶ In this first appearance, then, φύσις shows itself in the guise of a plant—or rather, in the guise of the movement of growth in which the plant consists—which bears

⁶ The appearance of φύσις also marks another boundary: the limit of names. In the twelfth book of the *Odyssey*, Homer speaks of another divine name with no human equivalent: πλαγκταί, terrible rocks against which the sea crashes and which not even birds can pass unscathed (Homer, 12.73). The rocks have no human name because they are beyond human experience. Only Jason and the Argonauts survived them, with the help of Hera. Although this is not the only divine name in Homer, it is one of only two that has no human equivalent. The other is, of course, μῶλυ. That in which φύσις first appears has no human name and can be unearthed by no human skill. And yet, Homer speaks—or rather, Homer has Odysseus have Hermes speak—the name. Divine by origin, it is also human by utterance: here, if only for a moment and through a string of deferrals, humans speak the language of the gods. For more on this subject, see page 20.

and secures the difference between animal and human, but only through its uprooting and disappearance.

What is the relation between plant life and φύσις? Following Homer, we might say that φύσις appears in a privileged way in vegetal life. For the study which follows, such a claim constitutes neither a premise nor a conclusion, but rather a guiding thread, a premonition that will be confirmed in the course of the inquiry. And yet, such a claim may at first appear strange. In *Physics* II.1, Aristotle lists plants as only one among many things which exist by φύσις: “both animals and their parts, and plants, and simple bodies.”⁷ The contrast case for φύσις is whatever is artificial, such as beds and garments. Thus, “φύσις is something like a principle [ἀρχή] and cause of motion and rest in that to which it belongs primarily and according to itself,” unlike those things which result from human craftsmanship.⁸ From this perspective, the plant is merely one type or instance of a more encompassing manner of being. Such an abstractly general conception, however, expresses the late stage of a concept that has a more concrete origin. The centrality of “growth” that is present in Homer’s understanding of φύσις⁹ is explicit in Xenophanes, who uses the term “φύονται” to refer to all natural things.¹⁰ φύσις, as an originary principle (ἀρχή) of whatever “has within itself the principle of its making,”¹¹ first becomes manifest in the growth (φύομαι) of a plant (φυτόν). In animals, growth is one activity among many, subordinated to the other operations of the organism. In this sense, growth possesses a modesty which involves an external determination and limit. In plants, however, growth¹²

⁷ Aristotle, *Physics*, 1957 192b9-10. “Simple bodies” refers to earth, fire, air, and water.

⁸ Aristotle, 192b21-23.

⁹ This sense is lacking in Pindar and Aeschylus; cf. Beardslee, “The Use of Φύσις in Fifth-Century Greek Literature” 6-9.

¹⁰ He refers, in contrast to the divine, to “all things, namely, what is born and grows.” Xenophanes, *Fragments* fragment B29, p. 131.

¹¹ Aristotle, *Physics*, 1957 192b29.

¹² “Growth” must here be understood in a properly vegetal sense so as to include nutrition and reproduction, as I explain in Chapter III.

appears as the primary, encompassing activity. Although not *exhaustive* of φύσις, plants are in this way *exemplary* of it.

From this perspective, plants constitute a privileged site for philosophical inquiry. Situated on the border of animal (and human) life in such a way as to secure that border, the plant offers insight into the vegetal dimension of life as such; emblematic of the broad movement of φύσις, the plant offers insight into the coming to be and passing away of things. Yet this promise already portends a difficulty: does not the specificity of vegetal life itself thereby recede and give way to the generality of animal/human life on the one hand and φύσις on the other? In the pages that follow, this challenge will appear as a necessary tension between the specificity of plant life and the generality of life as such.¹³ On the one hand, this essay is concerned only with the plant. On the other hand, fidelity to that very concern requires a reckoning with the ways in which other forms of life are implicated in a vegetal movement that subtends and enlivens them while remaining somehow very close to φύσις itself.

The exemplary appearance of φύσις in plants is also, therefore, a dis-appearance. If, as Heraclitus says, φύσις is the friend of concealment, it conceals itself especially in the plant.¹⁴ Hermes' plant remains hidden: first in its earthly submersion, then in the darkness which clings to it even in its uprooting, next in the silence of that which has no human name, and finally in the consumption by which it becomes for Odysseus a charm and ward. Pseudo-Aristotle makes a similar observation concerning life as such, which is evident in animals but is hidden in plants.¹⁵ In the indeterminacy of its growth, the plant retains a certain imperceptibility, receding from thought and remaining submerged, so to speak, in the broad flow of φύσις. The phytological¹⁶ study which follows strives to come alongside

¹³ I revisit this tension explicitly in the conclusion (page 220 and following).

¹⁴ See page 6.

¹⁵ Pseudo-Aristotle, "On Plants" 815a10-14 (see epigraph).

¹⁶ "Phytology" is constructed from φυτόν (plant) analogously to "zoology."

this broad flow and give articulation to a specifically vegetal form of life that does not thereby lose its imperceptibility but appears precisely in and through it.

This dissertation reexamines plant life through an exploration of the place of plants in the history of Western philosophy. By engaging in a close study of those philosophers who inquire concerning plant life, I show in each case how vegetality both (a) is constitutive for the philosophical thinking in question and (b) cannot be adequately accounted for by that thinking. Through this process, I suggest that the particular manner of resistance plant life manifests vis-à-vis philosophy indicates an aspect of vegetal existence that calls for a rethinking both of the plant specifically and of life as a manner of being. The foregoing remarks offer a first, preliminary sense of what I mean by the “ὑβρις” of plants: a manner of life, difficult to discern, for which growth is definitive (rather than partial) and which therefore consists in exceeding itself apart from any external limit or measure. In the rest of the introduction, I first clarify the concept of ὑβρις in relation to contemporary philological research, then discuss the complementary deconstructive and constructive aspects of my project. I then discuss the role that inquiry into language plays in my study, and I conclude the introduction with a synopsis of the essay.

§2.1. ὑβρις in Greek Thought

The invocation of ὑβρις on which this essay is predicated is not intended metaphorically. Rather, I claim that the contemporary interpretation of ὑβρις has neglected an aspect of the concept that was important to the Greeks and that articulates a crucial dimension of plant life.

The past fifty years have seen a mild resurgence of interest in the interpretation of the concept of ὑβρις.¹⁷ Much of this contemporary work focuses on the concept of ὑβρις in

¹⁷ Beginning in the mid-twentieth century, Lattimore, Vickers, Rosenmeyer, and others treated the meaning of ὑβρις for the Greeks. See Rosenmeyer, “Hubris and the Greeks”; Vickers, *Towards Greek Tragedy* 22-28;

the context of Greek tragedy and Athenian law. As I suggest in this section, however, such an approach fails to adequately account for the way ὕβρις appears in other contexts.

Speaking with the dominant strain of interpretation, Fisher rigorously follows the definition of ὕβρις given in Aristotle's *Rhetoric*:

ὕβρις consists in causing injury or annoyance whereby the sufferer is disgraced, not to obtain any other advantage for oneself besides the performance of the act, but for one's own pleasure.¹⁸

Within the broadest currents of contemporary interpretation, the interpretation of ὕβρις is *moralistic*, *behaviorist*, and *anthropocentric*: moralistic, since the term expresses an ethical judgment; behaviorist, because what is judged is an action or behavior; anthropocentric, because the action belongs to a human agent.¹⁹ On this basis, it becomes possible to understand ὕβρις in relation to the concept of “honor” which informs the subtitle of Fisher's seminal treatment, *Hybris: a Study in the Values of Honour and Shame in Ancient Greece*: “one would expect to find implicit in almost all instances of *hybris* the notion of injured honour; and that is in fact what I believe one does find,” he declares; “the vast majority of uses of *hybris*-words in all classical authors fit without any strain into this account.”²⁰ From this standpoint, it would be senseless to speak of the ὕβρις of plants.

Although perhaps appropriate to the legal context on which Aristotle is drawing in the relevant section of the *Rhetoric*, such an interpretation misunderstands the more

Lattimore, *Story Patterns* 29-32; see especially the work of N.R.E. Fisher, whose series of articles beginning in 1976 culminate in his exhaustive monograph (Fisher, *Hybris*, 1992).

¹⁸ Aristotle, *Rhetoric*, 1926 1378b5. See Fisher, *Hybris*, 1992.

¹⁹ See Fisher's own helpful summary in Fisher, “Hybris’ and Dishonour,” 1979 45.

²⁰ Fisher, “Hybris’ and Dishonour,” 1976 180, 185. See also Fisher, “Hybris’ and Dishonour,” 1979 32, 43. In fact, Fisher admits only one exception to his account, namely, Plato, “whose use of the term *hybris* is, like so much of his work, untypical” (Fisher, “Hybris’ and Dishonour,” 1979 44). This effect is achieved in part by claiming that any usage which fits his definition is paradigmatic and any usage that does not is derivative and metaphorical. Fisher's most prominent reviewers reproach him on precisely this point; see Adkins, “Review”; Cairns, “Hybris (Review),” 1994, and to a lesser extent Walcot, “Hybris”.

fundamental sense of ὕβρις.²¹ As an essentially *negative* definition which views ὕβρις from the standpoint of the injured, this definition is already suspicious, especially from a Nietzschean perspective. “*Hybris* presupposes a *joyful condition*,” Nietzsche emphasizes in a notebook entry from 1883.²² That is to say, ὕβρις involves excellence and growth of force: the essence of ὕβρις is not to be found in what injury it may do to another (which from the perspective of ὕβρις is a matter of complete indifference) but in its own nature. This Nietzschean suspicion is justified by a more careful consideration of the literature, which undermines each of the three pillars of the received interpretation:²³

1. *Behaviorism*. For the Greeks, ὕβρις is not so much a variety of behavior as it is a variety of disposition. David Cohen’s studies of ὕβρις and sexuality in Athenian legal cases, for example, demonstrate that even in legal contexts a charge of ὕβρις can be established on the basis of intention in the absence of act and, inversely, an otherwise hubristic act can cease to be so if the intention is altered.²⁴ Similarly, a man might inflict ὕβρις upon himself by consenting to sexual dishonor.²⁵ In both cases, the charge refers primarily to the way a hubristic disposition is expressed (or not) in the action in question. Douglas Cairns comes to a similar conclusion through a careful reading of Aristotle, showing that the passages concerning ὕβρις occur within the context of an ethical theory that emphasizes the determinative role of ethical comportment.²⁶ As Nietzsche says, ὕβρις is primarily a “condition” understood as a disposition or modality of life, not a behavior which belongs to a legal subject.²⁷

²¹ In fact, MacDowell convincingly reads Aristotle’s definition as a specialized one, concerned only with those types of ὕβρις which can be prosecuted (MacDowell, “‘Hybris’ in Athens” 28).

²² eKGWB/NF-1883 7[161] (emphasis added). For more on Nietzsche’s interpretation, see Chapter V.

²³ The three paragraphs which follow are deliberately brief. My intention is to first clear out common misconceptions to open a space for later developing my own account on somewhat different terms.

²⁴ Cohen, “Sexuality, Violence, and the Athenian Law of ‘Hubris’”, esp. 174-177.

²⁵ Cohen, 178.

²⁶ Cairns, “Hybris, Dishonour, and Thinking Big,” 1996, esp. 1-6.

²⁷ eKGWB/NF-1883 7[161].

2. *Moralism.* Although ὕβρις frequently has a normative sense in antiquity, J.T. Hooker argues that the term is morally neutral in the Homeric texts. In these earliest cases, the word means something like “exuberant strength”; it is only later re-interpreted to mean such strength applied wrongfully. Although Homer usually condemns ὕβρις, he does so through the addition of a supplementary judgment. This shows that the concept does not itself carry a normative valence.²⁸ When the suitors outside Odysseus’ house gather to throw the discus and javelin, for example, they are said to be “hubristic” neutrally, without qualification: they are testing and enjoying their physical strength.²⁹ When Homer wishes to condemn ὕβρις, by contrast, he typically feels the need to qualify it as over-violent (ὕπερβιος) and full of reckless folly (ἀτάσθαλος) or contrast it with whatever is well-ordered (εὖνομος).³⁰ Hesiod follows Homer in the non-pejorative usage of ὕβρις. In Solon, by contrast, ὕβρις for the first time becomes *itself* a moral term. Thenceforth two strands of thinking survive: one understands ὕβρις as morally reproachful insolence and pride, and the other understands it as morally neutral (or even occasionally admirable) high spirits and exuberant strength.³¹ In its originary occurrence, then, ὕβρις carries no moral judgment.

3. *Anthropocentrism.* In Greek thinking, ὕβρις is not confined to humans. To the contrary, there ὕβρις appears in many forms in animals, and even its manifestations in human life often maintain a relation to the animal forms. In animals, as in humans, ὕβρις often appears as an aggressive spirit and noisiness (as in the case of that most hubristic animal, the donkey). Excessive eating and drinking, lustfulness, restless “larking about,” and similar activities are characteristic of ὕβρις in both human and non-human

²⁸ Hooker, “The Original Meaning of YBPIΣ” esp. 126-128.

²⁹ Homer, *Odyssey*, 1995 4.627 and 17.169. This is the only case in Homer where ὕβρις is unqualified. See Hooker, “The Original Meaning of YBPIΣ” 126.

³⁰ Homer, *Odyssey*, 1995 1.368, 4.321, 16.86, 16.410, 24.352, 17.487.

³¹ Hooker, “The Original Meaning of YBPIΣ” 128, 131-133. See also Michelini, “Υβρις and Plants” 35.

creatures.³² Is ὕβρις, then, a primarily human phenomenon metaphorically applied to animals, or vice versa? Is the braying donkey, for example, especially human by virtue of his noisiness? Or, on the contrary, is the rude and noisy youth something rather close to a donkey in his braying, such that ὕβρις belong paradigmatically to the animal? In fact, the dichotomy is a false one. For the Greeks, ὕβρις pertains rather to a register of life which subtends both animal and human. This element comes to the fore in those passages in which the Greeks speak of the ὕβρις of plants.³³

Ultimately, it is the anthropocentric element of the interpretation that is decisively delusory: by focusing on ὕβρις in humans—especially in legal contexts—one is led to conceive ὕβρις from the point of view of a victim. Since direct imposition on the victim takes the form of behavior, this prejudices the inquiry in the direction of a behavioristic account; since the victim suffers the activity of ὕβρις, this prejudices the inquiry in the direction of a moralistic account; since the victim suffers at the hand of a perpetrator, this reinforces the prejudice favoring an anthropocentric account. Once beholden to such an interpretation, it becomes difficult to understand ὕβρις in a way that makes sense of many of the texts concerning human beings, much less those concerning animals and plants. By beginning with a more nuanced view, however, this essay attempts a reorientation away from these interpretations, beginning to hear the subtler notes in the ancient Greek conception of ὕβρις and opening the possibility of rethinking ὕβρις itself in relation to these underappreciated aspects. It is in this spirit that the essay will develop a philosophical concept of ὕβρις focused on its vegetal aspect.

³² MacDowell, “Hybris’ in Athens” esp. 15-18, 20-21.

³³ I discuss these passages in detail in Chapter V, pages 118–123.

§2.2. The History of Philosophy

In the pages that follow, this essay attempts an investigation of plant life, taking its *hubristic* dimension as primary. At the same time, it is also an investigation in the history of philosophy, consisting of a series of studies of Plato, Aristotle, Goethe, Hegel, and Nietzsche with respect to the role of plant life in their philosophy. In each case, my reading therefore contains a deconstructive element and a constructive element.

In its *deconstructive* aspect, the study involves reading certain texts in the history of philosophy with an eye toward exhibiting, in each case, the manner in which the philosophy in question cannot account for a vegetal element upon which it nevertheless depends. In Plato's *Phaedrus*, for example, plants appear as a condition for philosophical reflection that nevertheless remains inaccessible to thought, which must approach the vegetal only indirectly. Just as the plane tree makes discourse possible only by receding, vegetal life will have a crucial role to play throughout the history of philosophy precisely in virtue of its tendency to withdraw from philosophical articulation. The first goal of this essay is to mark that withdraw in its various forms.

How do I understand the task of reading texts in the history of philosophy in a philosophical way? From a philosophical standpoint, the doctrines taught and conclusions warranted by the texts possess a crucial but strictly secondary importance and must be read as symptomatic of the thought in question. To put the point in an idiom especially appropriate to the Platonic texts, philosophy proceeds *dramatically*, and a philosophical reading is attuned to this aspect of a given text. When, in the *Phaedrus*, Socrates says the plane tree (πλάτανος) is “unwilling to teach,” we should also hear the pun: we will not receive any teaching from Plato (Πλάτωνος).³⁴ The text does not essentially teach; rather, it

³⁴ Plato, *Phaedrus*, 2017 229a. The pun is repeated at 246d, where the myth of the soul occurs in the act of imagining (πλάττω). Cf. Zaslavsky, “A Hitherto Unremarked Pun in the *Phaedrus*” and Plato, *Plato's Phaedrus*, 2003 27n69. In Geier's interpretation, the role of the plane tree is to bring Socrates and Phaedrus into contact with the sun in a diffuse, bearable form; likewise, the role of the imaginative myth—and of Plato's text—is to bring us into contact with the nature of the soul in a diffuse, bearable form (Geier,

dramatizes the movements of thought and of things.³⁵ To read such a text carefully involves responding to an invitation to join in being so moved, to participate—as Plato says later in the same text when retelling his myth of the soul—in an act of imagination that nevertheless “speaks truly concerning the truth.”³⁶ Claudia Baracchi puts the issue eloquently: “What is at stake here is beginning to disclose the possibility of reading Plato in an altogether other register and simultaneously to hear the Platonic text elaborate on questions that haunt and besiege us, today, with undiminished vitality and increasing urgency.”³⁷ This study endeavors to read texts throughout the history of philosophy in this spirit.

This essay is therefore not primarily historical in nature, although it is a study in the history of philosophy. I make no attempt to arrange historical facts or trace the historical development of ideas for their own sake, although I enjoy frequent, fruitful recourse to great scholars who have done so.³⁸ Nor is the order in which I address historical texts chronological. Indeed, in a certain respect the order of chapters is arbitrary. A study of plants, which reproduce by repeating themselves in rhizomatic proliferation, is bound to repeat itself as well, producing shoots and graftings whose proper relation is one of horizontal proximity rather than vertical dependence. At the same time, however, the essay is organized following a dramatic or pedagogic logic which strives to arrange these proximate relations in order to articulate the ὕβρις of plant life with deepening complexity

Plato's Erotic Thought, especially 211-215). Although I admire his sensitivity to the dramatic context of the dialogue, I do not find his specific interpretation of the plane tree to be compelling. More illuminating is Peter Warnek's discussion of Plato's name in relation to the importance of “place” in the dialogues in Warnek, “Platonic Displacements” 120-121, 124.

³⁵ For the case of the *Phaedrus* in particular, see Vallega, *Sense and Finitude* 72-79.

³⁶ Plato, *Phaedrus*, 2017 247c.

³⁷ Baracchi, “Words of Air,” 2006 29.

³⁸ In the pages that follow, I therefore highlight only those texts which constitute the central body of work for my study. Although my readings have emerged from a close engagement with a wide variety of texts, references to secondary literature are typically limited to footnotes and, especially, to the bibliography. The same is true for the scientific texts that have informed my work.

and increasing precision. Finally, this essay is not focused on “history” as a philosophical problem in its own right. Many of the contemporary philosophers I most admire have engaged this question with great subtlety. My own aims, by contrast, are more modestly focused upon a simple form of life that sprouts anew in sundry historical periods with a common tenacity.

At the same time, this essay is guided by the conviction that the recurrent difficulties philosophers face in addressing plants are not merely the result of the idiosyncrasies of the authors in question. Rather, these difficulties indicate something fundamental about plant life *itself* in its encounter with philosophy. In its *constructive* aspect, this study interprets the withdrawal of plant life as disclosing an essential aspect of the vegetal—namely, the ὕβρις of plants. The second goal of this essay is to develop an understanding of this aspect of plant life.

As a form of friendship, philosophy is concerned in each case with *listening* to the subject which concerns it and *coming alongside* that subject in thought. In order to remain rigorous, this science must be cultivated afresh in each encounter in such a way as to allow its subject matter to show itself intelligibly. Just as the misguided person who attempts to apply an externally formulated “friendship method” to each person she meets is likely to be disappointed, so also will be the similarly misguided philosopher. In this discipline, method guarantees nothing: the friendship must be risked and its outcome left open. Phytology, as I attempt to practice it in these pages, is the attempt to risk an intellectual encounter with plants. Such an encounter must ultimately be measured against the concrete phenomena.³⁹ For this reason, the essay is punctuated by a number of images, which complement the verbal discussion of plants with a visual presentation.⁴⁰

³⁹ That is to say, philosophy must approach *things*, as well as texts, with an eye toward their *dramatic* occurrence. Cf. Deleuze, “The Method of Dramatization,” 2004.

⁴⁰ Of particular note are the paintings by Sydney Parkinson, a Scottish artist who accompanied Captain Cook on his journey in the HMS *Endeavor* (1768-1771), on which journey he died of dysentery.

Each of these goals—the deconstructive and the constructive—predominates in various parts of the essay. Ultimately, the study is carried out in a deliberate tension between these two aspects. To the extent that I am successful, this tension is maintained through the end of the text.

§2.3. Language

The issue of language enjoys a central importance in studies of the history of philosophy, not least because it marks a chasm separating contemporary philosophy, which occurs in the wake of the so-called “linguistic turn,” from earlier modes of thought. This issue therefore occupies the attention of many of the most sensitive contemporary commentators.⁴¹ The present study, by contrast, does not focus on questions concerning language; instead, it attempts to emphasize a different aspect of the philosophical encounter with vegetal life. Readers will no doubt find many opportunities to justly point out places where issues concerning language could fruitfully be given pride of place; I ask only that they make the experiment with me of allowing a different concern to predominate. Because of its importance within the scholarship to which I am indebted, however, I offer a few remarks on the subject.

This study is concerned not primarily with *words* but with *things*: namely, plants. To put the matter in this way—as a decision “against” words in favor of things—would, however, betray a distinctively modern sensibility. For the ancients, λόγος does not belong only to human beings over and against the natural world. Instead, as Alejandro Vallega indicates, “the philosophical logos is understood as the dynamic undergoing of *physis* in its unfolding, rather than as language separate or opposed to a nature or phenomena it attempts to describe and explain.”⁴² According to the Platonic text, language is itself living

⁴¹ See for example Vallega, *Sense and Finitude*, esp. 72-79 and Sallis, *Being and Logos*, 1996, among others.

⁴² Vallega, *Sense and Finitude* 66. See also 73: “the logos does not have to speak about beings; there is not a space from mind to things which language must bridge. Rather, logos is in the soul and in beings, and this

and ensouled (τὸν λόγον ζῶντα καὶ ἔμψυχον).⁴³ “Every λόγος is just as a living creature” as Socrates suggests, and therefore the philosophical λόγος also involves a participation in vegetal life.⁴⁴ As life thus belongs to language, so also language belongs to the sphere of living creatures: in times past, when people were content to listen to trees, Socrates insists, the earliest prophetic words were the words of oak trees.⁴⁵ Thus, not only do words appear as living creatures, but—as Socrates says to Phaedrus—the tree occurs “in the middle of our words” (μεταξὺ τῶν λόγων).⁴⁶ The challenge for philosophy, then, is not to find words that can adequately describe plant life. Rather, the challenge is to listen attentively to the λόγος, allowing the articulations of plant life to lend determination to a thought which follows alongside the growing and withering of vegetal life.⁴⁷ Such a way of thinking does not begin from language, understood as belonging to humans. Rather, beginning with things, such a way of thinking finds within them a language—a language not first possessed by anyone, but instead a language which belongs to the occurrence of vegetal life, and to which we ourselves also belong. Such is the approach this essay pursues.

means that to take up the task of thinking or of a philosophical logos is to seek a way of being along with the shine of the soul and beings.” Within the context of a text such as the *Phaedrus*, then, the matter “is not to make a speech that represents nature but to encounter speech in the context of *physis*” (Vallega, 68). Such an approach, however, would require developing a sense for φύσις. In particular, to encounter speech in the context of φύσις would also mean to encounter φύσις *as* the context in which the speech of the dialogue occurs.

⁴³ Plato, *Phaedrus*, 2017 276a.

⁴⁴ “πάντα λόγον ὥσπερ ζῶον,” Plato, 264c.

⁴⁵ Plato, 275b. In this connection, it is also noteworthy that the beginning of the speeches that Socrates offers to Phaedrus is secured by an oath sworn upon the plane tree (Plato, 236d-e).

⁴⁶ Plato, 230a.

⁴⁷ This study is therefore deeply Aristotelian in the specific sense that it holds that thinking proceeds *from* things and is *of* things. If Husserl responds to the Kantian assumption that “objects must conform to our cognition” with the slogan, “to the things themselves,” then the principle of this study reverses the latter slogan: “*from* the things themselves.” It is not primarily a study of concepts, except insofar as those concepts come alongside and give voice to the occurrence of things.

§2.4. Synopsis

After the first two chapters, which are introductory in character,⁴⁸ Part One of the dissertation addresses Hegel and Goethe's philosophies of vegetal life. Chapter III, "Toward Vegetal Growth," focuses on the role of plants in Hegel's encyclopedic system. On the one hand, vegetal life—which stands at the center of the *Encyclopedia*—is the pivot around which his philosophical edifice turns. On the other hand, he conceives life in rigorously non-vegetal terms. This leads Hegel to approach plants under a conception of unity and difference that is inadequate to plant life. At the same time, however, I suggest that there is a secondary discourse in Hegel's text which, addressing plants in terms of *growth*, is able to more adequately reveal the specificity of vegetal life. Hegel's marginal discourse on plants reveals an originary form of life that consists in a rhythmic expansion without recuperation: the plant exists in excess to itself. At the same time, however, life requires a limit in order to acquire determination. In the Hegelian system, this limit is the animal, in which the truth of life appears in a more determinate form. Hegel's marginal discourse, however, hints at the possibility of conceiving a limit internal to the movement of plant life.

In Chapter IV, "Intensification as Limit," I explore this internal sense of limit by turning to Goethe's botanical philosophy. Inspired by Spinoza, Goethe attempts to develop an intuitive philosophical science of the natural world, beginning with plant life. According to his approach, the plant must be understood as a generative process: the essence of plant life is found in the transitions between its various morphological developments. Like Hegel, Goethe seeks the limit according to which plant life constitutes a determinate existence; he finds this in the interplay between, on the one hand, the intensive process whereby the plant develops forms of increasing complexity and, on the other hand, the rhythmic movements of expansion and contraction exhibited by plant

⁴⁸ The "Preface" and "Introduction" are enumerated with the main chapters in order to fulfill a formatting requirement imposed by the University of Oregon.

growth. Ultimately, vegetal life appears in Goethe's philosophy as an intensive force characterized by a rhythmic temporality.

Part Two marks a pivot from recent German to ancient Greek philosophy and introduces the concept of vegetal ὕβρις that becomes the guiding theme for the remainder of the essay. It consists of a single chapter, "Force and ὕβρις," which focuses primarily on Nietzsche and Heraclitus. For both Hegel and Goethe, the philosophy of plants remains beholden to a concept of unity that is ultimately insensitive to the specific occurrence of vegetal life. Nietzsche shares this concern, but in an inverted manner: he measures plants against a concept of radical multiplicity. For Nietzsche, plant life is exemplary of the "will to power" that occupies much of his late thinking. Refusing any concept of self-preservation, he asserts that vegetal life is essentially a multiplicative movement of prodigal growth. Although Nietzsche's emphasis on the unbounded plurality of life predominates in his texts, there are also moments when he recognizes the need for determination, which he understands in terms of unity and situates in nutrition (without, however, developing this idea). The concept of the will to power appears in Nietzsche's earlier essays in association with the Greek concept of ὕβρις. In Heraclitus, ὕβρις appears as a cosmic principle of whatever comes to be and passes away and is associated with life understood as self-increase. Understood in this way, ὕβρις—especially insofar as it belongs to plant life—marks the self-overcoming aspect of life that Nietzsche identifies as will to power. Part Two, therefore, also marks a shift from the concern with unity and difference that characterizes the thinking of Hegel, Goethe, and Nietzsche to a concern with excess and limit that is more characteristic of Heraclitus and the Greek philosophers studied in the rest of the essay.

Part Three focuses on the place of plants in Greek philosophy. Its first two chapters concern Aristotle's *On the Soul*, in which plants play a crucial role. In Chapter VI, "Between φύσις and ζώη," I examine the structure of Aristotle's investigation. The inquiry

into the soul, Aristotle contends, reveals plants as an originary principle that holds together the twofold character of life (φύσις and ζωή).⁴⁹ Plants therefore exhibit a fundamental ambivalence, exemplified in Aristotle's account of vegetal striving. On the one hand, plants are alive; they strive toward the sun and into the depths of the earth as they live toward their ends. On the other hand, plants have only a partial kind of life. Because they are not perceptive, their activity of striving is indeterminate and profligate. Plants therefore reveal a different kind of life, an "other side" that belongs to the occurrence of life itself.

In Chapter VII, "Concerning Nourishment," I supplement this sense of indeterminate striving with the theory of limit and proportion that emerges from Aristotle's specific account of nourishment. As nutritive proportion, life is characterized by a sense of limit that emerges from the single activity of growing, nourishing, and reproducing whereby vegetal life essentially relates to itself. Here, my readings of Heraclitus and Aristotle (and, in the following chapter, of Plato) show how each struggles to maintain the tension between the indeterminate, proliferative aspects of plant life and the limit or proportion by which the plant exists as a determinate living thing.

This tension appears in a somewhat different context in Plato's *Timaeus*, which is the focus of Chapter VIII, "A Choric Life." In Timaeus' account, vegetal life appears as a second kind of life *in which* animal life comes to be. Plants are introduced into his account as the principle of determination and limit for all living creatures. What Heraclitus and Aristotle address in terms of the measure or proportionality of growth and nourishment (Chapter VII), Plato addresses in terms of a specific form of motion. In this context, the ὕβρις of plants appears as a wild movement that nevertheless possesses an inner balance and harmony. Plants therefore parallel on a terrestrial scale the structural role of the χώρα on a cosmic scale, and for this reason implicate the concept of life in the broadest sense.

⁴⁹ To a first approximation, φύσις (as we have seen) refers to the growing and withering of whatever has its principle of motion and rest within itself, and ζωή refers to animal life. The meanings of these terms are contested and complicated in the course of the discussion of Aristotle.

Finally, the conclusion of the study attempts to hold open and articulate the tensions involved in the study so as to gather together the various tendrils of the essay and intensify the question concerning the ὕβρις of vegetal life in three ways. First, it address the concept of ὕβρις in explicit relation to the reproductive activity of plants, which is a recurrent but marginal theme throughout the essay. Second, it discusses the tension between the specificity of plants on the one hand and the generality of life on the other that becomes increasingly evident in the essay (especially in Chapters V and VIII). Third, it points to the issue of vegetal temporality as an important area for further study.

Before drawing this introduction to a close, I would like to acknowledge the growing body of recent literature, arising from an intensified interest in plant life across diverse disciplines, that has come to be known broadly as “plant theory.” Many scholars are increasingly turning to plants in order to challenge the human-animal divide that has long haunted research in both the sciences and humanities.⁵⁰ Other scholars are finding in plants novel resources for articulating and motivating urgent socio-political projects.⁵¹ Perhaps because the philosophical tradition has largely ignored plants, however, most recent scholars have been inattentive to the role of the vegetal in intellectual history.⁵² Because this essay is concerned with the history of philosophy, these authors are rarely cited in its pages. In a broader sense, however, my work would be much poorer without the

⁵⁰ See especially Nealon, *Plant Theory*; Miller, *Vegetative Soul*, 2012; Doyle, *Darwin's Pharmacy*, 2011; Kohn, *How Forests Think*; Trewavas, “What Is Plant Behaviour?”. For a helpful overview of these recent trends, see Nealon, *Plant Theory* xiii.

⁵¹ See for example Marder, *Plant-Thinking*, 2013 and his related publications.

⁵² On the failure of the philosophical tradition to adequately consider vegetal life, see Marder, *The Philosopher's Plant*, 2014. In my view, Nealon, *Plant Theory* and Miller, *Vegetative Soul*, 2012 are amongst the most important exceptions to this trend. Also of particular interest from a strictly historical perspective is the “Phusis kai Phuta” project, which studies plants in the context of Ancient Greek thought and organized its first conference in 2019 (see <https://voices.uchicago.edu/phusiskaiphuta/>).

benefit of their scholarship. I hope that this study in turn begins to suggest a recuperation of the history of philosophy as a fruitful resource for contemporary studies of plants.

Part I

CHAPTER III

TOWARD VEGETAL GROWTH

In fact the plant is a thing prodigal and manifold, and so difficult to describe according to the whole: in proof whereof is the fact that one can seize nothing which exists in common to all.

THEOPHRASTUS

Hegel is a philosopher of life.¹ His philosophical project, encapsulated in the three volumes of the *Encyclopedia*, moves from the science of logic (in the first volume) to the philosophy of spirit (in the last volume), producing something like a genetic anthropology by grounding the historical realization of human consciousness in the structures of logic. This movement, however, requires a lengthy detour through the philosophy of nature (in the second volume). The first volume yields as its conceptual fruits the pure forms of space, time, and matter, whence it is possible to develop a physics. The second volume, in turn, yields the human animal, whence it is possible to develop a spiritual anthropology. As scholars have emphasized, the concept responsible for the coherence of this sprawling system is Hegel's idea of life:

There is a central, recurring rhetorical device that Hegel returns to again and again throughout his philosophical system: that of describing the activity of reason and thought in terms of the dynamic activity and development of organic life. On closer inspection, it is evident that Hegel means for us to take his descriptions quite literally, that he means to suggest not that reason is *like* life but that reason *is* a dynamic, living activity in constant development. To leave no doubt as to its central role in his understanding of reason and thought, Hegel not only includes the category of life in his *Science of Logic*, a

¹ Epigraph source: Theophrastus, *Enquiry into Plants*, 1999. I.1.10.

move as ‘scandalous’ as it is mysterious, but moreover, its specific placement within that text suggests that it plays a foundational role for his entire philosophical system, forming an essential part of his philosophical method.²

Life, ubiquitous in the *Encyclopedia*, belongs already to the account of logic and is therefore not properly an accomplishment of nature. To the contrary, in the developmental account of nature, a primarily *logical* life increasingly finds its adequation in nature, a process which culminates in the life of spirit.³ Although philosophy adopts the concept of life from nature, it elevates and clarifies it with respect to logical life and subsequently reinterprets natural life in terms of its logical essence.⁴ Hegel therefore develops a peculiar account of life as whatever “begins from an essential though abstract principle, distinguishes or particularizes its components, and then reintegrates these real divisions within the original

² Ng, *Hegel's Concept of Life* 3. See also Greene, “Hegel's Concept of Logical Life”, Hahn, *Contradiction in Motion*, Houlgate, *Hegel and the Philosophy of Nature*, Kreines, “The Logic of Life”, Stone, *Petrified Intelligence*, and Westphal, “Philosophizing about Nature”, among others. Unless otherwise specified, emphasis in quotations is original throughout.

³ “The perpetual action of life is thus absolute idealism” (Hegel, *Philosophy of Nature*, 1970 9). Compare: “Hegel consistently presents life and self-consciousness as sharing the same logical form, revealing cognition's powers to be essentially shaped by the form and activity of life. Life is not the ‘cause’ of spirit, but its first actuality” (Ng, *Hegel's Concept of Life* 14).

⁴ “Although Hegel indeed affirms that nature is living in fact, the strategy of his philosophical arguments with respect to life as a constitutive concept always revolve around the question of what makes the concept of life necessary a priori for self-consciousness and thought, and not primarily around questions concerning empirical nature,” Ng comments. “The significance of the concept of life in Hegel's system primarily concerns the activity and form of the Concept, and the culmination of Hegel's contribution can be most clearly seen in the presentation of a *logical* concept of life in the *Science of Logic*” (Ng, *Hegel's Concept of Life* 8-9). In a remarkable passage from the *Science of Logic*, Hegel recasts a comprehensive vocabulary of natural life in essentially logical terms: “*First*, life is therefore to be considered as a *living individual* that is for itself the subjective totality and is presupposed as indifferent to an objectivity that stands indifferent over against it. *Second*, it is the *life-process* of sublating its presupposition, of positing as negative the objectivity indifferent to it, and of actualizing itself as the power and negative unity of this objectivity. By so doing, it makes itself into the universal which is the unity of itself and its other. *Third*, consequently life is the *genus-process*, the process of sublating its singularization and relating itself to its objective existence as to itself. Accordingly, this process is on the one hand the turning back to its concept and the repetition of the first forcible separation, the coming to be of a new individuality and the death of the immediate first; but, on the other hand, the *withdrawing into itself of the concept* of life is the becoming of the concept that relates itself to itself, of the concept that exists for itself, universal and free, the transition into *cognition*” (Hegel, *The Science of Logic*, 2015 678-679 (12.182)).

essential principle.”⁵ This definition of life depends upon a specific conception of the relation between unity and difference: namely, the codetermination of whole and member. Hegel therefore contrasts life with mechanism, in which a whole is dependent upon parts that are nevertheless indifferent to each other and to the whole.⁶ The mechanical, in other words, lacks the reciprocal relation between whole and member that is characteristic of life:

The members and organs of a living body should not be considered merely as parts of it, for they are what they are only in their unity and are not indifferent to that unity at all. The members and organs become mere ‘parts’ only under the hands of the anatomist.⁷

In mechanistic systems, wholes are composed only of indifferent “parts”; in living systems, wholes are reciprocally determined through the unity of their “members.”⁸ Because of his *a priori* understanding of life, Hegel’s philosophy of nature is dominated by a concern with the relation between unity and difference, interpreted in terms of the whole/members relation (or, in its failure, the whole/parts relation).⁹ Difference is paradigmatically self-differentiation, and self-differentiation is paradigmatically the process whereby life (a) enacts a diremption into members which (b) integrate back into a whole. From this perspective, the natural life of plants and animals, which for example presupposes its objective part in the form of external nutriment, appears as an inadequate form of life. By

⁵ Ferrini, “The Transition to Organics” 204. Life is therefore “the very dynamic of ‘conceiving’ or the very form of pure conceptual thinking.”

⁶ “This is what constitutes the character of *mechanism*, namely, that whatever the connection that obtains between the things combined, the connection remains one that is alien to them, that does not affect their nature, and even when a reflective semblance of unity is associated with it, the connection remains nothing more than *composition, mixture, aggregate*, etc.” (Hegel, *The Science of Logic*, 2015 631 (12.133)).

⁷ Hegel, *The Encyclopaedia Logic, with the Zusätze*, 1991 §135. Cf. Ferrini, “The Transition to Organics” 204.

⁸ In logical terms, mechanism lacks judgment, in which the parts are elevated to the status of members gathered into a whole (See Hegel, *The Science of Logic*, 2015 631 (12.133)).

⁹ For an example of how this works in detail, see Ferrini’s careful account of Hegel’s passages on chemistry at the end of the *Science of Logic* (Ferrini, “The Transition to Organics” 207-214).

contrast, logical life, which generates—rather than receives—its objective content, appears as paradigmatic.¹⁰

If natural life is subordinated to logical life within the context of Hegel's larger philosophical system, the life of plants is further subordinated to that of animals within his philosophy of nature. This is a consequence of the systematic shape of his project, which makes animal life—ultimately, the life of the human animal—the aim and impetus of the discourse on plants. “Animal life is the truth of organic being,” he declares; the study of plants is merely a bridge toward the animal.¹¹ In Michael Marder's words, plants “are the mere intermezzi between the inorganic and the organic that must, themselves, be overcome for life to come into its own in the animal.”¹² It is *zoology*, not *phytology*, that forms the basic character of the Hegelian account.

The force of his systematic vision notwithstanding, Hegel remains far too careful a thinker to submerge himself entirely within this subordinated conception of vegetality. In a crucial passage of his botany, situated at the beginning of his explication of the three processes which characterize the living organism (*viz.*, formation, nutrition, and reproduction), he adds a *provisio*. “In the plant, these processes coincide, and are not so distinct as they are in the animal,” he muses. “It is precisely this which constitutes the difficulty one encounters in expounding the nature of the vegetable organism.”¹³ The problem Hegel faces in his explication of plant life, in other words, is that it is not the same as animal life and therefore cannot be analyzed according to the same schema of processes. And yet he then immediately proceeds to analyze these three processes entirely separately,

¹⁰ See Burmeister, “Hegel's Living Logic” 261.

¹¹ Hegel, *Philosophy of Nature*, 1970 47. This declaration signifies a chasm separating Hegel from Goethe, for whom (as I discuss in the next chapter) the study of plants is an exercise in fidelity bordering on obsession.

¹² Marder, *The Philosopher's Plant*, 2014 159.

¹³ Hegel, *Philosophy of Nature*, 1970 66.

as though he had not just declared such an approach inappropriate to the plant.¹⁴ In fact, Hegel had already recognized the essential divergence of plant and animal life: “the vital principle of the animal is its soul, but the vital principle of the plant is still submerged,” he says earlier in the botanical section of the *Encyclopedia*. “In the animal on the contrary, there is one animation.”¹⁵ In the encounter with the plant, Hegel thinks, life is doubled: whereas the vital principle of the animal is one (soul), the principle of the plant is something else that—in contradistinction to the animal—is *not* one. While the primary tendency of Hegel’s discourse on plants reproaches vegetal life for its inadequacy in relation to the zoological measure (and reproaches the zoological, in turn, in relation to the logical measure), there remains a second, submerged discourse attentive to this second, vegetal kind of life. Although *unity* remains the primary focus of Hegel’s account of plant life, this focus belongs by his own admission to the sphere of animal life. On the one hand, then, we must read Hegel’s botanical texts in terms of their zoological purpose and, more broadly, within a schema oriented toward the beginning and end of the *Encyclopedia*: the uniform life of logic and spirit. On the other hand, Hegel’s own insistence upon the duplicity of life that is found in the plant suggests the possibility of a second reading which emerges from the vegetal “middle” of Hegel’s project and stands in tension with its broader aims.¹⁶

This chapter focuses on these two discourses concerning vegetal life in Hegel’s *Encyclopedia*. In the first section, I highlight the basic features of Hegel’s “primary” account of plants, which understands the plant in terms of the unity proper to animal life.¹⁷

¹⁴ On this point, a major difference emerges between Hegel on the one hand and the other major figures I discuss in this essay: in their different ways, Goethe, Nietzsche, Aristotle, and Plato all recognize *and follow* the coincidence of these processes in plant life.

¹⁵ Hegel, *Philosophy of Nature*, 1970 48.

¹⁶ In this essay, the tension between what I have called Hegel’s “primary” and “secondary” discourses on plants is a productive tension insofar as it sets into relief issues that are central to the rest of my study of vegetal life. In a different context, it would be interesting to consider the productivity of this tension with respect to Hegel’s broader philosophical approach. I am not aware of any scholars who have explored the importance of Hegel’s philosophy of plants in this way.

¹⁷ Although I focus on the presentation in the *Encyclopedia*, Hegel’s interpretation of plant life remains remarkably consistent throughout his life, “from the earliest Jena system projects of 1803, 1804-1805, and

Although Hegel rightly criticizes “crude chemical interpretations” of life for missing the point because “they kill living being, and are only able to grasp that which is dead, not that which has life,” he himself falls victim to the inverse error: crude *animal* interpretations *also* miss the point because they, too, destroy the living plant, and are only able to grasp zoological, not vegetal, life.¹⁸

What, then, of the life of plants? It does not disappear entirely from Hegel’s account. “The physiology of the plant is necessarily more obscure than that of the animal body,” Hegel explains, “because it is simpler, its assimilation passes through fewer intermediaries, and change occurs as immediate infection.”¹⁹ In the second section of this chapter, I trace Hegel’s submerged discourse on plants, which focuses on the growth of plants. In this discourse, growth is not understood as a function of intermediary organs and parts, but appears as *growth itself* in its immediacy. “Difference” therefore assumes a distinctive meaning in the plant. As in Hegel’s broader philosophical project, difference is primarily self-differentiation. In the context of that broader project, self-differentiation is rigorously conceived in terms of diremption into members and re-integration of members into the whole. Consciousness, for example, must find itself objectively outside itself in the world in order to return to itself. Within the context of plant life, by contrast, self-differentiation—growth itself—appears as a process of continual stretching beyond itself without return. Here identity does not consist in a moment of reintegration on a higher level, but rather in the consistency of a process of increase.²⁰ This is why Hegel can

1805-1806, to the Berlin lectures on natural philosophy in 1819-1820 and 1825-1826, and through to the *Encyclopaedia* presentation of 1830.” See Mitchell, “The Botany of Romanticism” 319n4.

¹⁸ Hegel, *Philosophy of Nature*, 1970 93. This is what Marder reproaches Hegel with not recognizing: “At the very least, the inapplicability of either of the two terms,” namely, unity and difference, “should have given the philosopher pause and should have led to the conclusion that metaphysical umbrella categories do not cover this kind of life, lived on the hither side of the dialectics the same and the other, identity and non-identity” (Marder, *The Philosopher’s Plant*, 2014 83). As I show, however, Hegel *does* pause over this problem.

¹⁹ Hegel, *Philosophy of Nature*, 1970 54.

²⁰ As I suggest in this chapter, Hegel does not explicate this process in detail. In later chapters, this process will be addressed in a more sustained fashion.

say that “the *vital process* of the *plant* is complete within each part,” whereas in the animal it requires a differentiated hierarchy of organs. This process, he continues “as an immanent differentiation, appears in its beginning, as in its final product, merely as formation. In this respect the plant occupies a position midway between the mineralogical crystal and the freer shape of the animal.”²¹ Formation—that is, growth—constitutes the process of immanent differentiation that Hegel here identifies with the life of the plant. It is this power of growth which forms the fecund power of life by which plants “vacillate between chemical and organic matter.”²² In fact, it is precisely because plants are *not* animal life that they are able to play the role for which Hegel casts them, quietly preparing the way for the animal in which Hegel would like to find the truth of organic existence. From this perspective, the central place of life in Hegel’s philosophy might be rethought beginning not from the first, logical volume of the *Encyclopedia* but from its central pivot: the specifically vegetal life that appears as the middle term (between physics and animality) in the volume which is itself the middle term (between logic and spirit) of Hegel’s system.

§3.1. Unity and Difference

Hegel begins his philosophy of the vegetal organism with an assertion of unity: “the whole production of the plant displays the same uniformity and simple development, and this unity of form is the leaf.”²³ Known as the “foliar theory” in botany, this approach to plant life recognizes in the various parts of the plants modification of a single organ, the leaf. The point or node, which “constitutes the type of the whole plant,”²⁴ is the basis for development. The node casts off a thread or line, which is then arrested at the formation of the subsequent node. The leaf spreads this line into a surface, recapitulating the first

²¹ Hegel, *Philosophy of Nature*, 1970 65.

²² Hegel, 65-66.

²³ Hegel, 59.

²⁴ Hegel, 55.

dimension in a second, and the curvatures of both line and surface extend into a third dimension.²⁵ Thus the leaf figures the basic spatio-temporal movement of the node in all its forms. The unity of the plant resides in this process whereby each organ transforms into the next, and Hegel labors to identify that unity through an analysis of form. Indeed, he contends that “primarily, life is shape.”²⁶ This is why even the geological organism (the earth) constitutes a prototypical form of life. But whereas the earth is *mere* shape, plants exhibit ideality in shape.²⁷ The status of this ideality constitutes the central concern of Hegel’s analysis. Whatever is properly alive both “maintains the unity of multiplicity” and “differentiates itself within itself.”²⁸ Without real difference, unity is merely superficial and apparent. In the foliar theory of plant life, however, the identity of the organs predominates over their differentiation. If the basic organ of the plant is in every case a leaf, then the ideal whole is present in each part: “the members of the plant are only particular in relation to one another therefore, not in relation to the whole.” Rather, each organ is itself the whole.²⁹ For this reason, Hegel sees a need to supplement the foliar theory with a focus on differential formations.³⁰

In Hegel’s view, there are four processes of differentiation evident in the plant. The first involves the diremption of the plant into root and leaf through a distinction between the gravitropic and heliotropic extensions of the plant. The stem is the figure of this diremption, although it is not strictly necessary (many plants lack it, the root growing directly from the leaf).³¹ This process corresponds to the internal process of sap circulation

²⁵ Hegel, 65.

²⁶ Hegel, 9. Note the contrast between this and his more frequent definition of life, discussed earlier (page 29).

²⁷ Hegel, 45.

²⁸ Hegel, 47.

²⁹ Hegel, 45-46.

³⁰ Hegel, 54, 64.

³¹ Hegel, 67, 70.

throughout the plant which is required by the separation of subterranean and aerial functions.³² The second division is the internal differentiation of cellular tissue into the wood and cortical substances.³³ In general terms, this is distinguished from the first diremption into root and leaf in that it is (a) internal to the plant, not corresponding to any visible exterior division, and (b) polarized perpendicular to, rather than parallel with, the axis of linear extension in the plant. A third differentiation is the division into organs through growth. In simpler plants this occurs as a production of distinct nodes along the point-line structure of growth (fig. 1); in more complex plant forms, such as shrubs and trees, it occurs as a process of division that follows a branching structure.³⁴ In both cases, nodal development differentiates the plant within itself through the successive production of distinct organs (leaf/leaf, leaf/petal, etc.). Finally, the plant is differentiated sexually. In the bud, nodal differentiation reaches its apex, and the diverse elements of the bud—the shift toward rotundity of shape, the concentration of leaves in a whorl, the emergence of color, the increase of scent, and the subtle differentiation of organs—bear witness to the unique character of this process: the blossom is the “final act” of the plant.³⁵ At this highest point of development the sexual differentiation into male and female organs and organisms appears (pistil and anther, sexed plants, etc.).

For Hegel, however, these processes of differentiation are inadequate. Precisely because the differences between the various parts of the plant can be understood as equivalent across a process of transformation, these differences are “a fleeting breath of forms, which does not attain to qualitative and fundamental difference,” offering only that which is in essence “intrinsically the same.”³⁶ In some cases, for example, plants that have

³² Hegel, 79.

³³ Hegel, 72, 80.

³⁴ Hegel, 55-56. Fig. source: Kops, “Chordaria Flagelliformis.”

³⁵ Hegel, *Philosophy of Nature*, 1970 91-92.

³⁶ Hegel, 59.



FIGURE 1. *Conferva*

articulated along a root/leaf polarity will, if uprooted, inverted, and replanted, continue to grow, transforming the subterranean organs into aerial ones and vice versa.³⁷ The distinction between the sexes suffers the same superficiality. In most plants, the sexual distinction operates not on the level of individual plants as wholes, but only on the level of their parts: many plants are monoecious, bearing both male and female flowers, and many others bear flowers that are each hermaphroditic.³⁸ Even when present, sexual difference operates on the level of distinctions between organs that are transformations of one another. As Goethe demonstrates, the male and female parts of the plants are both modifications of the foliar organ.³⁹ In those cases where an individual plant is entirely identified with a single sex, the difference nevertheless remains controvertible, for these plants can sometimes change from one sex to the other in the course of their development.⁴⁰ Almost all plants, furthermore, practice the alternation of generations, alternating between sexual and asexual reproduction in successive generations.⁴¹ Some plant species, though sexually differentiated, are completely sexually sterile: King's Lomatia, for example, is a chromosomal triploid that reproduces only by cloning itself when branches fall off the shrub, take root, and grow into new plants. Finally, sexual difference does not constitute an essential difference in plant life; the plant can develop and reproduce effectively without it. "The synthesis of the sexes," Hegel concludes, "is a game and a luxury, and is not essential to propagation."⁴² Thus, he declares that as far as fundamental differentiation is concerned, "the plant is sexless."⁴³ These problems reappear at the level of the differences of form between species, where distinctions again appear

³⁷ Hegel, 59.

³⁸ Tudge, *The Tree* xiv.

³⁹ Goethe, *Metamorphosis*, 2009 §§67, 69, 71-72. Hegel quotes Goethe's book extensively in the *Encyclopedia*.

⁴⁰ Hegel, *Philosophy of Nature*, 1970 93.

⁴¹ Tudge, *The Tree* 69.

⁴² Hegel, *Philosophy of Nature*, 1970 95.

⁴³ Hegel, 94.

inessential. “The course of leaf-development which displays itself in one species, is also the principal determinant in the different species themselves,” Hegel claims; “consequently, the leaves of all the species taken together exhibit the complete development of a leaf.”⁴⁴ Thus, the formal differences that occur in plant development appear to be mere externalities that do not constitute essential differentiation.

A second reason that differentiation in plant development consists in merely exterior relations, according to Hegel, is that this differentiation always occurs with respect to and at the behest of an exterior element. The diremption of the plant into root and leaf, for example, is directed toward earth and water on the one hand and light and air on the other.⁴⁵ Hegel views light as particularly important in this respect. “It is primarily their sap, and in general a vigorous individualization, that plants receive from light,” he says. “Without light plants certainly become larger, but they remain tasteless, colourless, and odourless.”⁴⁶ Distinctions of taste, color, and odor occur in response to the influence of light, as does the formation of sap, the principle of self-differentiation in general.⁴⁷ Hegel contends that the plant’s relation to these external influences is one of reflex or reaction; the sensitivity of plants is in the end “merely a mechanical elasticity.” “Air and water are perpetually acting upon the plant,” he explains; “the plant does not sip water.”⁴⁸ Since differentiation in the plant consists in responses to stimulation from without, the plant possesses its principle of differentiation as something external rather than essential to itself. “Light draws the plant out of itself by constituting its external self, so that the plant

⁴⁴ Hegel, 60.

⁴⁵ Hegel, 83-84.

⁴⁶ Hegel, 48.

⁴⁷ In Goethe’s theory, the development of metamorphic variation out of the single organ (the leaf) is attributed to the work of the sap as it goes through progressive stages of refinement. In this sense, by attributing sap to the action of light on the plant, Hegel attributes the entire development of formal variation to its influence. See for example Goethe, *Metamorphosis*, 2009 §§30, 41, 95, 113, and 120.

⁴⁸ Hegel, *Philosophy of Nature*, 1970 51-52.

strives towards it, and branches out into a plurality of individuals,” Hegel explains.⁴⁹ What determines the plant as itself is not found within itself. For this reason, he describes plant identity as a process of “self-specification in accordance with externality.”⁵⁰ Furthermore, these external beings are not individuated things with which the plant could enter into the determinate relations proper to things, but rather abstract, elemental beings: light, air, water, earth, etc.⁵¹ The plant, internally deficient with respect to differentiation, situates the determination of its difference in an other which is likewise deficient. Thus, once again, the distinctions that appear in the course of plant development do not constitute processes of essential differentiation.

Finally, Hegel understands differentiation in plant life to be merely external because the various parts of the plant stand in external relation to each other. “The plant not only develops outwards generally,” he observes, “but the preservation of its self as an individual is only accomplished through the perennial positing of a fresh individual.”⁵² The particular structure of plant living is such that the formation of each part is a recapitulation of the whole. “The side branches growing from the nodes of a plant may be considered separate small plants placed on the parent in the same way that the parent is attached to the earth,” Goethe notes, and “a bud opening on the oldest tree may be considered an annual plant even though it develops on a long-existent stem and may itself last for a longer time.”⁵³ Hegel likewise describes the bud as “a new plant on the old one,” observing that “each branch and each twig constitutes a complete plant, which has its root in the plant as it does in the soil,” and he holds this to be true of plant development in general.⁵⁴

⁴⁹ Hegel, 84.

⁵⁰ Hegel, 83.

⁵¹ Hegel, 51.

⁵² Hegel, 55.

⁵³ Goethe, *Metamorphosis*, 2009 §§90, 110.

⁵⁴ Hegel, *Philosophy of Nature*, 1970 83, 56.

Nodes are continually developing further through self-repulsion, for the plant splits up within a thread into a multitude of germs, each of which is a whole plant. It is in this way that members are produced, each of which is the whole. It makes no great difference whether these nodulations keep together within a single individual, or whether they fall apart into several individuals.⁵⁵

The various parts of the plant are distinguished, but their distinction is not the differentiation of self within itself that constitutes for Hegel the necessary counterpart to the unity of multiplicity. “The members of the plant are only particular in relation to one another therefore, not in relation to the whole,” he explains. “These members are wholes in their own right.”⁵⁶ Whereas the members of the animal body constitute relationships of mutual dependence and specialization within a whole, the members of the vegetal body are not properly differentiated “organs” of a unity, but instead particularities defined by exterior, indifferent relations.⁵⁷

The inquiry into the nature of vegetal life therefore ultimately leads Hegel to claim that the plant fails to achieve self-differentiation. Apparent processes of differentiation reveal themselves to be merely transmutational or external distinctions that do not constitute the differentiation of self within itself that is proper to life as such. Furthermore, if the plant does not exhibit true differentiation, then neither can it be characterized by genuine unity. The plant “cannot yet sustain the true differentiation of its members,” Hegel says; it is “perpetually falling apart into its particularity, and is therefore unable to hold on to itself.”⁵⁸ Hegel’s analysis identifies each part with every other part through the process of transformation, and in so doing he shows that “the part—bud, branch, and so on, is also

⁵⁵ Hegel, 83.

⁵⁶ Hegel, 46.

⁵⁷ Hegel, 9.

⁵⁸ Hegel, 13, 50.

the whole plant,” such that “one part can easily assume the function of the other.”⁵⁹ A whole which can simply be identified with each of its parts, however, is not a proper whole. Unity, conceived as the unity of multiplicity which gathers together diversity into a whole, requires precisely the internal relation between members that the plant lacks. Without integrated, dependent parts, the plant is an aggregate of independent members, a conflation of part and whole, and does not constitute a true unity. Its apparent unity, like its apparent differentiation, is revealed to be merely external.⁶⁰

Hegel characterizes plant living as an immanent production of form operating according to a nodal logic, but he views this process as abstract because it fails to achieve either unity or plurality in the proper sense. This “falling apart” into indifferent individuality is the primary feature of plant life for his interpretation and the one which secures the position of plants within the Hegelian system:

Strictly speaking therefore, a plant is an aggregate of a number of individuals constituting a single individual, the parts of which however are completely independent. It is this independence of its parts which constitutes the *impotence* of the plant. The animal on the contrary, has viscera, dependent members, the whole existence of which is dependent solely upon the unity of the whole. [...] The animal organism can also have members removed of course, but the plant consists of nothing but these removable members.⁶¹

For Hegel, the plant is characterized primarily by a kind of *impotence*: specifically, the impotence *to be an animal*. According to the zoological movement of Hegel’s thinking, the plant must appear—as he says on two separate occasions—as a “feeble and infantine life.”⁶²

⁵⁹ Hegel, 45.

⁶⁰ Hegel, 48.

⁶¹ Hegel, 58.

⁶² Hegel, 46, 95.

Life, for Hegel, operates within the circumscription of the dialectic of unity and plurality, and vegetal life occupies a deficient role in the movement of this dialectic. But does not this logic proceed by way of a conceptual inversion? Hegel's analysis demonstrates an inadequation between his concept of ideal unity and the actuality of plant living. Instead of seizing this as an occasion for rethinking plant living in different conceptual terms, however, he understands the disjunction as an inadequacy of plant living to the concept of identity rooted in his interpretation of animal life, and he takes this inadequacy as the constitutive idea of vegetal life. While this move forms an essential step in the inner drama of idea and nature in Hegel's philosophy of nature, it also entails a departure from the phenomena of plant living itself and leaves the plant unthought on its own terms.

§3.2. Growth Itself

Although Hegel's primary, zoological discourse passes over plants, I have suggested that Hegel's text also carries another discourse, more attentive to the "still submerged" vital principle of the plant. This second, inchoate account of plants indicates the possibility of recuperating a sense for the specific character of plant life. Let us return to the four processes of differentiation Hegel identifies in vegetal life: that into root and leaf, that into wood and cortical tissues, that into organs, and that which is sexual. In the first two processes, differentiation occurs by polarized diremption, *viz.*, along the vertical or gravitropic/heliotropic poles and the horizontal or interior/exterior poles. In the second two processes, differentiation occurs by periodic expansion and contraction, *viz.*, the expansion of growth followed by contraction of nodal formation and the expansion of sexual organs preceded by the contracted bud and followed by the contracted seed. In both cases, differentiation operates according to a logic of mobility: a rhythm of departure and return that articulates a process of formation. This process of formation is *growth*. In a certain respect, growth has its own proper and delimited place in Hegel's account, as we

saw above: growth is the first process of the plant, distinct from the other two processes of nutrition and reproduction, and exhibits in miniature the problematic of ideal unity that Hegel takes to be characteristic of plant life. This is because growth recapitulates parts which are indifferent to one another and appear as wholes in their own right. In growth, he summarizes, “the gathering of self-preservation into unity is not unification of the individual with itself, but the production of a new plant-individual.”⁶³ The growth of the plant is here seen as self-preservation which does not achieve the unification of hierarchically differentiated parts which characterizes animal life, but rather collapses into simple recapitulation of superficially related wholes.

Hegel therefore understands the difference between animal and plant growth is a difference of degree: namely, the degree of deficiency plants exhibit in the particular character of their (animal) growth. I suggest, however, that there is at the same time in Hegel’s text an account of another kind of (vegetal) growth. “Growth” would therefore be an equivocal, rather than univocal, term in Hegel’s philosophy of nature. The qualitative difference between these two varieties of growth takes three forms.

First, insofar as plant growth is *multiplicative*, it is not subordinate to the schema of organs characteristic of animal life. In animals, growth preserves the dependent relationships of organs and their specific organization within the whole throughout the growth process. In this sense, “animal growth is merely a change in size.”⁶⁴ As it grows, an animal such as a dog retains, for example, its quadruple arrangement of legs and double arrangement of lungs in a relatively stable organization which increases in size throughout the animal’s growth. By contrast, growth in plants means the continual production of new organs (fig. 2).⁶⁵ To the extent that the new and additional parts formed in this process of self-augmentation are independent, vegetal growth is reproductive in character. Neptune

⁶³ Hegel, 67.

⁶⁴ Hegel, 56.

⁶⁵ Hegel, 46. Fig. source: Parkinson, *Acaena Anserinifolia*, 1770.

Grass (*Posidonia oceanica*), an aquatic plant that forms extensive meadows in the Mediterranean Sea, offers a striking example. As a flowering plant, it practices sexual reproduction, but it also reproduces asexually through two systems of rhizomes, one beneath and one above the sandy seafloor. Shoots of the plant will periodically break off, spreading some distance from the parent and forming new plants genetically identical to the parent. As parent and child continue to grow and spread, they are often brought into close proximity again, and the two plants may grow together, fusing into one organism again. One such colony of Neptune Grass has recently been estimated to be one hundred thousand years or more in age.⁶⁶ Here the preservation of a self-identical and hierarchically arranged organism is entirely absent; rather, the plant appears as nothing other than a proliferative, multiplicative force. “The conservation of the plant,” Hegel says, “is itself merely a self-multiplication.”⁶⁷ Thus, rather than appearing as a developmental process governed by an organizational schema, vegetal growth appears as the process of the plant itself.

Second, insofar as plant growth is *indeterminate*, it occurs without reference to a point of maturity at which increase gives over to reproduction.⁶⁸ Whereas the animal “stops [growing] at a definite point of size,” producing its own self-maintenance, “the plant grows without ceasing.”⁶⁹ In the animal, growth works to develop the individual organism to the point of maturity at which point the process of increase is halted, digestion takes the role of conservation, and reproductive functions predominate. In the plant, however, the immediate work of digestion is growth as nodulation, which is the coming into being of

⁶⁶ Arnaud-Haond et al., “Implications of Extreme Life Span in Clonal Organisms.”

⁶⁷ Hegel, *Philosophy of Nature*, 1970 95.

⁶⁸ For more on the biological distinction between determine and indeterminate growth, see Bertalanffy, “Principles and Theory of Growth” 206-207. According to Bertalanffy, fish occupy a middle position between plants on the one hand and mammals, insects, etc. on the other: while they are characterized by a fixed arrangement of organs, they nevertheless continually increase in size throughout their lives.

⁶⁹ Hegel, *Hegel's Aesthetics* 136-137.



FIGURE 2. *Acaena anserinifolia*

another individual.⁷⁰ Hegel summarizes the process of specifically vegetal growth that he takes to be the nature of the plant: “The plant assimilates the other being into itself as it grows, but as self-multiplication, this assimilation is also a self-emergence. It is not the individual coming to itself, it is a multiplication of individuality.”⁷¹ Whereas in the animal, growth is subordinated to organic maturity as a principle of identity in relation to which growth occurs, in the plant, by contrast, growth appears as an autotelic principle.

Third, insofar as plant growth is *comprehensive*, it is not merely one component process among many but expresses the process of vegetal life as such. As Hegel explains, vegetal growth occurs as a process of gathering-production that does not unite the individual with itself but rather gives rise to another.⁷² But how are we to understand this other? It, too, must be understood as the same process of gathering-production. In this sense, “growth” becomes the name not for one process of the plant but for the whole movement of plant life. This is precisely the difficulty Hegel identifies early in his study of plants: the coincidence of nutrition and reproduction in the single process of growth.⁷³ “Strictly speaking,” Hegel admits, reproduction “should be regarded to an equal extent, or even predominantly a *digestive process*,” for “digestion and procreation are the same.” Individuation, reproduction, digestion, and nodulation are all equivalent in the single process of growth.⁷⁴ Thus, whereas growth in animals can be understood as one among many dependent, partial phenomena organized in relation to the animal creature, growth in plants seems to capture something more comprehensive concerning vegetality as such. Take for instance the Dodder plant (*Cuscuta*), a parasitic plant related to the morning glory (fig. 3).⁷⁵ Upon germination, it immediately begins searching for a host plant. Its root-like

⁷⁰ Hegel, *Philosophy of Nature*, 1970 96.

⁷¹ Hegel, 47.

⁷² Hegel, 67, quoted above.

⁷³ Hegel, 66.

⁷⁴ Hegel, 96.

⁷⁵ Fig. source: Bergen, *Elements of Botany* 33.

organ is not functional, and the food reserves stored in the seed will sustain it for only a week or two. Orienting itself by olfactory cues, it locates a suitable host and grows toward it, wraps itself around it, and puts out small, thorn-like haustoria that penetrate the host, establishing physiological and biochemical connections with the host's vascular tissues. These parasitic connections provide the water and nutrients on which the Dodder depends almost exclusively throughout its life. As it grows, new stems form similar connections with other plants, and these connections have been shown to involve lateral gene transfer between hosts. A single Dodder, which may maintain a contiguous network with hundreds of hosts of entirely different species, can attain seven and a half kilometers of stem length.⁷⁶ In both itself and the host plants, the Dodder's growth is a continual deformation or transformation of identity in which growth, nutrition, and reproduction are conflated at the genetic, molecular, metabolic, and morphological levels. "Implicitly," Hegel suggests, growth "is already the plant, the whole tree etc., in miniature."⁷⁷ From this perspective, the plant is *nothing but* a certain manner of growth activity. But this means that the properly phytological measure of unity is not, *contra* Hegel, the ideality of the animal organism and the relation of organs which compose it. Rather, the foliar theory of plants already suggests a different approach: the leaf is not the name for an organ *per se* or one process among others; rather, "the foliage is the pure process of the plant" as such.⁷⁸

Whereas nutrition in the animal assimilates another body in order to preserve itself, the plant assimilates the other being as part of its growth, such that "this assimilation is also a self-emergence."⁷⁹ Hegel is critical of this self-emergence because it results in "a mutually indifferent and separated plurality": unlike animals, "the substance from which

⁷⁶ Costea, "Cuscuta."

⁷⁷ Hegel, *Philosophy of Nature*, 1970 68.

⁷⁸ Hegel, 75.

⁷⁹ Hegel, 47.



FIGURE 3. Dodder growing on Golden-Rod with haustoria ("A").

they [plants] proceed is not a common essence.”⁸⁰ This is the case, however, because on Hegel’s own terms the essence of the plant resides not in a substance from which growth proceeds but in vegetal self-emergence itself. Unlike the animal, the plant “produces itself in externality” and “grows entirely out of itself.”⁸¹ It is the circulation of growth, the increase and diminution which moves through plant, that forms the principle of vegetal identity.⁸² Although Hegel does not use the term, this is the characteristic of plant life that the Greeks call ὑβρις: the tendency of plant life to compose itself in excess of its own limits. Hegel describes the movement of this growth geometrically in terms of rhythmic, linear extension. The point “constitutes the *type* of the whole plant,” which “puts out threads, forms itself into a *line*” before checking itself and constituting a new node.⁸³ Note that plant growth is not simply endless outward movement, for it also entails a certain periodicity by which it checks itself and continues.⁸⁴ “You can call this magnetism if you like,” he comments, “but it lacks polar opposition.”⁸⁵ That is, linear extension is rhythmic but asymmetrical, casting itself out of itself with arrest but without return.

“It is because the plant is alive,” Hegel ventures, “that this tremulation of vitality within itself, this restlessness of time, is one of its features.”⁸⁶ This is the closest the philosopher comes to thinking vegetal life on its own terms. Growth is cast in terms of the *living* of a plant-life and belongs fundamentally to this life. Growth is a “tremulation,” a manner of movement *qua* movement, and it again belongs to life, vitality. This is why growth is understood *temporally*, as a mode “of time.” Finally, it is a restlessness: an

⁸⁰ Hegel, 47.

⁸¹ Hegel, 47.

⁸² Hegel, 77.

⁸³ Hegel, 55.

⁸⁴ Hegel, 91.

⁸⁵ Hegel, 55.

⁸⁶ Hegel, 76.

indeterminate movement, defined by its insatiate or self-surpassing tendency toward perpetuation of movement.

§3.3. Conclusion

The discourse on growth remains a marginal discourse within Hegel's *Encyclopedia*, appearing only in scattered passages. In its primary aims, Hegel's philosophy of nature cannot assimilate a form of life which diverges from animal life and produces itself in externality. At times, these two congeal in one and the same passage:

The process of self-preservation is the winning of self, self-satisfaction, the attainment of sentience. The plant's self is external to it however, so that it tends rather to be drawn out of itself as it strives towards it. Consequently, its return into itself is a perpetual egression, and vice versa. The plant multiplies itself in order to preserve itself.⁸⁷

Here the categories of thought are determined by the dominant thrust of the Hegelian project: the question concerns a self which is won in a process of self-preservation and return. Yet these terms are badly suited to the movements of plant life, for the striving of the plant is always beyond itself. If we were to insist—as Hegel here does—on interpreting this as a striving for a “self,” we would have to say that its self is external to itself, so that its striving is not really an attempt to win itself at all, but rather appears as a tendency to be drawn out of itself. Since there is nothing other than the plant responsible for this “being drawn,” we must say that the plant *is* this tendency: the being of the plant is growth as “perpetual egression.” For Hegel, this must be systematized as a deficiency. “If the plant broke off its relation to that external to it,” he speculates, “it would exist as a subjective being, and so establish its self-relatedness.”⁸⁸ The import of his analysis, however, is rather

⁸⁷ Hegel, 48.

⁸⁸ Hegel, 50.

that the plant appears as a kind of life for which the relation to the external is its self-relatedness, because the “self” in question is nothing but a particular activity of composition in excess of itself. When Hegel observes that the plant “develops outwards generally,” in distinction from the animal, and that its individuality is accomplished “through the perennial positing of a fresh individual,” we can hear in these interpretations not a dismissal of the plant on the basis of a zoological measure but rather a *fidelity* to the movement of growth in plants.

The problem for such a way of thinking is to establish a limit from which to understand the movement of life in the plant. If plants are understood in terms of growth, then the life of plants appears as a kind of “bad infinity,” endless proliferation without recuperation.⁸⁹ In its “continual multiplication of itself,” the plant lacks the “ideal unity” which would give it a properly determinate existence.⁹⁰ Hegel therefore situates the delimitation of plant life in the animal, which then gives shape to his zoological discourse on plants: the animal is the principle of the finitude of the plant.

At the same time, Hegel also offers an indication, however slight, of another possibility when he mentions the “magnetism” or “tremulation” that gives to the linear extension of the plant an *internal* rhythm and proportion. As I explain in the following chapter, Goethe—who, because he is a Spinozist, has a quite different relation to the problem of the limit—is able to more adequately develop this concept of an internal rhythm of life.

⁸⁹ Consider Jeffrey T. Nealon’s passing comment concerning the role of plants in Hegel’s thinking: “growth yes, emergence yes, but a kind of undifferentiated and uncontrolled growth that is finally anathema to the progress of spirit or law” (Nealon, *Plant Theory* 68).

⁹⁰ Hegel, *Hegel’s Aesthetics* 137. One might wonder about the interpretation of unity in question. Hegel does not, for example, reproach a flock of birds for having only “parts” rather than “members” and therefore failing to achieve “ideal unity,” for he rightly recognizes that the locus of unity is to be found elsewhere. If the essence of the plant is growth, then the locus of unity should be sought there, not among the organic detritus. This is precisely what Goethe does.

Hegel's botany is significant, then, for two reasons. First, it reveals an internal divergence in Hegel's thought concerning the duplicity of growth, which must be zoological in character by virtue of its place in the Hegelian system but becomes vegetal in character by virtue of Hegel's fidelity to the phenomenon of plants. This duplicity, in turn, reveals an equivocation in the crucial concept of life. In working out the logical concept of life that organizes the *Encyclopedia* (including the philosophy of nature), Hegel must depend upon a vegetal concept of life that does not answer to the reciprocal relation of whole and members that defines his concept of logical life. For this reason, vegetal life also requires an alternative theory of identity and difference than that which predominates in his philosophy (as I explain above). At the same time, it is precisely *because* plant life is not reducible to animal life that plants occupy their position in Hegel's thinking. In order to move from physics to zoology, the *Encyclopedia* requires a kind of life that is essentially non-zoological. Plants are the indispensable term that bridges the logic-physics series with the animal-spirit series in its very inability to be reduced to either series. Because of the centrality of these concepts—growth, life, identity, difference—to Hegel's philosophical project, their necessary vegetal deformation indicates the coordinates of a far-reaching “other side” of Hegelian philosophy that is immanent to its development.⁹¹

Second, Hegel's botany is significant insofar as it reveals something essential concerning plants. To Hegel's complaint that the confusion of growth, nutrition, and reproduction constitutes a difficulty for any study of vegetal life, we agree: it is precisely this coincidence, *contra* animal existence, that first establishes life in plants as a site of its own challenging study. Although he is unable to sustain such a study, Hegel's text brings to light the importance of *growth* as the essence of plant life. In contrast to the animal, for which growth is a partial and dependent process, the plant exhibits a growth process that is comprehensive in scope, encompassing all the distinctive activities of vegetal existence.

⁹¹ Rereading the whole Hegelian corpus from this perspective would be an exciting venture, but would fall far beyond the scope of this essay.

From one perspective, the indeterminate growth of plants appears monstrous: it pours forth without limit. In this respect, it differs from the animal, for which “maturity” designates the determination of “tame” growth which does not relate to external conditions and is subordinate to the organism understood as an integrated whole. After more careful consideration, however, it becomes evident that growth in plants is not *simply* infinite extension; rather, it possesses an internal rhythm or proportionality.

In this sense, the difficulty of thinking through plant life appears in Hegel’s text as a series of tensions: the tension between zoological and phytological discourse, the tension between preservation and productivity, and the tension between extension and arrest. Ultimately, the questions which Hegel raises and develops—almost in spite of himself—concern the fact that “the plant *transcends itself* by constant nodulation.”⁹² The next chapter turns to Goethe’s attempt to develop a more precise account of this power of self-transcendence in plants.⁹³

⁹² Hegel, *Philosophy of Nature*, 1970 92, emphasis added.

⁹³ Fig. 4: Parkinson, *Lepidium Bidentatum*, 1769; fig. 5: Parkinson, *Macrocystis Pyriferus*, 1769.



FIGURE 4. *Lepidium bidentatum*



FIGURE 5. *Macrocystis pyrifera*

CHAPTER IV

INTENSIFICATION AS LIMIT

But it can also happen, if will and grace are joined, that as I contemplate the tree
I am drawn into a relation, and the tree ceases to be an It. The power of
exclusiveness has seized me. This does not require me to forego any of the
modes of contemplation. There is nothing that I must not see in order to see,
and there is no knowledge that I must forget. Rather is everything, picture and
movement, species and instance, law and number included and inseparably
fused. Whatever belongs to the tree is included: its form and its mechanics, its
colors and its chemistry, its conversation with the elements and its conversation
with the stars—all this in its entirety. The tree is no impression, no play of my
imagination, no aspect of a mood; it confronts me bodily and has to deal with
me as I must deal with it—only differently. One should not try to dilute the
meaning of the relation: relation is reciprocity. Does the tree then have
consciousness, similar to our own? I have no experience of that. But thinking
that you have brought this off in your own case, must you again divide the
indivisible? What I encounter is neither the soul of a tree nor a dryad, but the
tree itself.

MARTIN BUBER

There are few works in the history of philosophy as attuned to the specificity of plant life as Goethe's botanical studies, particularly the *Attempt to Explain the Metamorphosis of Plants*.¹ According to Hegel, this text "marks the beginning of a rational conception of the nature of the plant, for it has forced attention away from a concern with mere details, to a recognition of the unity of a plant-life."² There is both an element of truth and one of falsehood in this praise: Goethe's approach is indeed unique by virtue of its attempt to develop a rational conception of "a plant-life," but this entails an appreciation—rather than depreciation—of detail. When Hegel dismisses the play of differences between the parts of

¹ Epigraph source: Buber, *I and Thou* 58-59.

² Hegel, *Philosophy of Nature*, 1970 54.

the plant as “merely a superficial metamorphosis,” he has interpreted “metamorphosis” in radically non-Goethean terms.³ Hegel summarizes the *Metamorphosis*:

Goethe sets out to show however, that in all these different parts of the plant there is a simple basic life which is self-contained and enduring, and that all its forms are nothing more than the exterior transformations of the identity of one and the same primary essence.⁴

It would be more in keeping with a Goethean spirit to say that the forms of the plant are “metamorphoses,” rather than exterior transformations of identity. For the poet-philosopher, the fundamental process of metamorphosis *is* the unity of plant-life, which manifests itself only in and through the details of its form and activity. In what Hegel passes over as a “simple phenomenon of contraction and dilation,” Goethe finds the essential rhythm at the heart of metamorphosis.⁵ What Hegel dismisses as “a fleeting breath of forms, which does not attain to qualitative and fundamental difference, but is merely a metamorphosis of an ideal nature within the material being of the plant” constitutes for Goethe the entire problematic of plant life.⁶ Nevertheless, Hegel understands the fundamental impetus of Goethe’s thought: what Goethe aims for—and what Hegel does not—is the understanding that there is a “simple basic life,” proper to the plant, which is found in its different parts, apart from any integration into a whole.

Like Hegel, Goethe observes that the distinction between growth and reproduction is unstable in the plant. The fact that modifying one and the same condition (such as the frequency of watering) can induce growth at one time and reproduction at another shows that the *force* expressed in either case is the same.⁷ For Goethe, however, this instability

³ Hegel, 45.

⁴ Hegel, 58-59.

⁵ Hegel, 53.

⁶ Hegel, 59.

⁷ Goethe, *Metamorphosis*, 2009 §131. Sections refer to the numbered paragraphs of the German text.

becomes the starting point for an inquiry into the specificity of vegetal life. After careful observation, he contends that the instability characterizes other distinctions regarding plant appearances. “Anyone who has paid even a little attention to plant growth,” he observes, “will readily see that certain external parts of the plant undergo frequent change and take on the shape of the adjacent parts—sometimes fully, sometimes more, and sometimes less.”⁸ A double flower is sometimes formed out of a single flower, for example, when petals develop in the place of stamens and anthers.⁹ For Goethe’s thinking, this means that there is an inner relationship between the various vital forms taken by the plant by virtue of which each can be seen as modalities of the other. Thus, in the same way that growth and reproduction can be viewed as modifications of one another, the external parts of the plant—leaves, petals, seeds, etc.—can be likewise viewed as the various manifestations of a basic organ. “The different plant parts with their apparent variety of form are nonetheless identical in their inner essence,” he summarizes.¹⁰

Goethe’s task, then, is to detail the nature of plant life such that its various forms can be understood as transformations of a common structure. He names the process whereby the various parts of the plant develop out of one another, producing one part through another and a variety of forms through the modification of a single organ, “the metamorphosis of plants” and proposes to undertake a study of the laws of that metamorphosis.¹¹ Whereas for Hegel “metamorphosis” named only the failure of the various parts of the plant to differentiate themselves in a hierarchy, it names for Goethe the entire process of plant growth/reproduction.

In this chapter, I first discuss Goethe’s Spinozist approach to understanding living things, the importance he places on plants, and his interpretation of vegetal life in terms of

⁸ Goethe, §1.

⁹ Goethe, §2.

¹⁰ Goethe, §60.

¹¹ Goethe, §§4-4.

a “primordial plant process” or *Urpflanze*. The second section explains Goethe’s emphasis on observation and understanding plants as phenomena. I then walk through his synopsis of the annual plant, which exhibits the metamorphic character of the plant. The fourth section develops the concept of metamorphic growth that Goethe takes to be the essence of plant life, highlighting both its dynamic striving (“intensification”) and its inner limit or boundary (“polarity”). I conclude by discussing three limitations of Goethe’s engagement with plant life: his fruitful but abortive conception of vegetal temporality, his disregard for the issue of nutrition, and his overemphasis on unity. These limitations prepare for the discussion of Nietzsche’s philosophy in Chapter V.

§4.1. Goethe’s Spinozism

Goethe’s work is a direct response to Linnæus, the father of modern taxonomy, and his debt to the great naturalist is evident: in addition to dealing explicitly with Linnæus’ theories, the *Metamorphosis* follows precisely the typographical organization into one hundred twenty-three numbered sections employed by the Swedish botanist. In Linnæus’ taxonomic method, the plant is defined and identified according to a logic of attribute and variation. The plant is understood as a collection of attributes (*e.g.*, the standard number of petals, the shape of the leaves, etc.) and the methodological challenge is to ascertain which attributes are taxonomically relevant to the constitution of the system of classification. The organs of the plant, then, are its identical determinates, and each species constitutes a fixed class within the system.¹² In the case of Linnæus’ system, the quantification of reproductive organs is particularly definitive. Although Goethe was initially enamored with Linnæus

¹² It should be noted, however, that contrary to his early proclamation, “*unitas in omni specie ordinem ducit*” (“the invariability of species is the condition for order”), Linnæus’ work on hybridization later brought him to view species as unfixed.

(“carrying the Swedish botanist’s text with him at all times like a Bible”¹³), the German philosopher came to view this system of classification as completely arbitrary in nature.

“I confess,” Goethe reflects, “that next to Shakespeare and Spinoza it was Linnæus who had the greatest effect on me precisely because he provoked my disagreement.”¹⁴ More important than his reaction against Linnæus, then, is his fascination with Spinoza’s *Ethics*, which he encounters just as he is beginning his studies of the life of plants, “in whose profound and detailed study no one encourages us as much as Spinoza.”¹⁵ In a letter written just before his departure for Italy, Goethe emphasizes what he found captivating about Spinoza’s philosophy:

I place stock in *seeing*, and when Spinoza says of *scientia intuitiva*: *Hoc cognoscendi genus procedit ab adaequata idea essentiae formalis quorundam Dei attributorum ad adaequatam cognitionem essentiae rerum*, those few words give me the courage to devote my whole life to the contemplation of things.¹⁶

Goethe’s attraction to Spinozist philosophy is based on the value the German places on “seeing” and the conviction that it is possible to “see” the essence of things.¹⁷ For Spinoza, there are three kinds of knowledge. The first kind comes from sense perception and concerns the ways bodies make impressions upon us. The second kind is a rational knowledge that moves by deduction and derivation. For example, learning about the three types of knowledge by following the course of definitions, axioms, and propositions laid out in Spinoza’s *Ethics* would itself be an example of the second type of knowledge. The

¹³ Amrine, “Goethean Intuitions,” 2011 37.

¹⁴ Quoted in Förster, *The Twenty-Five Years of Philosophy*, 2012 92. I do not pursue the question of Shakespeare’s influence.

¹⁵ Quoted in Förster, 93-94.

¹⁶ “This kind of cognition proceeds from the adequate idea of the formal essence of certain attributes of God to the adequate knowledge of the essence of things” (Spinoza, *Complete Works: Ethics*, II, Pr.40, Sch.2). Quoted in Förster, *The Twenty-Five Years of Philosophy*, 2012 94. Emphasis original.

¹⁷ For the development of this point, see page 66 and following, below.

third type of knowledge, however, is an intuitive, rational knowledge that proceeds *immediately* from essence to properties. Spinoza gives the mathematical example of someone who has not merely memorized tables of proportions (the first kind of knowledge) or followed Euclid's demonstrations concerning the laws of mean proportion (the second kind of knowledge) but rather when given a series of numbers such as "2, 3; 4, x" immediately grasps that the number "6" completes the proportion.¹⁸

While Spinoza largely confines himself to the realm of mathematics and geometry, Goethe is fascinated with the idea of a *scientia intuitiva* of the natural world.¹⁹ Spinoza's three types of knowledge are not strictly separate orders; rather, each finds its genesis in the previous kind.²⁰ Ultimately, for Spinoza, *scientia intuitiva* must begin in the first kind of knowledge—in the impression that things make upon one's senses and in the way one cultivates a receptivity to those impressions. This is the question which fascinates Goethe: granting that the goal of the *scientia intuitiva* is to proceed immediately from essence to property, how might one come to grasp the essence of a thing to begin with, particularly in the case of living things?²¹ It is in response to this question that he turns to plants: here, perhaps, in what appears as the simplest and easiest to study of living things, it may be possible to develop a genuinely scientific knowledge of nature.

Goethe's way of thinking is also genetic in a second sense, for the subject matter of his science is the *generation* of the plant. The *scientia intuitiva* is concerned with the coming-to-be of the organism, with its growth. Here, too, Goethe is inspired directly by

¹⁸ One is reminded of many stories of mathematical geniuses who were known for such immediate understanding. G.H. Hardy tells of visiting the sick Ramanujan in the hospital and remarking that the number of the taxicab—1729—seemed "rather a dull number." Ramanujan is said to have replied that it is a very interesting number, for it is the smallest expressible as the sum of two cubes in two different ways. See Hardy, *A Mathematician's Apology* 37.

¹⁹ Although Spinoza does not venture to address this question, he nevertheless declares it "a matter of little importance when it is a question of figures," but "a matter of prime importance when it is a question of physical and real beings." Spinoza, *Complete Works* 26 (TIE par. 95).

²⁰ I develop this point in the context of aesthetics in Kerr, "Spinoza," 2020.

²¹ See Amrine, "Goethean Intuitions," 2011 esp. 38.

Spinoza, who insists that a definition must explain the generative essence of things, rather than their properties only. To define a circle as a figure whose points are equidistant from the center is to merely traffic in properties; instead, the circle must be defined genetically, as the figure described by a line segment with one fixed and one mobile endpoint.²² But “genetic” here indicates an ontological, rather than chronological, priority. The second definition of a circle is not superior because it is how a geometer happened to produce this or that circle; rather, it is superior because it grasps and explains the dynamic essence of the circle (from which its properties can then be explicated). In the case of the organism, the task is to grasp the organism as *natura naturans* (“nature naturing”) rather than *natura naturata* (“nature natured”), and it is in this sense that Goethe’s method emphasizes *creation* and *progression*. He aims to understand the dynamic essence of things that can be observed in the steps and stages of its development. It is from this perspective that “the different plant parts with their apparent variety of forms are nonetheless identical in their inner essence.”²³

The task of Goethe’s project is therefore *not* merely to discern features common to various plant organs. Rather, it involves the more subtle and radical attempt to perceive the mobile *transitions* between the forms, the process of “repeating, recreating, in infinite variety” through which “nature produces one part through another, creating a great variety of forms.”²⁴ It is this process, Goethe stresses, that he means by the term, “*the metamorphosis of plants*.”²⁵ The botanical exemplars on which he relies are therefore “transitional forms” precisely in the sense that they are privileged moments in which the *transitions* take on form, manifesting themselves rather than remaining hidden.²⁶ The idea

²² Spinoza, *Complete Works* 25-26.

²³ Goethe, *Metamorphosis*, 2009 §60.

²⁴ Goethe, 2, §4.

²⁵ Goethe, §4 (emphasis original).

²⁶ Goethe, §58.

of “metamorphosis,” in other words, does not refer to the fact that various plant organs resemble one another. Rather, it signifies the transitional essence of the plant itself:

[My approach] forces me to consider all natural phenomena in a certain developmental sequence and attentively to follow the *transitions* forwards and backwards. For only in this way do I finally arrive at the living view of the whole from which a concept is formed that soon will merge with the idea along an ascending line.”²⁷

Beginning with (a) a sequence of forms, Goethe turns his attention to (b) the relation between these forms, which he interprets developmentally as part of a coherent impulse. This allows him to fix his attention on (c) the transitions between the forms and to generate (d) a *lebendige Übersicht* (“living view of the whole”) from which will emerge (e) a concept. This *lebendige Übersicht* is another name for the *Urpflanze*: not the Linnæan external representation of fixed features but a view of the thing which grasps it *as* a living whole. Only by coming to apprehend this transitional movement in which plant life consists, Goethe believes, could we achieve a knowledge of the essence on the basis of which a *scientia intuitiva* would be possible.

§4.2. Delicate Empiricism

Goethe’s relentless search for the archetypal origin therefore paradoxically implies a Spinozist mode of thinking, which rationally intuits the generative essence of the plant on the basis of a sensual education whose beginnings are always shrouded in the singular circumstances of perceptive experience.²⁸ Fittingly, then, it is through the observations he undertakes during his Italian journey (1786-1788)—just following his discovery of

²⁷ From “*Wolkengestalt nach Howard*,” quoted in Förster, *The Twenty-Five Years of Philosophy*, 2012 276 (emphasis original).

²⁸ For a related analysis of the relation between Hegel and Spinoza on the question of beginnings, see Macherey, *Hegel or Spinoza* 13-32.

Spinoza's *Ethics*—that he develops the idea of an *Urpflanze*, the primordial ancestor of all plants.²⁹ In 1786, he recounts that wandering amidst unfamiliar vegetation has dislodged his absorption with particular plants and given him the idea that “perhaps all plant forms can be derived from one plant.”³⁰ Whereas the Linnæan classification schema dealt with external characteristics, Goethe's incipient conception of plant life aims to move from the facts of *natura naturata* to the generative unity of *natura naturans*. In April 1787, he insists that his *Urpflanze* should be responsible not only for the genesis of the diversity of plant life but also for the genesis of recognition. “How else would I recognize this or that form as being a plant,” he asks, “if they were not all constructed according to one model?”³¹ The *Urpflanze* is therefore not only a biological ancestor of all existing plants but a principle of knowledge concerning the same: the philogenetic essence of plant life, a living vegetal ἀρχή (originary principle). By May 1787, however, Goethe has moved away from thinking of the *Urpflanze* as an actual plant. “The primordial plant is turning out to be the most marvelous creation in the world,” he muses, “and nature itself will envy me because of it.”³² Years later, in a letter to von Esenbeck, Goethe reflects that he “searched for the *Urpflanze*, unconscious of the fact that I was looking for the idea, the concept through which we can form a plant for ourselves.”³³ When Goethe reinterprets the *Urpflanze* as an idea, he remains concerned with primordality, “but less with a plant than a process,” as Mitchell explains. “He no longer seeks an *Urpflanze*, but an *Urprozesse*.”³⁴ It is during this time that Goethe shifts toward the foliar theory that characterizes his *Metamorphosis of Plants* and which inspires Hegel's *Encyclopedia*. “It had become apparent to me,” Goethe reflects

²⁹ On this point, I am indebted to Andrew Mitchell's excellent reconstruction of the trajectory of Goethe's thinking between 1786 and 1789. See Mitchell, “The Botany of Romanticism” 316-318.

³⁰ Goethe, *Italian Journey*, 1989 53-54.

³¹ Goethe, 214.

³² Goethe, 256.

³³ Quoted in Förster, “Goethe's Spinozism,” 2012 89.

³⁴ Mitchell, “The Botany of Romanticism” 317 (*sic erat scriptum*).

concerning this transition, “that in the plant organ we ordinarily call the leaf a true Proteus is concealed, who can hide and reveal himself in all formations. From top to bottom, a plant is all leaf.”³⁵ The following year, Goethe completes and publishes the *Metamorphosis*.

In order to approach vegetal life in terms of an *Urpflanze* process, Goethe suggests a philosophical method that stresses careful, continuous observation of the various stages of metamorphic development coupled with the practice of uniting those observations in the imagination. Fully convinced that disciplined observation is the primary mode of scientific inquiry, he often criticizes the typical methods of science for speculating beyond the phenomena.³⁶ This discipline, he believes, must be acquired through practice. During his Italian journeys, Goethe develops a technique to refine his vision in stages. The philosopher begins by sketching plants as he observes them. Once he is satisfied with the accuracy of his vision, he begins sketching plants *after* having observed them (for example, by turning away), then comparing his sketches to the plants. Gradually, the interval of time can be lengthened (by observing a plant one morning, for example, then sketching from memory the next morning). By comparing his sketches to the specimen at each stage of the process, he is able to slowly develop an ability to maintain a precise mental image of the phenomenon. Through this ability, it becomes possible to “observe” the various stages of plant development at the same time.³⁷ Then, beginning with a series of phenomena—a series of stem leaves that display different stages of metamorphic development, for example—he attends to the specificity of the phenomena and their proximate relations. The movement of seeing shifts both backwards and forwards between them meticulously, gradually coming to grasp the patterns and structures displayed in common. Finally, perception is able to move beyond the commonalities to the transitions between them:

³⁵ Goethe, *Italian Journey*, 1989 299.

³⁶ Brady, “The Idea in Nature” 84.

³⁷ Goethe’s practice is therefore related to the modern technology of time-lapse photography.

If I look at the created object, inquire into its creation, and follow this process back as far as I can, I will find a series of steps. Since these are not actually seen together before me, I must visualize them in my memory so that they form a certain ideal whole. At first I will tend to think in terms of steps, but nature leaves no gaps, and thus, in the end, I will have to see this progression of uninterrupted activity as a whole. I can do so by dissolving the particular without destroying the impression itself.³⁸

In this way, Goethe believes it possible to come slowly to the knowledge of an “ideal whole,” the point of convergence of the series of phenomena which is not identical with any particular member of the series. This is the archetypical, genetic process of the plant: the *Urpflanze*, or more generally the *Urphänomen*.

Goethe’s “delicate empiricism” is therefore a response to the specific nature of living creatures and their paradigmatic case, plants. It is because nature is essentially *natura naturans* that the philosopher must cultivate the ability to observe the *Urphänomen* in and through the procession of momentary forms. The aim of Goethe’s procedure is not to hypothesize a reality beyond what is observed, but to hone the practice of attentive observation until he is able to grasp the essential structures of living things. “Seek nothing behind the phenomena,” he admonishes: “they are themselves the theory.”³⁹ The theory—understood as the conceptual “view” of the subject matter—differs from the phenomenon only insofar as it gathers together the diverse moments of phenomenal appearance and grasps the *life* which shows itself throughout.

This is why the element of strict empirical observation is so crucial for Goethe. In fact, he used his influence to add a stipulation to the contract for the director of the Botanical Garden of Jena that required plants to be grown not where the environmental

³⁸ Goethe, *Scientific Studies*, 1988 75. See also Amrine, “Metamorphosis of the Scientist,” 1998 37.

³⁹ Quoted in Hensel, “Goethe, Science, and Sensory Experience” 75.

conditions are most suitable for them but instead where they must stand in order to systematically manifest inner relationship between the metamorphic variations of their organs.⁴⁰ The *lebendige Übersicht* is really a *seeing*; the *Urphänomen* is really a *phenomenon*. When Goethe once explained his idea to Schiller, the latter objected: “that is not an observation from experience; that is an idea.” “Then I may rejoice,” Goethe retorted, “that I have ideas without knowing it, and can see them with my own eyes.”⁴¹ The *Metamorphosis of Plants* is designed as a handbook for so learning to see. By highlighting examples in which the steps between forms almost disappear and become fluid, Goethe endeavors to educate our vision to see transition.⁴² The fruits of this approach are best exhibited by means of a digression through Goethe’s synopsis of the annual plant, which highlights the metamorphic relationship between the plants’s various parts and stages of growth.

§4.3. Synopsis of the Plant

Goethe begins his account of the plant with the embryological leaf structure, the cotyledon (see fig. 6).⁴³ In some plants, these appear largely unformed and having little resemblance to a leaf, while in other plants they are more obviously leaf-like in shape. As they develop, they take on clear foliar characteristics and become the first stem leaves.⁴⁴ The leaf stalk, too, can be viewed as itself a leaf form, and in some plants (such as those within the orange family) explicitly take the appearance of a small leaf.⁴⁵ The stem leaves undergo a process of differentiation, articulating growth along the ribs. The date palm, for example, begins with a simple leaf that is then divided along the ribs to form a complex leaf composed of

⁴⁰ I am grateful to Förster, *The Twenty-Five Years of Philosophy*, 2012 97 for this anecdote.

⁴¹ This anecdote is recounted in Brady, “The Idea in Nature” 96.

⁴² See the helpful description in Amrine, “Goethean Intuitions,” 2011 47.

⁴³ Fig. source: Goethe, *Metamorphosis*, 2009 7 (labels added).

⁴⁴ Goethe, §§12-14.

⁴⁵ Goethe, §§21-22.

many branches. In certain semi-aquatic plants, such as the water buttercup, the underwater leaves consist almost entirely of threadlike ribs, whereas the aerial leaves form a single, connected surface, and those leaves which develop near the surface of the water display a range of characteristics between those extremes.⁴⁶ Stem leaves continue to develop until they reach a point of maximal size and form, at which point the transition to flowering begins. As we approach the flower, “nature does not create a new organ,” Goethe says; “it merely gathers and modifies the organs we are already familiar with.”⁴⁷ In some plants this process occurs suddenly, but in those plants in which it occurs more slowly the leaves display a kind of regression, growing smaller and losing external divisions.⁴⁸ The stem, often extending itself rapidly above the last leaf node, grows a cluster of leaves. Instead of alternating, as is the typical case with stem leaves, this cluster gathers in a whorl around the stem (as do the cotyledons) and forms the calyx. In certain cases, these leaves are called *folia floralia* (flower leaves). In other cases, these transitional forms between leaf and petal are known as bracts, which may closely resemble stem leaves (e.g., in the hay rattle) or look much more like colorful petals (e.g., in the various bougainvillea).⁴⁹ Some calyxes consist of a whorl of leaves that grow together, fused into a single structure known as a single-leaf calyx; the sunflower, marigold, and many other composite flowers offer examples.

The formation of the corolla follows that of the calyx, which in many cases had introduced at its tip, edge, or other extremity the displays of color that are characteristic of most flowers. In the corolla, that process is given free rein. Whereas the sepals of the calyx involved a diminution of the leaf, the petals are usually much larger. Again, Goethe notes many transitional forms. The carnation and calliopsis, for example, often develop a double calyx, the exterior being green and the interior displaying the colors and structures of the

⁴⁶ Goethe, §§20, 25.

⁴⁷ Goethe, §§46-38.

⁴⁸ Goethe, §§28-29.

⁴⁹ Goethe, §§41-32, 34.

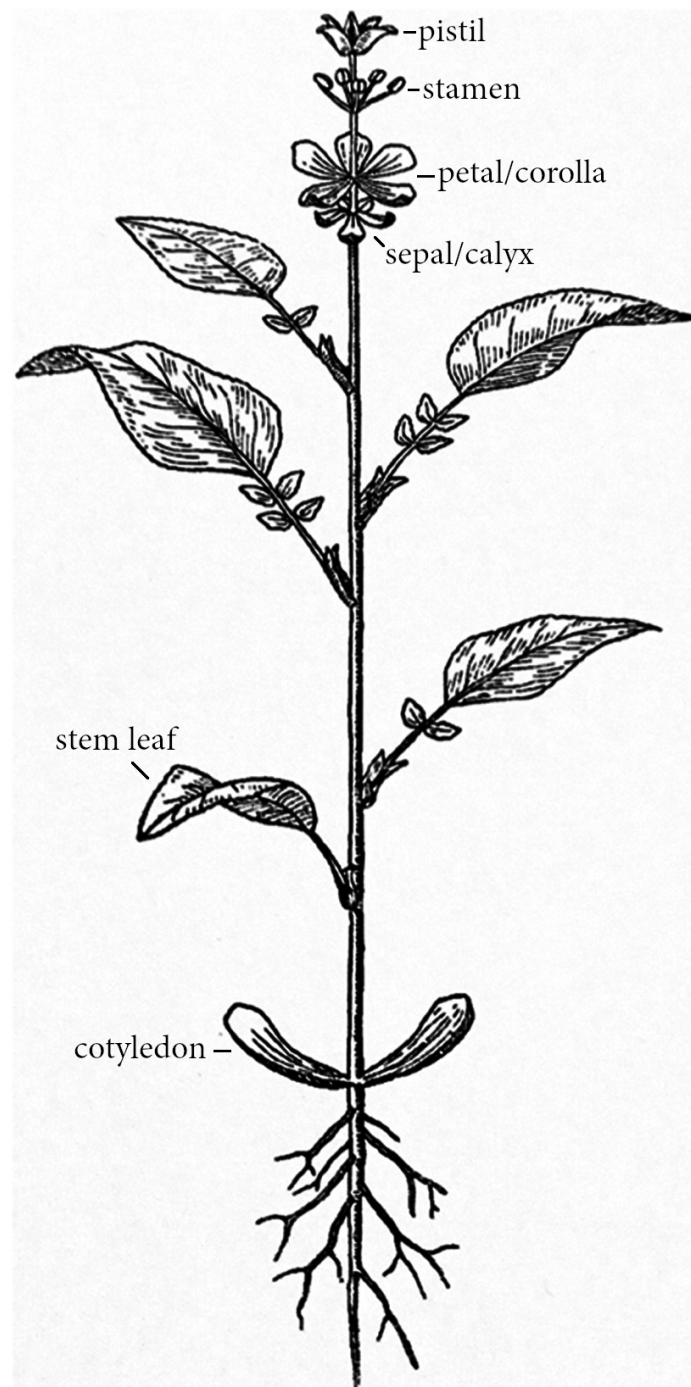


FIGURE 6. Annual Plant

true petals. In some plants, the transition is even more gradual, with stem leaves prior to the calyx beginning to shift colors toward the eventual flower tones. In other cases, the calyx is skipped entirely and stem leaves turn directly into petals. Tulips exhibit this phenomenon, and sometimes display leaves that are divided in two: half of the organ is green and is attached to the stem like a stem leaf, and half is colorful and forms part of the corolla.⁵⁰ Stamens are formed from petals in a similar way. The canna lily's petal, for example, merely contracts at its edge and an anther appears, the petal standing in for the more typical filament. The metamorphic relation between petals and stamens is particularly striking in doubled flowers, such as those of the rose and poppy.⁵¹ In other plants, nectaries provide an intermediate step between the two (although extrafloral nectaries sometimes appear, as well). These can closely resemble stamens (as in the genus *Parnassia*) or they can be quite similar to petals (as they are in the genus *Pentapetes*, where they alternate with stamens in a whorl, and in the various plants in which they form the petals of a secondary corolla). In some flowers, such as the columbine, nectaries form as depressions in the petals themselves. In papilionaceous flowers, such as the sweet pea, the petals gradually contract into nectaries and display the transitional forms.⁵² Goethe explains the female parts of the flower in many of the same ways and considers their metamorphosis closely related to that of the stamens. In the iris, the stigma takes the form of a flower leaf, and in the pitcher plant and crocus, it is composed of several leaves. The Persian buttercup gives an impressive example: in a movement of retrogressive metamorphosis, the styles and stigma change back into true petals to form a double flower.⁵³

⁵⁰ Goethe, §§40-44.

⁵¹ Goethe, §§46-48.

⁵² Goethe, §§51, 54-56, 58.

⁵³ Goethe, §§67, 69, 71-72.

Finally, Goethe considers fruits and seeds. Here, again, he endeavors to demonstrate through transitional forms the metamorphic relationships between the various parts, in this case the “fruitfulness hidden in a leaf.”⁵⁴ Thus in the European linden, small stalks will emerge from the midrib of stem leaves and form flowers and fruit, and in the butcher’s broom, the flower and fruit form directly at the center of the leaf. Ferns are perhaps most exemplary of the fruitfulness of stem leaves, each leaf developing spores in huge quantities.⁵⁵ That fruit structures can themselves be viewed as modified leaves is exhibited clearly in pods (single, folded leaves with edges grown together); husks and compound seed vessels show similar patterns. Conversely, in the flowers called pinks, fruit capsules are often retrogressively changed back into leaves and sometimes even transformed into true calyxes.⁵⁶ The seed transforms leaves into its outer covering, as is particularly visible in the winged seeds (such as the maple, elm, ash, etc.), and in less differentiated plants, the seed is indistinguishable from the nodal eyes from which all leaf structures emerge. In most cases, leaves eventually lose their recognizable form as they metamorphose to conform to the seed’s shape. With this final transition, Goethe has led us to the inner leaf structure of the cotyledon with which we began.⁵⁷

Through this analysis, Goethe details the successive sequences of metamorphic transformation that the plant undergoes in its process of development. He identifies a continuous movement from cotyledon through stem leaf and sepal to petal and beyond in such a way that it is impossible to say where one organ ends and another begins. On this basis, he endeavors to demonstrate that the variety of plant forms emerge through the modification of the single organ.

⁵⁴ Goethe, §76.

⁵⁵ Goethe, §§76-77.

⁵⁶ Goethe, §§78, 75.

⁵⁷ Goethe, §§82-83, 92.

By refusing to view the distinct articulation of various organs as fundamental to plant life and instead insisting upon the underlying unity of their apparent diversity, Goethe's foliar theory of plants undermines the taxonomic method exemplified by Linnæus. No longer can individual organic attributes (*e.g.*, a standard number of petals) or momentary organic articulations (*e.g.*, the reproductive organs) serve as the basis for an understanding of plant life. Rather, by understanding the vital activities and external parts of the plant as metamorphic variations, Goethe brings the dynamic dimension of plant life to the forefront of his analysis. What appears as distinct under instantaneous observation (*e.g.*, disparate organs) exhibits inner connections when observed diachronically. The life of plants is a procession of forms whose integrity resides in that procession itself; plant morphology must be understood in terms of its specific metamorphic temporality. As Goethe observes, "We have investigated the outer expression of the forces by which the plant gradually transforms one and the same organ, but without any pretense of uncovering the basic impulses behind the natural phenomena."⁵⁸ Interpreting vegetal existence as a continual process of self-transformation makes necessary an account of the underlying impetus of such transfigurations.

§4.4. Intensity and Limit

"The more we understand particular things, the more we understand God," Spinoza says.⁵⁹ Goethe agrees, convinced that the *Urphänomen* is to be found in the plants themselves, through a "delicate empiricism" that stresses rigorous observation. The task, in Goethe's own words, is to "pursue the phenomena all the way to their original sources, to the point at which they merely appear and are and where there is nothing left in them to explain."⁶⁰

⁵⁸ Goethe, §84.

⁵⁹ Spinoza, *Complete Works: Ethics*, V, Pr.24.

⁶⁰ Goethe, *Theory of Colours*, 1840 lviii. The translation follows Förster, *The Twenty-Five Years of Philosophy*, 2012 370.

What, then, is the specific essence of vegetal life which Goethe believes can be seen through a disciplined observation of the superficial metamorphoses of the parts of the plant?

If it is true that “from first to last, the plant is nothing but leaf,”⁶¹ this is because the term “leaf” has shifted to name the specific transitional essence of vegetal life, the characteristic mode or manner of growth. “We would obviously need a general term to describe this organ that metamorphosed into such a variety of forms, a term descriptive of the standard against which to compare the various manifestations of its form,” Goethe muses.⁶² In some sense, the choice is arbitrary: the stamen could be seen as a modified petal or the petal as a modified stamen, for example.⁶³ In experiential terms, however, the leaf appears a particularly suitable term for the “true Proteus who can hide or reveal himself in all vegetal forms.”⁶⁴ Indeed, Goethe sometimes refers not to the leaf as such but to the “fruitfulness hidden in a leaf.”⁶⁵ He instructs us, for example, to recognize the leaf in seed vessels, “regardless of their manifold formations.” In this context, the leaf is not the form, but is recognized regardless of the form; we are not surprised to find the leaf referred to as a “process” a few lines later.⁶⁶ The leaf is “masked” and hidden in the various forms of the plant (including leaves), Goethe claims, such that we must learn “how to follow it carefully through all its transitions”⁶⁷ in order to discern it:

Thus we have sought to follow as carefully as possible in the footsteps of nature. We have accompanied the outer form of the plant through all its transformations, from the seed to the formation of a new seed; we have investigated the outer expression of the forces by which the plant gradually

⁶¹ Goethe, *Italian Journey: 1786-1788*, 1970 366.

⁶² Goethe, *Metamorphosis*, 2009 §120.

⁶³ Goethe, §§120-121.

⁶⁴ Goethe, *Italian Journey: 1786-1788*, 1970 366. Quoted in Miller, “Introduction,” 2009 xvii.

⁶⁵ Goethe, *Metamorphosis*, 2009 §76.

⁶⁶ Goethe, §78.

⁶⁷ Goethe, §79.

transforms one and the same organ, but without any pretense of uncovering the basic impulses behind the natural phenomena.⁶⁸

By attending as carefully as possible to the transitions evident in the outer form of the plant, Goethe's inquiry seeks to discern something that is neither identical with those forms nor some "basic impulse" that would be behind and other than those forms. Instead, his inquiry attempts to bring into view something else: the transitioning which belongs to the plant as such, a force or process which adheres to the unfurling of vegetal life and is manifest in the outer modifications of this or that organ but belongs to the plant as to one and the same organ, the "pure leaf" which constitutes the movement of growth. As the synopsis of the annual plant shows, this force appears equally in those parts of the plant that are typically considered "reproductive" and those which are not. For Goethe (as for Hegel), "growth" does not name a different process than reproduction; rather, growth is already "a kind of reproduction." For this reason, "the power shown in gradual vegetative growth is closely related to the power suddenly displayed in major reproduction."⁶⁹ The leaf, then, names this movement of growth/reproduction in which the forms of the plant metamorphose.

Goethe's favorite examples of the metamorphosis of plants are the proliferous rose and carnation, two rare botanical phenomena. In the proliferous rose, the calyx and corolla appear as usual, but instead of forming the seed vessel in the center, the stem continues to grow, putting forth petals and sometimes anthers. Soon thorns reappear and stem leaves emerge, and rosebuds once again develop at the extremities of growth (fig. 7).⁷⁰ The proliferous carnation is similar: here the flower forms perfectly and the seed capsule develops, but then stalks appear from the sides of the corolla and four new flowers grow,

⁶⁸ Goethe, §84.

⁶⁹ Goethe, §113. See also §63 and §86. In §§94-102, for example, he alternates between the term "growth" and "reproduction" almost arbitrarily.

⁷⁰ Goethe, §103. Fig. source: Goethe, 94.

complete with fruit capsules.⁷¹ Although the growth process usually terminates at the flower in the formation of the seed, in these two examples the metamorphoses continue toward further developments, producing stems and stem leaves before transitioning again to the flower structures. These phenomena therefore vividly exhibit the proliferative element of growth and its indistinction from reproduction. To take a taxonomic approach—to number and classify the reproductive parts, for example—would here be to entirely miss the essentially prodigal *movement* of the plant as it surges forth:

Gaze on them as they grow, see how the plant
Burgeons by stages into flower and fruit, [...]
As nature welds her ring of ageless power,
Joining another cycle to the last,
Flinging the chain unto the end of time—
The whole reflected in each separate part.⁷²

The rose—already a heady flower, too be sure—becomes for Goethe intoxicating in its proliferative aspect. Here, he sees before his eyes the extravagance of plant growth and its impulse to self-transcendence.

At the same time, Goethe maintains, the extravagant proliferation of vegetal growth is not simply unbounded prodigality:

Turn now your eyes again, love, to the teeming
Profusion. See its bafflement dispelled.
Each plant heralds now the iron laws.⁷³

The same practice of delicate observation by which Goethe discerns the profusion of plant growth also delivers to his eye the “iron laws” that structure that growth. “Nature precludes

⁷¹ Goethe, §105.

⁷² Goethe, 1 (lines 9-10), 3 (lines 10-13).

⁷³ Goethe, 3, lines 14-16 (translation modified).

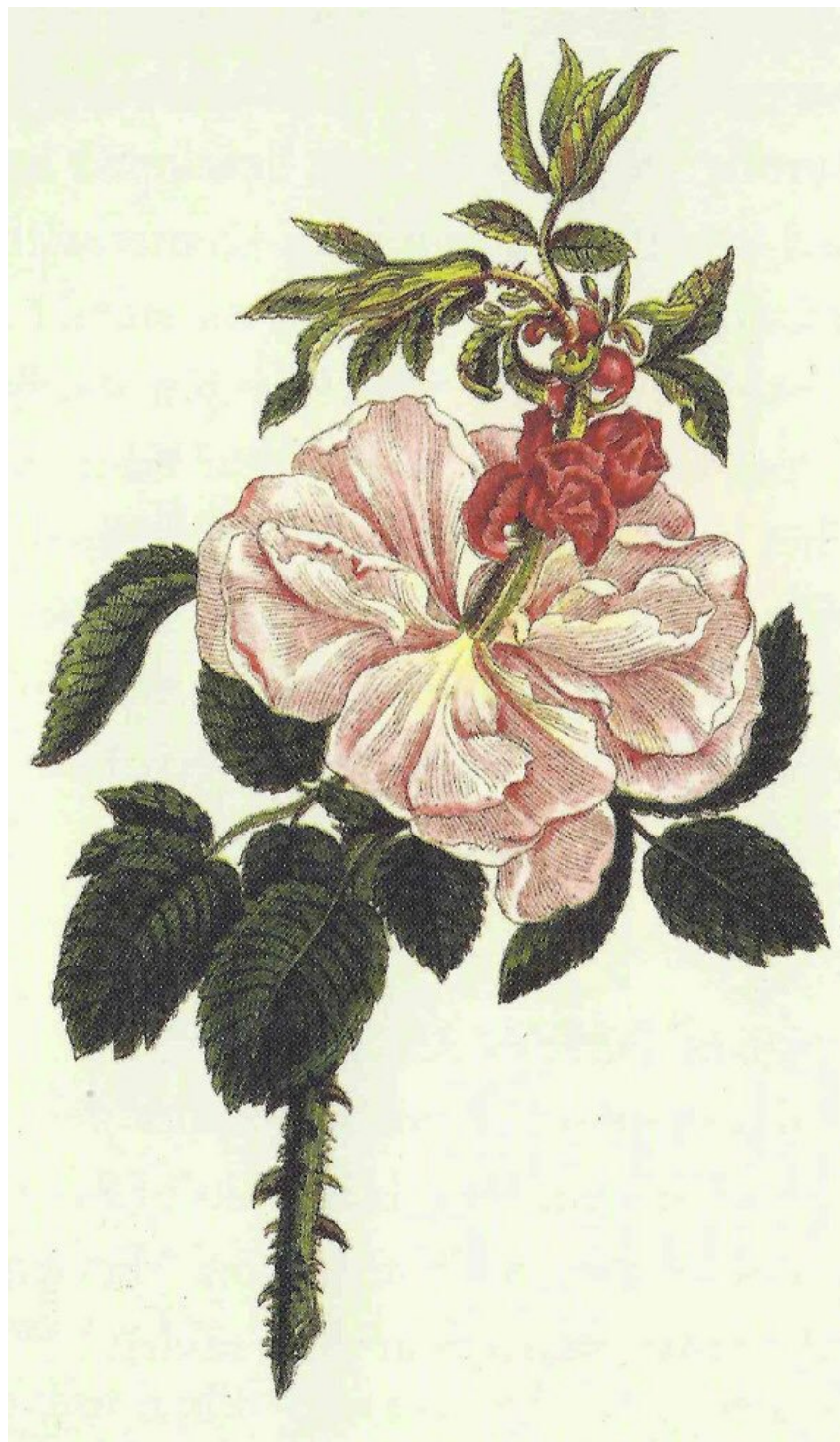


FIGURE 7. Proliferous Rose. Watercolor commissioned by Goethe.

the possibility of growth in endless stages,” he declares firmly.⁷⁴ As Joan Steigerwald has noted, Goethe’s position here arises from a concern for “how a boundary is set to nature’s structural range through the laws of metamorphosis,” since the permissible forms become infinite unless “opposed by a tendency to fixed, definite forms.”⁷⁵ In other words, since plant life evidently does not exhibit an indefinite array of forms, how can the tendency which limits and defines its fecundity be understood? Whereas Hegel attempts to situate the delimitation of plant growth in the subordination of parts to an ideal whole, however, Goethe’s “iron law” will not so betray the vegetal focus of his *Metamorphosis*.

According to Goethe, the process of plant life is governed by a movement of intensification, “a state of ever-striving ascent,” which is articulated according to a structure of polarity, “a state of constant attraction and repulsion.”⁷⁶ Intensification, understood as the mode of striving proper to plants, involves the rarification of sap and the growth of increasingly specialized and colorful forms. This intensive process is articulated according to two polarities. First, the plant develops according to its opposed gravitropic and heliotropic tendencies.⁷⁷ This distinction is coupled with a second: the polarity of expansion and contraction.⁷⁸ It is through the rhythmic interplay of these polarities that the various metamorphoses of the plant exhibit an intensive, striving movement, from the

⁷⁴ Goethe, §106.

⁷⁵ Steigerwald, “Goethe’s Morphology”, 299. For Steigerwald’s biographical analysis, this fits (or justifies) a broader pattern of psychological anxiety over the relation between discipline and chaos in Goethe’s art, science, and politics.

⁷⁶ Goethe, *Metamorphosis*, 2009 xix-xx. The quotation comes from a letter to Müller (May 24, 1828). Polarity is a universal principle of nature, exhibited in such varied manifestations as light/darkness, subject/object, left/right, and inhalation/exhalation (See Tantillo, *The Will to Create* 13, 18). The morphogenesis of plant living, articulated according to intensification and polarity, therefore expresses a basic element of nature as such.

⁷⁷ Goethe observes, in a note dated from 1819, that “the seed already contains the organs which will divide the plant into two parts: those with a decided tendency to grow into the earth, seeking moisture and darkness, and those with a need to grow up into the light and air.” Goethe, *Metamorphosis*, 2009 104n13.

⁷⁸ Goethe, §102.

relatively crude and simple forms of the stem leaves through the more articulated and colorful petals to the specialized reproductive organs.

It is the polarity of expansion and contraction, rather than that of gravitropism and heliotropism, that forms the focal point of Goethe's analysis. In more precise terms, he sees the complementary terms of the polarity as expansion on the one hand and contraction,⁷⁹ compaction, and anastomosis on the other.⁸⁰ In its restricted sense, contraction refers both to the concentrated form of certain plant formations (such as the calyx, stamen, and seed) and to the total comportment of the plant at its different stages of growth. "A vegetating plant expands to some extent, developing a stalk or stem; the intervals between nodes are usually perceptible, and its leaves spread out on all sides," Goethe explains. "A blossoming plant, on the other hand, shows a contraction of all its parts; the dimensions of length and breadth are canceled out, as it were; all its organs develop in a highly concentrated state and lie next to one another."⁸¹ In similar fashion, compaction refers to the gathering of organs in certain characteristic proportions around a center (such as the rose's habit of gathering petals in multiples of five).⁸² Finally anastomosis refers to the recombination of parts of the plant that had grown apart, such as when certain divergent leaf veins grow together again or the specialized male and female organs, the filaments and anthers, are each able to undergo physical anastomosis and fuse together again.⁸³ Goethe also emphasizes the properly creative anastomosis carried out by the sexual organs through the production of the fruit and seed. In all three cases—contraction, compaction, and anastomosis—the expansive element of growth finds a check and counterpart. Its elements taken together, this polarity constitutes "the life of nature; this is the eternal systole and

⁷⁹ Goethe uses "contraction" in two ways: first, as one of three moments alongside compaction and anastomosis; second, as a term for all three of these moments in contrast to expansion.

⁸⁰ Goethe, *Metamorphosis*, 2009 §102.

⁸¹ Goethe, §114.

⁸² Goethe, §115.

⁸³ Goethe, §66.

diastole, the eternal collapsion and expansion, the inspiration and expiration of the world.”⁸⁴ By virtue of this structure of polarity, intensification achieves its most complex, creative, and unique forms. In the life of the plant, expansion and contraction occurs in six primary stages: stem (expansion), calyx (contraction), leaves (expansion), reproductive parts (contraction), fruit (expansion), and seed (contraction).⁸⁵

§4.5. Conclusion

But *what* exactly is expanding and contracting, according to Goethe? Here, we reach the limit of his published work, for he leaves no explicit discussion of this point. Nevertheless, there are sufficient indications in his corpus to continue his inquiry. In order to approach the question, we must clarify three points. First, it is not any particular part of the plant that expands and contracts. For Goethe, the plant does not consist in its parts; rather, his philosophical botany focuses on the living, transitional movement that constitutes the essence of the vegetal. Second, although the structures of polarity offer a limit to the metamorphic growth of the plant, this polarity is nevertheless not something *other* than or external to that dynamic essence itself. The “iron laws” of plant morphology do not constitute a theory of something that lies “behind” the plant; rather, they are found *within* the plant’s own movements. Finally, the subject of expansion and contraction cannot be identified with any single aspect of the plant’s dynamic unfurling.⁸⁶ This is because the determination that defines the movement of growth belongs neither to one side of the

⁸⁴ Goethe, *Theory of Colours*, 1840 294 (§739).

⁸⁵ Goethe, *Metamorphosis*, 2009 §73.

⁸⁶ Here Frederick Amrine makes an instructive misstep by interpreting anastomosis as the most ontologically fundamental aspect of plant life. He rightly stresses the importance for Goethe of anastomosis, explaining that Goethe sees there “enacted, displayed synthesis, *natura naturans* made visible” (Amrine, “Goethean Intuitions,” 2011 48). But while it is true that Goethe privileges anastomosis, he does so for primarily *methodological* reasons: anastomosis is a moment of extreme fluidity when the usual “steps” between the various plant forms no longer constitutes a barrier to observation of the transitions. For Goethe, *contra* Amrine, *natura naturans*—the leaf, the power of growth—could never be identified with a single element of the polarity between expansion and contraction.

polarity nor yet to both, but rather to the difference between them. It is the *transitions between* expansion and contraction, their rhythmic oscillation, that constitutes the determinate character of growth in plants. Furthermore, because polarity is a determination *of* intensification, the essence of plant life cannot be simply identified with polarity (*viz.*, the transitional difference between expansion and contraction), either. Rather, the limit (polarity) is not something other than the striving it delimits; rather, the limit belongs to the movement of that striving (intensification).

Goethe admits that his ideas concerning intensification and polarity are imprecise. “In the progressive modification of the parts of the plant, one single force is at work which can only improperly be called expansion and contraction,” he suggests. “*The force contracts, expands, develops, transforms, connects, separates.*”⁸⁷ The impropriety of the term “expansion and contraction” has its counterpart in the impropriety of the term “leaf” for the same force. The difficulty, in other words, consists in the polyvalent essence of vegetal life, in which a single force appears as nothing other than its plural activities. In my view, this problem marks the limitation of Goethe’s philosophical botany. Although his conception of unity is far more appropriate to the occurrence of vegetal life than is Hegel’s, it nevertheless prevents him from adequately accounting for the multiplicitous character of the plant. More precisely, Goethe’s emphasis on unity prevents him from recognizing that the vital import of his analysis occurs in a different register than that defined by the relation of unity and multiplicity on which he remains focused.⁸⁸ “For the present, however,” he instructs his reader, “we must be satisfied with learning to relate these manifestations both forward and backward.”⁸⁹

⁸⁷ Quoted in Förster, *The Twenty-Five Years of Philosophy*, 2012 273n13 (emphasis added).

⁸⁸ See also page 84.

⁸⁹ Goethe, *Metamorphosis*, 2009 §120.

Both forward and backward—with this phrase, so often repeated in his botanical writings,⁹⁰ Goethe indicates the implicit importance of temporality to his thinking. To understand *what* plants are means to understand *how* they are. Given the metamorphosis of plants, however, this temporality cannot be simply linear. Although this fact has led some commentators to suggest that Goethe's *Urphänomen* is non-temporal,⁹¹ Goethe himself asserts that the dynamic essence of plant life consists in a confluence of successive intensification (vegetative growth) and simultaneous intensification (flowering, fruiting).⁹² Plant growth does not “progress” (in a strong sense) from one form to another; rather, it oscillates around rhythmic expansions and contractions. These oscillations mark an intensification: not a directional ascent in the life of the plant, but a primordial restlessness or striving by which the plant continually outstrips itself from form to form. Let us return to the examples of the proliferative rose and carnation: from the midst of the exquisitely unfurled blossom the stem emerges once more, putting forth thorns and stem leaves and recapitulating the development of the flower a second time. Contrary to the way Goethe sometimes speaks of intensification, this prodigal reassertion of the stem and leaves is not a “refinement” or “purification” of the blossom. We might say that here Goethe offers a self-corrective, a counter to his tendency to speak of the ascendance of the plant to its blossoming apex: in the end, intensification refers not to a linear progression but rather to a rhythmic restlessness, not directional ascent but bivalent force surpassing itself “both forward and backward.”

Here we might recall Hegel's description of plant life as a “tremulation of vitality within itself” and a “restlessness of time.”⁹³ Through his more rigorous engagement with plants as phenomena, Goethe is able to go further than Hegel, offering the first intimations

⁹⁰ See Amrine, “Goethean Intuitions,” 2011 44ff.

⁹¹ See for example Amrine, 44-46.

⁹² Goethe, *Metamorphosis*, 2009 §114.

⁹³ See page 50.

of a specifically vegetal form of temporality: neither linear nor cyclical but rather intensive; essentially plural, yet rhythmically coherent.⁹⁴ Like Hegel's, however, Goethe's incipient concept of vegetal temporality remains undeveloped. The attempt to adequately conceive the temporal unity of simultaneous and successive metamorphic development, he says, "seems to drive us to a kind of madness."⁹⁵ Goethe recognized this limitation, ultimately declaring his treatment on plants a failure; he abandoned his second attempt after writing the introduction. In the end, his carefully cultivated habits of observation were unable to grant him the vision for which he searched: to *see* the temporal difference that holds together the polarities which belong to and delimit the intensive movements of the metamorphosis of plants.

Discussing the Spinozist legacy in Goethe's botanical thinking, Hans Jonas offers an instructive analogy: just as the permanence of a flame consists only in a process that is being continually reconstituted with different materials, so the identity of the plant must be conceived as the continuity of process across time, which is signified by the *conatus* or persistent striving that belongs to each plant.⁹⁶ The analogy emphasizes both the temporal character of the plant and its intensive, striving activity. However, the analogy also betrays a fundamental limitation of Goethe's thinking.⁹⁷ Goethe—like Spinoza before him—is a decidedly *optical* thinker, but his stress on vision also entails a blind spot.⁹⁸ As he carefully catalogs and explains the various visible forms of the plant, Goethe appears persistently heedless to the invisible phenomenon of *nutrition*. Despite occasional comments about the

⁹⁴ This sense of vegetal temporality remains an important theme throughout this essay, as I indicate most fully in the conclusion.

⁹⁵ Quoted in Förster, *The Twenty-Five Years of Philosophy*, 2012 258.

⁹⁶ Jonas, "Spinoza and the Theory of Organism" 47.

⁹⁷ As we will see in Chapter VII, Jonas is much closer to Aristotle on this point than he is to Goethe. It is no coincidence that Aristotle, too, employs the analogy of a flame in his discussion of plants.

⁹⁸ For Goethe, Spinoza's third kind of knowledge is a *visual* knowledge—a point he did not take metaphorically. This "optocentrism" (cf. Lange, "Goethe and Spinoza," 2011 22-23), evident throughout the *Metamorphosis*, is also poignantly reflected in his second scientific project, the *Theory of Colors*.

movement of sap through the plant or the effects of watering on the development of the flowers, the idea that growth is fundamentally nutritive—that to be conceived adequately, plant life must be conceived metabolically—does not occur to the philosopher. As later chapters of this essay show, this is a crucial omission.⁹⁹

This limitation is related to another: perhaps his talk of “iron laws” overstates his point, but there is nevertheless an element of Goethe’s thinking that wants to pass away from the plant at precisely the crucial moment, taking refuge in a “law” which would belong to “nature.” While he abandons the unity of substance and the subordination of parts to the whole which characterizes Hegel’s account in favor of an *Urphänomen* understood as a metamorphic process, there remains a tendency to interpret this process as something self-identical.¹⁰⁰ Goethe places much more emphasis on the structures of polarity in plant life, for example, than on the profligate striving that he names under the term “intensification” (and which I discuss in terms of vegetal ὑβρις).

At the same time, Goethe is aware of these limitations. Goethe’s enduring sensitivity to plant life is due in large part to his dogged insistence “that my thinking is not separate from objects; that the elements of the object, the perceptions of the object, flow into my thinking and are fully permeated by it; that my perception itself is a thinking, and my thinking is a perception.”¹⁰¹ In other words, the achievements of Goethe’s botanical philosophy can be credited to his tenacious absorption in vegetal life as a phenomenon. Through his valorization of the proliferous rose and carnation, for example, he resists his countervailing tendency to think of intensification as progression and thereby subordinate it to an ideal unity. “No living thing is a single individual, but rather a plurality,” he reminds himself on one occasion. Even when a plant “appears to us as an individual, it still

⁹⁹ See especially chapters V and VII.

¹⁰⁰ This is a tendency that Hegel attributes to Spinoza’s obsession with light. See Hegel, *Lectures on the History of Philosophy*, 1995 253.

¹⁰¹ Goethe, *Scientific Studies*, 1988 36.

remains a collection of living, self-sufficient beings” which only in “their idea, their basic tendency, are identical.”¹⁰² This struggle over the question of unity therefore remains an unresolved subtext throughout the *Metamorphosis*.

Ultimately, by refusing the distinct articulation of various organs as fundamental to plant life, Goethe’s foliar theory sets itself the task of tracing the developments and modifications of foliar organisms in order to discover the structure of their transformations. To the extent that the plant is metamorphic, vegetal existence must be thought from the standpoint of *growth*, conceived in terms of the dynamic essence of plant living. Seeking “nothing behind the phenomena,” one must attend to the hidden transitions between the various morphological configurations of the plant, discerning the foliar movement that gives birth to the momentary forms. The metamorphosis of plants then appears as an intensive striving or *force* which is always exceeding itself. This movement of growth is “eternally creating new forms with an unstoppable and prodigious fecundity.”¹⁰³ And yet, this creativity is not boundless but rather determinate, articulated according to a rhythmic, temporal interplay of expansion and contraction. With this thought, Goethe writes in a letter from his travels in Italy, “I believe I have come very close to the truth about the *how* of the organism.”¹⁰⁴

In the next chapter, this Goethean spirit finds its precise counterpart in Nietzsche, for whom the growth of plants consists in a *nutritive multiplicity* of force.¹⁰⁵

¹⁰² Quoted in Förster, *The Twenty-Five Years of Philosophy*, 2012 274n15.

¹⁰³ Lange, “Goethe and Spinoza,” 2011 23. On this theme, see Tantillo, *The Will to Create*.

¹⁰⁴ Goethe, *Italian Journey: 1786-1788*, 1970 379 (emphasis added).

¹⁰⁵ Fig. 8: Parkinson, *Aechmea*, n.d.; fig. 9: Parkinson, *Barringtonia Asiatica*, n.d.



FIGURE 8. *Aechmea*



FIGURE 9. *Barringtonia asiatica*

Part II

CHAPTER V

FORCE AND "YBPIΣ"

And this secret life itself spoke to me: "Behold," it said, "I am that which must always overcome itself."

FRIEDRICH NIETZSCHE

Life . . . that dark, driving power that insatiably thirsts for itself.

FRIEDRICH NIETZSCHE

As Nietzsche's late thinking turns toward questions concerning life, he becomes increasingly captivated by plants.¹ Unlike Hegel and Goethe, he does not pursue botany as a philosophical pursuit in its own right. Like them, however, he sees in vegetal life an exemplary case of the activities which characterize life as such. For Nietzsche—as for the other figures in this study—the plant stands at the origin of the inquiry concerning living creatures, including human beings. As early as *Beyond Good and Evil*, Nietzsche christens "man" a type of plant (an appellation he repeats on more than one occasion in his notebooks²) when indicating the extent to which the human "life will" involves an "unconditional power will."³ Against any temptation to interpret this "power will"—later

¹ Epigraph sources: Nietzsche, *Zarathustra*, 2006 89; Nietzsche, *Nietzsche*, 1997 76.

² See, e.g., Nietzsche, *Notebooks*, 2003 34[74], 37[8]. I make use of the standard translations whenever possible, especially the recent series from *Cambridge Texts in the History of Philosophy*. Where the translations are modified, it is noted in the apparatus. I have consulted the Digital Critical Edition of Nietzsche's Works and Letters (*Digitale Kritische Gesamtausgabe Werke und Briefe*), or eKGWB, edited by Paolo D'Iorio (2009–) and available at www.nietzschesource.org/eKGWB. For unpublished notes that are not included in the Cambridge editions, I refer to the Digital Critical Edition directly according to the standard convention (e.g., "eKGWB/NF-1876 23[9]"). For those fragments included in Kaufman's classic collection, *The Will to Power*, I often take recourse to his translation and cite accordingly. Throughout, I use standard section numbers (and sub-section numbers) when applicable.

³ Nietzsche, *Beyond Good and Evil*, 2001 §44.

called a “will to power”⁴—anthropocentrically, Nietzsche insists on an identification between the will to power and life: “Only where life is, is there also will; but not will to life, instead—thus I teach you—will to power!”⁵ He does not conceive of this life as specifically human; rather, rejecting any “cardinal distinction” between humans, animals, and plants, Nietzsche insists upon that vegetal element of life that is common to all three.⁶ It is therefore by virtue of identifying humans with plants that Nietzsche understands the will to power as constitutive of human existence.⁷ But *why* should the will to power—“the innermost essence of being,” in Nietzsche’s thinking⁸—be conceived in vegetal terms? In the life of plants, Nietzsche sees most vividly what he also takes to be true of other living creatures.⁹ In humans and other animals, a panoply of drives and functions must be traced

⁴ The reception of Nietzsche’s late doctrine of the “will to power” has been exceptionally varied. To name only a few examples: Walter Kaufmann argues for the primacy of self-control in the interpretation of the will to power; John Richardson draws a distinction between “mastery” and “tyranny,” emphasizing the former; Maudemarie Clark reinterprets power as capacity and potential; Bernard Reginster sees the will to power as a second-order desire to overcome resistance in the pursuit of first-order desires; Gregory Moore sees in Nietzsche’s doctrine a bald repetition of 19th century biologism and eugenics; and Karl Löwith has simply pronounced Nietzsche’s thinking on this point altogether superfluous. See Kaufmann, *Nietzsche*; Richardson, *Nietzsche’s System*; Clark, *Nietzsche on Truth and Philosophy*; Reginster, *Affirmation of Life*; Moore, *Nietzsche, Biology and Metaphor*; Löwith, *Nietzsche’s Philosophy of the Eternal Recurrence of the Same*. It should be no surprise that such a far-reaching and multifaceted aspect of Nietzsche’s text has invited a rich panoply of readings. Taken as a whole, however, the literature ignores what might appear a minor detail: the will to power is a *vegetal* force in Nietzsche’s thinking. While a reconstruction of Nietzsche’s doctrine would take this study far afield, this section is devoted to extracting Nietzsche’s conception of the vegetal through a consideration of the specifically vegetal aspect of the will to power. For two excellent (though somewhat different) interpretations of the will to power, see McNeill, “The Secret of Life,” 2013 and Deleuze, *Nietzsche and Philosophy*, 1983 (esp. 39–72).

⁵ Nietzsche, *Zarathustra*, 2006. II, 12. Compare: “life, as the form of being that is best known to us, is specifically a will to the accumulation of force: this is the lever of all the processes of life,” for life “is essentially a striving for more power: striving is nothing other than striving for power” (Nietzsche, *Notebooks*, 2003 14[82]); “life is precisely will to power,” which “is just the will of life” (Nietzsche, *Beyond Good and Evil*, 2001 §259); “The will to power as *life*” (Nietzsche, *Notebooks*, 2003 14[174]). In these quotations and throughout this chapter, emphasis is original unless otherwise noted.

⁶ Nietzsche, *Nietzsche*, 1997 112; cf. Nietzsche, *Zarathustra*, 2006. I, 1[3].

⁷ E.g., “great question: where the plant called ‘man’ has grown most magnificently up to now” (Nietzsche, *Notebooks*, 2003 34[74]; see also 37[8]).

⁸ Nietzsche, 14[82]. Translation modified.

⁹ On the extent to which Nietzsche’s philosophy in this respect constitutes a “phenomenology,” see McNeill, “The Secret of Life,” 2013.

back to the originary will to power; in the plant, the will to power remains more evidently dominant.¹⁰

Like Goethe, Nietzsche sees in vegetal life a constitutive movement of striving, but he specifies the character of this striving differently. “Life,” in his view, “is specifically a will to the accumulation of force” which “strives after a maximal feeling of power.”¹¹ While this movement involves ascending stages of increasing complexity, the intensification that belongs to plant life is for Nietzsche most fundamentally a process of the maximization of force: “essentially a striving for more power.”¹² Nietzsche therefore recognizes what Goethe identifies as an intensive movement toward greater complexity, but he views this as a consequence of the essential tendency toward the increase in power.

In this chapter, I trace the vegetal aspects of Nietzsche’s doctrine of the will to power and its connection to his much earlier writings on the Greeks. In the first section, I highlight three aspects of Nietzsche’s account of the will to power that I interpret as central to his understanding of vegetality: (1) it is opposed to any notion of self-preservation, (2) it is a modality of growth, and (3) it reveals life as a multiplicity. I also raise the issue of unity: what is the sense of “self” that must be operative in Nietzsche’s theory of “self-overcoming?” Turning next toward Nietzsche’s earlier writings, I suggest that his later concept of the will to power elaborates a concept of *ὑβρις* that Nietzsche develops in his early interpretation of the Greeks. The second section of the chapter involves a survey of contemporary and ancient understandings of *ὑβρις*, especially in relation to vegetal life, and therefore begins an explicit discussion of the concept of *ὑβρις* that I introduce in earlier chapters. In terms of the broader project of the essay, this chapter marks a transition

¹⁰ Nietzsche, *Notebooks*, 2003 36[31].

¹¹ Nietzsche, *Will to Power*, 1968 §689. For a discussion of the anthropomorphic character of this language, see page 93.

¹² Nietzsche, §689.

from the Hegelian and Goethean preoccupation with the relation between unity and difference to the Greek focus on questions of growth and limit.

§5.1. The Will to Flower

§5.1.1. *Against Preservation*

For Nietzsche, life does not aim at preservation. Whether it comes in the guise of a Darwinian obsession with survival or the complacency of an utilitarian self-satisfaction, he rejects the preservationist conception that reduces the activity of living to self-coincident identity. Living things do not primarily seek to maintain themselves; the activities of life do not surge forth in order to return to themselves. Rather, life is an activity which strives to become something *more*. “Nothing wants to preserve itself,” Nietzsche declares emphatically; “everything is to be added up and accumulated.”¹³ As evidence for this perspective, he turns to the manifest prodigality of growth in plants. “For what do the trees in a jungle fight each other?” he asks. “For *power*.”¹⁴ The dense cacophony of vegetal growth exhibits the non-preservative character of the activity of life. From this standpoint, an orientation toward self-preservation appears as “a sign of distress, of a limitation of the truly basic life-instinct, which aims at *the expansion of power* and in so doing often enough risks and sacrifices self-preservation.”¹⁵ The gardener who thins and props up the branches of fruit trees, for example, knows this lesson well: left to its own devices, the tree will pour forth such an abundance of growth that the branches, unable to bear their own weight, will break off and die. Thus, “where there is perishing and the falling of leaves, behold, there life sacrifices itself—for the sake of power!”¹⁶

¹³ Nietzsche, *Notebooks*, 2003 14[82]. Compare eKGWB/NF-1876 23[9]: “Why assume an *instinct for self-preservation* at all?”

¹⁴ Nietzsche, 1[111].

¹⁵ Nietzsche, *Gay Science*, 2001 §349. The context here is human beings.

¹⁶ Nietzsche, *Zarathustra*, 2006 89.

In more precise terms, Nietzsche rejects the idea that there is any “self” to be preserved. Life is an activity whose existence is only its manner of occurrence: Nietzsche wants to understand “processes as ‘beings,’” refusing to posit a substratum that bears up the activities we ordinarily attribute to actors.¹⁷ He affirms only the deed, rejecting the mythology of the “doer” behind the deed. Upon observing a flash of lightning, he suggests in the *Genealogy*, it would be a mistake to posit a “doer” (lightning) that does a deed (flashes). Rather, what we call “lightning” is in truth nothing other than the flashing. The error can be generalized: “There is no ‘being’ behind the deed, its effect and what becomes of it; ‘the doer’ is invented as an afterthought,— the doing is everything,” he concludes.¹⁸ For this reason, the “will” that appears in the “will to power” should not be understood in a substantive sense, as though there were first an agent with a faculty of will that then affirmed power as the object of her will. We must be cautious about Nietzsche’s frequent recourse to the vocabulary of subjectivity, for it would be a great mistake to understand the invocation of the “will to power,” “feeling of power,” “striving for more power,” and the like as indications of a humanistic or subjective interpretation of life.¹⁹ “But *who* feels pleasure? But *who* wills power?” Nietzsche asks. “Absurd question, if *the essence is itself* will to power and thus feeling pleasure and unpleasure.”²⁰ “Will to power,” “pleasure,” and “unpleasure” are here radically non-anthropocentric concepts, much closer to the domain of physics than that of subject psychology. Nietzsche explains the motivation for his terminology by contrasting it with the more typical term “force”:

The victorious concept ‘force,’ by means of which our physicists have created
God and the world, still needs to be completed: an inner will must be ascribed

¹⁷ Nietzsche, *Notebooks*, 2003 36[21].

¹⁸ Nietzsche, *Genealogy*, 2006. First Essay, §13.

¹⁹ For a lucid and detailed exposition of this point, see Deleuze, *Nietzsche and Philosophy*, 1983 chapter 2, to which I am indebted.

²⁰ Nietzsche, *Notebooks*, 2003 14[80] (final emphasis added).

to it, which I designate as ‘will to power,’ i.e., as an insatiable desire to manifest power; or as the employment and exercise of power, as a creative drive, etc.

Physicists cannot eradicate ‘action at a distance’ from their principles; nor can they eradicate a repellent force (or an attracting one). There is nothing for it: one is obliged to understand all motion, all ‘appearances,’ all ‘laws,’ only as symptoms of an inner event.²¹

It is therefore against the mechanistic interpretation of the world implied in the concept of “force” that Nietzsche opposes the concept of “will” and its affective correlates (repellent and attractive forces). “Will” and “striving” name the *internal* genesis of what the concept of force understands only as an external quantity.²² Likewise, the “feeling of power” indicates not a subjective experience but rather the simple affectivity which belongs to this internal element.²³ Ultimately, the “will to power” indicates only the manner in which life—understood as a process, a “doing”—occurs.²⁴

²¹ Nietzsche, *Will to Power*, 1968 §619.

²² “This is what the will to power is: the genealogical element of force, both differential and genetic. *The will to power is the element from which derive both the quantitative difference of related forces and the quality that devolves into each force in this relation.* The will to power here reveals its nature as the principle of the synthesis of forces. [...] We should not be surprised by the word ‘will’: *which one* apart from the will is capable of serving as the principle of a synthesis of forces by determining the relation of force with forces? [...] The will to power is thus added to force, but as the differential and genetic element, as the internal element of its production. It is in no way anthropomorphic” (Deleuze, *Nietzsche and Philosophy*, 1983 50-51).

²³ “The relationship between forces in each case is determined to the extent that each force is *affected* by other, inferior or superior, forces. It follows that will to power is manifested as a capacity for being affected. This capacity is not an abstract possibility, it is necessarily fulfilled and actualized at each moment by the other forces to which a given force relates. [...] The capacity for being affected is not necessarily a passivity but an *affectivity*, a sensibility, a sensation. It is in this sense that Nietzsche, even before elaborating the concept of the will to power and giving it its full significance, was already speaking of a *feeling of power*. Before treating power as a matter of will he treated it as a matter of feeling and sensibility. [...] This is why Nietzsche always says that the will to power is ‘the primitive affective form’ from which all other feelings derive (VP II 42)” (Deleuze, 62).

²⁴ Daniela Vallega-Neu puts the point well: “When he calls these *will to power*, we should not take these as expressions that name an essence—that is, ‘something’ that would be the ground of the world. Each ‘something’ is already a representation. ‘Will to power’ rather names the ‘how’ of occurrences of life, the play of forces that animate life.” And again, “In response to Heidegger’s interpretation of Nietzsche, scholars have again and again pointed out that will to power is not a metaphysical concept that designates the essence of life. Will to power is not simply another name for Schopenhauer’s metaphysical will but rather designates

Nietzsche therefore embarks upon a series of experiments in articulating this interpretation of life as pure activity. Life is “striving and tension,” he affirms, but not a striving *of* anything—other than the striving.²⁵ His challenge is to articulate a kind of activity that neither (a) belongs to any “doer” nor (b) is understood in terms of homeostasis or self-maintenance. The task of life is simply “spinning on the chain of life,” he ventures, but precisely “in such a way that the thread grows ever more powerful.”²⁶ This means that there is nothing apart from life that life serves; life is simply the activity of life. At the same time, however, life does not close in upon itself in a stable, self-coincident equilibrium. Instead, life must be understood as a process of growing power. Elsewhere, he suggests that “life should be defined as an enduring form of the *process of testing force*.”²⁷ That is, life is a force that exists only in being active and deploying itself: it is “struggle for struggle’s sake.”²⁸ As the lightning is nothing but the activity of flashing—a testing of a degree of luminous force which splits the night sky—so also the trees of the jungle are nothing but the activity of vegetating—a testing of a degree of proliferative force which reaches through the canopy.²⁹

For Nietzsche, then, the proliferative force of vegetal life exhibits the extravagance of nature as such, whose economy is not one of privation but rather abundance: “nature seems bent on squandering.” His model for this extravagance is the observable life of plants, whose growth “achieves its aims in a broad and ponderous manner: and in doing so

ways in which life occurs. Thus, it is always particularized and includes an impenetrable complexity that exceeds intellectual grasp.” See Vallega-Neu, *The Bodily Dimension in Thinking* 28, 34; see also McNeill, “The Secret of Life,” 2013, esp. 179. Compare Nietzsche, *Notebooks*, 2003 14[79] and 6[14].

²⁵ Nietzsche, *Notebooks*, 2003 11[111].

²⁶ Nietzsche, *Will to Power*, 1968 §674.

²⁷ Nietzsche, *Notebooks*, 2003 36[22].

²⁸ “When two organic beings collide, if there were *only* struggle *for* existence or for food: then what? There must be struggle for struggle’s sake” (eKGWB/NF-1884 26[276]).

²⁹ Although the distance between this conception of life as a specific style of self-surpassing and the Hegelian conception of self-identity through negation could not be greater, Nietzsche’s approach nevertheless resonates with Hegel’s “secondary” discourse concerning growth, discussed in Chapter III.

it sacrifices much too much energy.”³⁰ To his contemporaries, who were enamored with conditions of scarcity, Nietzsche responds that such circumstances are atypical:

In nature, it is not distress which *rules*, but rather abundance, squandering — even to the point of absurdity. The struggle for survival is only an *exception*, a temporary restriction of the will to life; the great and small struggle revolves everywhere around preponderance, around growth and expansion, around power and in accordance with the will to power, which is simply the will to life.³¹

The overall condition of life is *not* a state of need, a state of hunger, but rather abundance, opulence, even absurd squandering. Where there is a struggle, it is a struggle for *power*.³²

The common cattail (*Typha latifolia*, fig. 10), for example, is a wetland plant which grows throughout most of the world.³³ The plant spreads rhizomatically, forming sprawling, interconnected colonies in shallow waterways. The plant also reproduces sexually: each of the fuzzy, brown “spikes” which give the cattail its name and characteristic shape may contain up to a million tiny seeds which are released high into the atmosphere and have been shown to cross mountain ranges. An acre of wetland may produce over a trillion cattail seeds in a season. Nor is the cattail unique in this respect: a single orchid flower, for example, may also produce close to a million seeds.³⁴ For Nietzsche, such plants are emblematic of the sheer prodigality and opulence of life.

³⁰ Nietzsche, *Nietzsche*, 1997 177, speaking of “sowing and planting.”

³¹ Nietzsche, *Gay Science*, 2001 §349.

³² Nietzsche, *Anti-Christ and Other Writings*, 2005 199 (*Twilight* X.14).

³³ Fig. source: Rockman, *Broadleaf Cattail (Typha Latifolia)*.

³⁴ Armstrong, “Wind Dispersal Of Seeds,” 1999.



FIGURE 10. Common Cattail

§5.1.2. Growth

Through the idea of the “will to power,” Nietzsche rejects the theory of the substantial “doer” and its self-preservation in favor of an affirmation of the prodigal, expansive character of life. The essentially proliferative character of life is set into sharp relief by plants, which he sees as a corrective to prior attempts to understand life primarily with respect to animals.³⁵ In this respect, Nietzsche is influenced by the biologist William Rolph, whose work replaces the primacy of self-preservation with the function of growth. According to Rolph, all organic functions, including nutrition and reproduction, could be understood on the basis of growth as a fundamental activity.³⁶ For Nietzsche, growth is primary even in apparently preservative activities, such as nutrition. Contrary to the ideas of his contemporaries, he insists that “*hunger* cannot be taken as the *primum mobile*.”³⁷ Rather, nutrition must either (a) be considered “merely a subsequent phenomenon, a practical application of that original will to become *stronger*,”³⁸ or (b) be reinterpreted in terms of the will to power, such that nutrition is not a matter of “hunger” or self-preservation at all.³⁹ In either case, growth remains primary. Furthermore, Nietzsche is careful to distance himself from the Darwinian temptation to subordinate the growth of the *individual* to self-preservation of the *species*. To the contrary, Nietzsche says that growth is the *primum mobile* at both levels:

All that happens, all movement, all becoming as a determining of relations of degree and force, as a *struggle* ... The ‘well-being of the individual’ is just as imaginary as the ‘well-being of the species’: the former is *not* sacrificed to the latter; regarded from a distance, the species is something quite as fluid as the

³⁵ Nietzsche, *Notebooks*, 2003 11[111].

³⁶ Moore, *Nietzsche, Biology and Metaphor* 47-48.

³⁷ Nietzsche, *Notebooks*, 2003 14[174].

³⁸ Nietzsche, 14[174].

³⁹ See page 108 and following, below.

individual. The ‘*preservation* of the species’ is only a consequence of the *growth* of the species, i.e., of *overcoming the species* on the path to a stronger type.⁴⁰

According to this Nietzschean vision, life is contest (in Greek, ἀγών) and striving to excel. The economy of forces which characterize life is therefore an economy not of scarcity but of excess: life exhibits “immense ruin alongside magnificent, multifarious, jungle-like upwards growth.”⁴¹ From this perspective, life *just is* growth. “To have and to want to have more—*growth*, in one word—that is life itself,” Nietzsche concludes.⁴²

In certain plants, the appearance of such growth becomes striking:

In the same way, the sun-seeking, Javanese climbing plant called the *sipo matador* [fig. 11] will wrap its arms around an oak tree so often and for such a long time that finally, high above the oak, although still supported by it, the plant will be able to unfold its highest crown of foliage and show its happiness in the full, clear light.⁴³

Nietzsche here echoes the description in Henry Walter Bates’ work, *A Naturalist on the River Amazons* (1863), but with a very different accent:

There is one kind of parasitic tree, very common near Pará, which exhibits this feature in a very prominent manner. It is called the Sipó Matador, or the Murderer Liana. It belongs to the fig order, and has been described and figured by Von Martius in the Atlas to Spiz and Martius’s Travels. I observed many specimens. The base of its stem would be unable to bear the weight of

⁴⁰ Nietzsche, *Notebooks*, 2003 9[91].

⁴¹ Nietzsche, 35[20].

⁴² Nietzsche, *Will to Power*, 1968 §125. Compare: “life itself is not a means to something; it is merely a growth-form of power” (Nietzsche, *Notebooks*, 2003 16[12]); “life ought to be a growth of power” (Nietzsche, *Notebooks*, 2003 14[101]).

⁴³ Nietzsche, *Beyond Good and Evil*, 2001 §258. Fig. source: Sproule, *Strangler Fig*.

the upper growth; it is obliged, therefore, to support itself on a tree of another species. In this it is not essentially different from other climbing trees and plants, but the way the matador sets about it is peculiar, and produces certainly a disagreeable impression. It springs up close to the tree on which it intends to fix itself, and the wood of its stem grows by spreading itself like a plastic mould over one side of the trunk of its supporter. It then puts forth, from each side, an arm-like branch, which grows rapidly, and looks as though a stream of sap were flowing and hardening as it went. This adheres closely to the trunk of the victim and the two arms meet on the opposite side and blend together. These arms are put forth at somewhat regular intervals in mounting upwards, and the victim, when its strangler is full-grown, becomes tightly clasped by a number of inflexible rings. These rings gradually grow larger as the Murderer flourishes, rearing its crown of foliage to the sky mingled with that of its neighbor, and in course of time they kill it by stopping the flow of its sap. The strange spectacle then remains of the selfish parasite clasping in its arms the lifeless and decaying body of its victim, which had been a help to its own growth. Its ends have been served—it has flowered and fruited, reproduced and disseminated its kind; and now, when the dead trunk moulders away, its own end approaches; its support is gone, and itself also falls.⁴⁴

In the Matador, vegetal life appears as vector of force that wills nothing but its own unfurling: growth is here a stunning prodigality without recuperation.

In this respect, Nietzsche speaks of the “*ambiguity of the world as a question of force, which looks at all things from the perspective of its/their growth.*”⁴⁵ Understood in Nietzschean terms, there is no difference between the growth of *force* and the growth of

⁴⁴ Bates, *The Naturalist on the River Amazons* 53-54.

⁴⁵ Nietzsche, *Notebooks*, 2003 2[128].

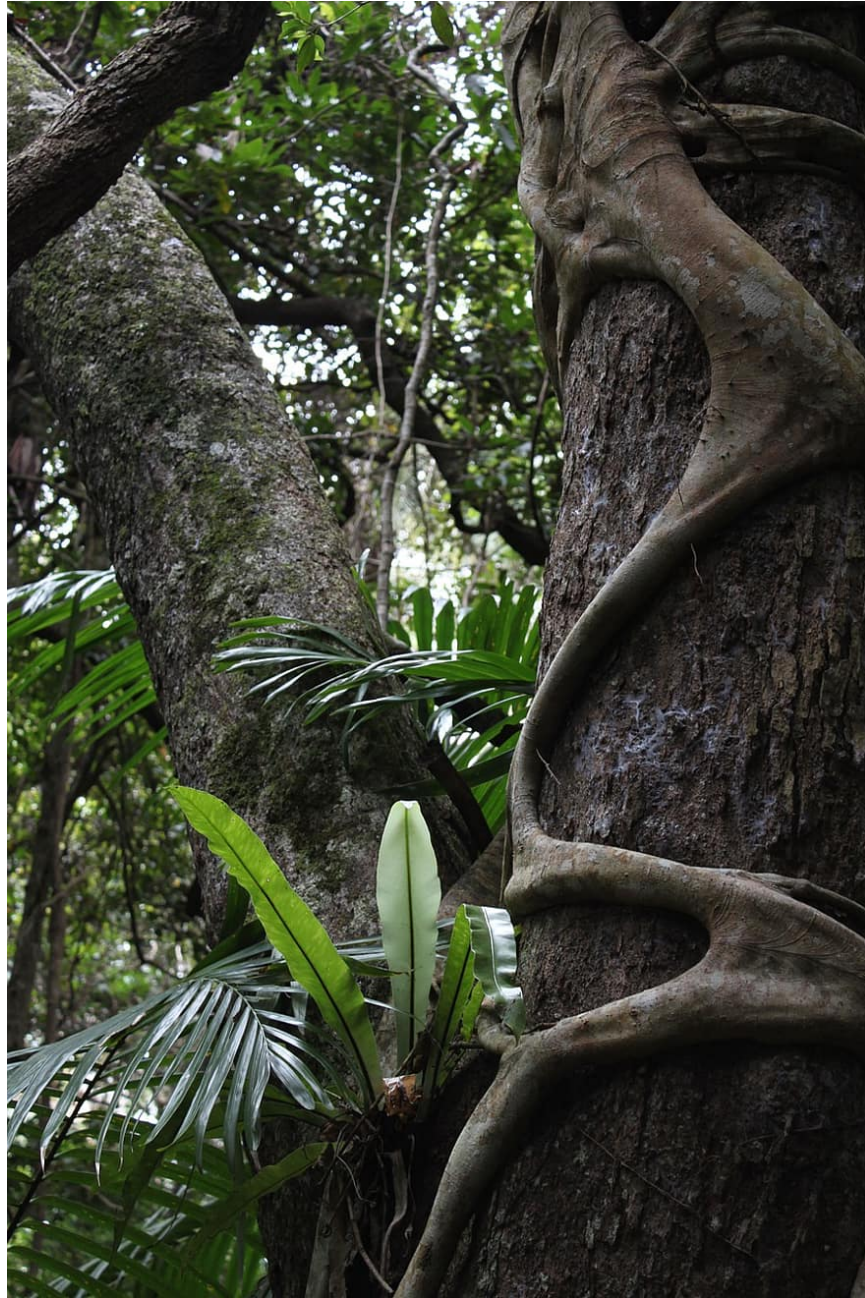


FIGURE 11. Strangler Fig

things, because living things are understood *as* force. Growth does not serve the interests of any broader organism or species; rather, in Nietzsche's words, "growth itself is a craving *to be more*," and nothing else.⁴⁶

§5.1.3. *Multiplicity*

The will to power is not any form of self-preservation; rather, it is growth as an activity of increase and self-surpassing. This activity is emblematically manifest in vegetal life, especially in such plants as the Matador. For Nietzsche, vegetal life also exemplifies a third aspect of growth as the will to power, namely, its *multiplicative* character:

To understand what life is, what kind of striving and tension life is, the formula must be applicable to trees and plants as well as to animals. "What does the plant strive for?"—but here we've already fabricated a false unity that does not exist: the fact of a millionfold growth, with initiatives of its own and half its own, is hidden and denied if we begin by positing a crude unity "plant."⁴⁷

Plants are particularly important for Nietzsche as a corrective: whereas in the animal growth can more readily be mistaken for a kind of unity, in the plant growth appears in its properly multiplicative aspect. As Hegel and Goethe recognize, growth in plants is a process that is not subordinated to an external demand for unity.⁴⁸ Vegetal life reveals a kind of growth that is not a component process integrated within a larger organism; rather, this kind of growth *just is* the organism—or, rather, there is no "organism," conceived as a unity gathering the various growth-processes in a unitary direction. Instead, Nietzsche conceives of "life" as the dispersed play of growth, a multiplicity of impulses in tension with one another, each striving toward its own maximization: the plant is a site of struggle.

⁴⁶ Nietzsche, 2[157].

⁴⁷ Nietzsche, 11[111].

⁴⁸ See page 44 and following, above.

What is it that struggles? Here Nietzsche follows Goethe in insisting upon the radical multiplicity of vegetal growth (and, more broadly, of life as the will to power). “Every living thing is not a single thing, but a plurality,” Goethe says in a passage that Nietzsche marked in his own copy. “Even insofar as it appears to us as an individual, it still remains a collection of living independent beings.”⁴⁹ The plant is a collection of living beings: independent impulses of growth that compose, at least for the moment, that which we call this or that plant. Crucially, these living beings are *themselves* such collections: ultimately, the “smallest” individuals are not atoms but rather also vectors of growth/force. “Even those smallest living beings which constitute our body (more correctly: for whose interaction the thing we call ‘body’ is the best simile) are not soul-atoms, but rather something growing, struggling, reproducing and dying off again,” Nietzsche reflects. “Their number alters unsteadily, and our living, like all living, is at once an incessant dying.”⁵⁰ Accordingly, these “continual transitions do no permit us to speak of the ‘individual,’ etc.; the ‘number’ of beings is itself in flux.”⁵¹ Even at the most elementary levels, Nietzsche asks us to see the movements of life as pure activity, a field of deeds without “doers,” a multiplicity of force, a thousandfold growing and withering.

Unity, therefore, cannot be found in the *composition* of forces. There are no atomic individuals, for example, to ground the play of growth. Likewise, Nietzsche will not allow unity to be found in the *purpose* of the organism. To the contrary, he observes in plants that healthy growth exhibits the opposite tendency: “as it grows, it splits into two and more.”⁵² A healthy plant does not work together toward a common, integrated end; rather, it diverges toward increasingly diverse ends. The point generalizes: “the more there is an

⁴⁹ The passage is quoted and marked in Nietzsche’s copy of Lange, *History of Materialism*, 1881 38. Cf. Stack, *Lange and Nietzsche* 168; see also Moore, *Nietzsche, Biology and Metaphor* 35. Cf. page 84.

⁵⁰ Nietzsche, *Notebooks*, 2003 37[4].

⁵¹ Nietzsche, 36[23].

⁵² Nietzsche, 36[21].

urge to variety, differentiation, inner fragmentation, the more force is present.”⁵³ Properly conceived, “purposes” and “goals” could only be understood as expressions of the will to power. But since “willing in general amounts to willing more strength, willing growth,” such aims will not gather force towards a unity but will rather express the fundamentally multiplicative character of growth.⁵⁴

Life is therefore neither a river delta which flows in myriad ways from a unitary spring, nor a river basin which gathers tributaries toward a unitary mouth. In Nietzsche’s copy of Jean-Marie Guyau’s *Esquisse d’une morale sans obligation ni sanction*, an annotated passage suggests a much different image:

We believe that nature has a purpose, that she is going somewhere; it is that we do not understand her. We take her for a river that flows towards its mouth and will one day arrive there, but nature is an ocean. To give nature a purpose would be to shrink her, because a purpose is an end. What is immense has no purpose. The ocean does not work, does not produce; it is restless. It does not

⁵³ Nietzsche, 36[21].

⁵⁴ Nietzsche, 11[96]. Nietzsche makes a similar point in a striking passage from the *Genealogy of Morality*: “But every purpose and use is just a *sign* that the will to power has achieved mastery over something less powerful, and has impressed upon it its own idea of a use function; and the whole history of a ‘thing,’ an organ, a tradition can to this extent be a continuous chain of signs, continually revealing new interpretations and adaptations, the causes of which need not be connected even amongst themselves, but rather sometimes just follow and replace one another at random. The ‘development’ of a thing, a tradition, an organ is therefore certainly not *progressus* toward a goal, still less is it a logical *progressus*, taking the shortest route with least expenditure of energy and cost, — instead it is a succession of more or less profound, more or less mutually independent processes of subjugation exacted on the thing, added to this the resistances encountered every time, the attempted transformations for the purpose of defence and reaction, and the results, too, of successful countermeasures. The form is fluid, the ‘meaning’ even more so . . . It is no different inside any individual organism: every time the whole grows appreciably, the ‘meaning’ of the individual organs shifts, — sometimes the partial destruction of organs, the reduction in their number (for example, by the destruction of intermediary parts) can be a sign of increasing vigour and perfection. To speak plainly: even the partial *reduction in usefulness*, decay and degeneration, loss of meaning and functional purpose, in short death, make up the conditions of true *progressus*: always appearing, as it does, in the form of the will and way to *greater power* and always emerging victorious at the cost of countless smaller forces” Nietzsche, *Genealogy*, 2006. II.12. The promising study of vegetal ὕβρις as a *hermeneutical* principle is outside the scope of this essay.

give life but contains it—or, rather, it gives and takes it away with the same indifference. It is the great, eternal swell that rocks beings.⁵⁵

Life, conceived in terms of a multiplicative, vegetal growth—that is, as the will to power—is a vector field of forces, a restless ocean of struggling impulses.

Wolffia microscopica is the world's smallest flowering plant, roughly the size of two normal grains of table salt; it would take around five thousand flowers to fill a thimble. The rootless plant floats on the surface of water, where it appears as a grainy film, and holds a tiny flower in a depression on its upper surface. The plant is also one of the most rapidly reproducing plants in the world, with each generation able to give rise to the next in as few as thirty hours. Left unchecked and sufficiently nourished, a single plant could therefore theoretically produce in just four months a number of plants whose spherical volume—despite each plant's miniature size—would be roughly equal to that of the earth.⁵⁶ In the words of Zarathustra, the will to power is an “unexhausted, procreative will of life.”⁵⁷

§5.1.4. *A Common Modality*

Nietzsche bids us understand the movements of plant life as an assemblage of sites whose spheres of power are constantly contracting, expanding, and shifting: vegetal life as a multiplicity of force. For Hegel, determination occurs through a process of negation in which unity is achieved through the differentiation of parts subordinate to a whole. The growth of the animal (with its fixed arrangement of organs) typifies this process of determination; the inadequacy of the plant's “indeterminate” growth belies it.⁵⁸ For Goethe, determination occurs through the rhythmic oscillations of contraction and

⁵⁵ See Fouillée, “Note Sur Nietzsche Et Lange”.

⁵⁶ Armstrong, “World's Smallest Flowering Plant,” 1996.

⁵⁷ Nietzsche, *Zarathustra*, 2006 88.

⁵⁸ See page 34 and following, above.

expansion which he calls polarity.⁵⁹ For Nietzsche, by contrast, identity occurs through differentiation as such: the vegetal model is paradigmatic of a multiplicative growth which continues multiplying as it grows. To conceive of determination in these terms, however, remains inadequate, for it does not account for the element of consistency which living beings exhibit. Unless Nietzsche can give an account of the *affinities* of power which relate certain forces with one another (and not with others), his play of forces will in the end amount to a homogenous, undifferentiated field.

The first step toward the solution is to recognize that the agonistic growth activities of life do not entail universal hostility. To the contrary, they often involve *coordination*:

My idea is that every specific body strives to become master over all space and to extend its force (—its will to power:) and to thrust back all that resists its extension. But it continually encounters similar efforts on the part of other bodies and ends by coming to an arrangement (“union”) with those of them that are sufficiently related to it: thus they then conspire together for power. And the process goes on—⁶⁰

A process of force maximization runs up against other such processes. These forces may repel and struggle with one another, or they may coordinate themselves to one another and join forces in alliance. As these interactions occur, an assemblage of forces grows, each of the parts having relative and shifting degrees of autonomy. In this way, Nietzsche explains the manifold structure of plant life: each part of the plant, understood as an expression of forces operating in a certain harmony, exists in relative tension with other parts as it is simultaneously gathered together into a common mode. In some cases, the centripetal force of the assemblage emerges as a dominant factor due to “the victory of predominance

⁵⁹ See page 79 and following, above.

⁶⁰ Nietzsche, *Will to Power*, 1968 §636.

of individual parts, to an atrophy, a ‘becoming organ’ of other parts.”⁶¹ The plants that are most specialized and organized, including carnivorous plants such as the well-known Venus flytrap, exhibit this pattern. The waterwheel plant, for example, is an underwater carnivore with special, elaborate systems for detecting nearby objects, differentiating between prey and debris, rapidly closing its trap around victims, raising and lowering flowers above and below the surface of the water for pollination and seed production, etc.⁶² In other cases, the growth of the assemblage outstrips its centripetal tendencies and it splits into multiple sites or centers of power.⁶³ It is Goethe’s movement of expansion and contraction understood in this way—as the expansion and contraction of vectors of power and territories of the deployment of forces constantly repelling, coordinating, incorporating, and dividing—that gives rise to richness and complexity in plant living.

Taken as a whole, however, such shifting coordinations of force are insufficient to account for the central feature of life understood as the will to power. So articulated, the Nietzschean vision would still “fail to appreciate the distinguishing mark of life itself,” as William McNeill puts it.⁶⁴ This is because the distinguishing mark of life, according to Nietzsche’s way of thinking, consists in its *self-overcoming* character. To speak of an “unexhausted, procreative” growth of living beings refers to the *self*-exceeding movement of life. But does not this relation—as a special instance of coordination and tension of forces—require something like a “self” or unity that belongs to life? Does Nietzsche’s concept of the *will* to power not, ultimately, require a “will?” In some sense, we must admit this to be true: self-overcoming, as it occurs in the “unexhausted, procreative” growth of living beings, requires a relation of the living being to itself. The crucial point, however, is

⁶¹ Nietzsche, §647.

⁶² Breckpot, “Aldrovanda Vesiculosa.”

⁶³ Cf. Nietzsche, *Will to Power*, 1968 §654.

⁶⁴ McNeill, “The Secret of Life,” 2013 188f. Nietzsche recognizes this in a notebook entry that repudiates any account of life attempted on the basis of merely *quantitative* differences of force (Nietzsche, *Notebooks*, 2003 2[157]).

that “living being” here no longer names an “entity” in the substantive sense, for living beings are never simply given. Rather, a living being, *qua* living, is an activity of growth which constantly exceeds itself. According to Nietzsche’s insight, then, there is not first a “self” which must then be overcome. Instead, there is a movement of force which occurs as a relation of difference whereby it becomes possible to retrospectively speak of a “self” and its “overcoming.”

This relation—in which the living being appears and is constituted as self-overcoming—is called nutrition:

A multiplicity of forces, connected by a common mode of nutrition, we call life. To this mode of nutrition, as a means of making it possible, belong [...] (1) a resistance to all other forces; (2) an adjustment of the same according to form and rhythm; (3) an estimate in regard to assimilation or excretion.⁶⁵

It is clear from the foregoing analysis that Nietzsche nutrition, understood as the “common mode” of a life, should not be confused with an activity of self-preservation.⁶⁶ Rather, nutrition is a process of increase through the incorporation of force. It is the *means* of intensification, the *mode* in which various forces are brought into connection with one another. For this reason, nourishment has an ambivalent relation to growth: often, frequent nourishment hampers the intensive development of the plant, whereas scant nourishment accelerates it.⁶⁷ Entering into composition with an excess of force can overwhelm the plant, which discharges its excess energy via growth. The consequent inhibition of flowering is thus a result of what Nietzsche calls a “crumbling that supervenes when the ruling cells are incapable of organizing that which has been appropriated.”⁶⁸

⁶⁵ Nietzsche, *Will to Power*, 1968 §641.

⁶⁶ See page 98.

⁶⁷ See for example the remarks in Goethe, *Metamorphosis*, 2009 §30.

⁶⁸ Nietzsche, *Will to Power*, 1968 §660.

Inversely, the provision of scant resources makes necessary a “maximal economy in use, so the only reality is the will to grow stronger of every center of force.”⁶⁹ This ambivalence (which appears again in the discussion of κόρος beginning on page 114) exhibits the delicate tension in which the nutritive growth consists. This tension constitutes the distinctive relation of forces that is most characteristic of life and expresses its growing, self-exceeding impulse as the elementary form of the will to power.

In this sense, the activity of nutrition is ultimately structured according to a complex sense of measure. Nutrition requires a finely calibrated relation of forces in tension between surfeit and scarcity that is conducive to the plant’s flourishing. Insofar as the plant (understood as will to power, *viz.*, as vegetative growth) is this relation, however, the flourishing which belongs to the activity of nutrition must be defined according to a self-surpassing measure. In other words, nutrition involves increase, but this increase is measured in relation to the essence of plant life, which is nothing other than that process of increase. For Aristotle, as we will see in the next chapter, this process is characterized as a striving for something unattainable, “reaching for the divine.”⁷⁰ Nietzsche similarly declares this movement to be an impossible “desire to incorporate everything.”⁷¹ For the German thinker, the proliferative movement of plant life involves the deployment of a restless force which does not establish and maintain for itself limits but rather expends itself, establishing the limits it surpasses only as the retrospective traces of its deployment.

For the moment, this suggestive sketch must suffice, for Nietzsche nowhere develops his concept of nutrition in detail.⁷² But whereas the Nietzsche of the late notebooks prefers to speak of the will to power, the young Nietzsche sees this movement of life—of which plants are an exemplary case—in terms of the Greek concept of ὕβρις. It is

⁶⁹ Nietzsche, §689.

⁷⁰ See page 142.

⁷¹ Nietzsche, *Will to Power*, 1968 §657.

⁷² This essay returns to the issue of nutrition in chapters VII and VIII.

through an exploration of this concept, then, that we may develop a better understanding of Nietzsche's encounter with the "unexhausted, procreative will of life" and its nutritive determination. In so doing, this essay will also begin to shift its frame of reference from modern German philosophy to ancient Greek thought.

§5.2. ὕβρις

The relation between life and ὕβρις appears most clearly in Nietzsche's neglected early essay, "Homer's Contest."⁷³ The essay begins with the question of what "*separates* man from nature and is his mark of distinction." In truth, he suggests, no such distinction exists. Rather, the question more accurately concerns how the human being comes to be constituted *within* nature in a nevertheless distinctive manner. The Greeks, as "the most humane people of ancient time," are the focal point of his explorations of this question.⁷⁴

To the earliest Greeks, life appears as a "purely material fusion," a continual "night and horror" of mere cruelty. In this guise, life is experienced as relentless combat in which "the cruelty of the victory is the pinnacle of life's jubilation."⁷⁵ In other words, life was experienced as the indifference of pure will to power: the unremitting struggle of all things to exceed themselves, continually growing and dying. According to Nietzsche, the response to such a life that is most typical of ancient peoples is to be overcome with "nausea at existence" and see life as "a punishment to be discharged by serving one's time."⁷⁶ By contrast, the response that gives birth to Hellenic civilization, typified by Homer and Hesiod, is the *affirmation* of life on its own terms: to acknowledge that life is a "terrible

⁷³ Nietzsche, "Homer's Competition," 1997.

⁷⁴ Nietzsche, 177. It should be evident from my reading that my interest in Nietzsche's essay is primarily conceptual, not historical. That is, I am less concerned with the accuracy of Nietzsche's reconstruction of Greek life understood in historical terms than I am in the conceptual work that his reconstruction makes possible.

⁷⁵ Nietzsche, 177-178.

⁷⁶ Nietzsche, 178-179.

impulse” yet “regard it as *justified*.”⁷⁷ Nietzsche sees the first line of Hesiod’s *Works and Days* as an important articulation of this affirmative posture: “There are *two* Eris-goddesses on earth.”⁷⁸ Life, that is to say, is indeed strife, but in a twofold aspect. One type of strife is mere hostility and “struggle-to-the-death,” which is incompatible with human flourishing. Under a different aspect, however, this “terrible impulse” can appear as that envy and jealousy which goads men to “the action of the *contest*.”⁷⁹ The particular insight that gives birth to Greek civilization is therefore the understanding that the striving character of life can be affirmed as soon as one recognizes it as equivocal: life’s “terrible impulse” takes many shapes. To use the terminology of Nietzsche’s later work, there are—from the human perspective—broadly two kinds of the will to power, *viz.*, those kinds in which the growth of force is incompatible with human existence and those in which it is not. The latter type of the will to power is the struggle of which the contest (ἀγών⁸⁰) is especially emblematic.

When force has a territory for its deployment—in the case of the human, for example, the field of contest and battle—it is stimulated toward a maximum power. By delimiting the contours of life’s impulse, the contest intensifies its force. By contrast, without an opponent—with no struggle to give shape to force—it becomes mere surfeit and destruction.⁸¹ Nietzsche therefore understands the ancient practice of ostracism as a stimulant to the life of the community: the preeminent individual is removed from society in order to increase the competition and “renew the tournament of forces.”⁸² Without ostracism, in other words, the contest would dry up, its forces would dissipate, and the other, destructive Eris-goddess would prevail. The contest between forces is a limit which

⁷⁷ Nietzsche, 179.

⁷⁸ Nietzsche, 179. He takes this to be the original beginning of the text.

⁷⁹ Nietzsche, 180.

⁸⁰ Although Nietzsche does not make the point, the double sense of ἀγών (contest/struggle, but also assembly) and its relation to ἀγείρω (to gather) and ἀγορά (marketplace) is consonant with his broader argument.

⁸¹ Nietzsche, “Homer’s Competition,” 1997 183.

⁸² Nietzsche, 181.

gives to force a determinate character. In the contest, the “terrible impulse” of life no longer manifests as a “boundless and indeterminate ambition” but instead relates in certain precise ways to the growth of the city.⁸³ If force exists only in its deployment, its “limit” marks not so much an impasse or obstacle for the activity of force but rather the originary cusp of its growth.

According to Nietzsche’s interpretation, then, Hellenic life *constitutes itself* through the contest (ἀγών). That is, Greek civilization is born precisely as that form of human life-impulse (will to power) that occurs in the struggle whereby a tension occurs between two or more activities of force such that each is able to exceed itself (grow).⁸⁴ Such self-exceeding is possible only where there is a limit or cusp that is not prior to growth but is instead its other side (as the convex line is to the concave). In the context of Nietzsche’s interpretation of the birth of the Hellenic world, this limit or measure is the contest, and it is specifically human—indeed, as that by which the human emerges within nature as nevertheless distinctive, it is what answers to the original question of the essay. The contest marks the limit of force (that is, its origin and determination as a manner of growth) that is the characteristic mark of the human being (the Greek, in this case) understood as a specific kind of natural activity.

When the immensely glorious hero exceeds the limit which constitutes Greek life, excelling all others in the contest, he or she does not for that reason lose all sense of limit. To the contrary, this would be impossible, since the limit is the correlate of the activity of force as growth, which is characteristic of all life. After all, the hero still belongs to the living. Instead, he or she leaves the *particular kind* of limit that pertains to prosaic Greek existence and becomes situated in relation to *another kind* of life. Insofar as the Greeks

⁸³ In this respect, Nietzsche contrasts the consequently freer Greek with the “modern man” who “is crossed everywhere by the infinite” (Nietzsche, 181-182).

⁸⁴ The prior, dark ages of cruelty, by contrast, are characterized by forms of human life-impulse that occur in different contexts, namely, ones in which the human life-impulse is overwhelmed by life-impulses antagonistic to human existence.

conceived only two Eris-goddesses, this “other kind” refers only to “everything else,” *i.e.*, whatever does properly belong to Greek life.⁸⁵ The excessively decorated hero therefore enters into an “anonymous” or inhuman life: that broad current of growing force that is called by the name φύσις. Caught up in the grip of such a will to power, he or she paradigmatically provokes the envy of the gods—“he has only the gods near him now”—and is ruined.⁸⁶ According to Nietzsche, the name for such a state—that is, the name for a will to power which is determined not in relation to the contest but rather in relation to the movement of life *qua* life, and therefore to divinities and elemental forces—is ὕβρις.⁸⁷ In “The Greek State,” an early essay from the same period as “Homer’s Contest,” he frames this impulse in specifically vegetal terms that portend the later notebooks: “what can we find, in the toil and moil of all the millions,” he asks, other than the “all-powerful drive which makes stunted plants push their roots into arid rocks!”⁸⁸

Nietzsche therefore understands ὕβρις in terms of the unbounded, “terrible impulse” of life: the play of surfeit (κόρος) at the heart of the coming to be and passing away of things (φύσις) antecedent to or apart from the limits of the human.⁸⁹ Just as he does not develop his concept of nutrition, however, Nietzsche does not develop this concept of ὕβρις. Without leaving the German thinker behind entirely, then, the rest of this chapter focuses on the Greek sense of ὕβρις and its particular relation to plant life.⁹⁰

⁸⁵ In this context, Greek life primarily means the life of the πόλις.

⁸⁶ Nietzsche, “Homer’s Competition,” 1997 183.

⁸⁷ Nietzsche, 183.

⁸⁸ Nietzsche, “The Greek State,” 1997 167.

⁸⁹ Compare page 8 and following, above.

⁹⁰ In what follows, my primary aim will be to elaborate a *Greek*—rather than Nietzschean—understanding of ὕβρις that is nevertheless sympathetic to the Nietzschean vision.

§5.2.1. ὕβρις in Heraclitus

Nietzsche's own interest in ὕβρις, appears to have been inspired largely by the pre-Socratic philosophers, especially Heraclitus. "That dangerous word hybris," he says, "is indeed the touchstone for every Heraclitan."⁹¹ While speculation concerning the details of the scant Heraclitean cosmology is difficult, Nietzsche believes the fragments give sufficient reason for thinking that ὕβρις is a key element of cosmic creativity, especially in connection with κόρος (satiety):

The period in which the world hurries toward the conflagration and dissolves into pure fire Heraclitus characterizes, with notable emphasis, as a desire, a want, or lack; the full consumption in fire he calls satiety. It remains for us to ask how he interpreted and what he might have called the newly awakened impulse toward cosmic formation, the new outpouring into the forms of plurality. The Greek proverb 'Satiety gives birth to hybris' seems to come to our aid here, and indeed one may ask, for a moment, if Heraclitus did not perhaps derive the return to the many from hybris.⁹²

And yet the word ὕβρις appears in only a single fragment:

ὕβριν χρη σβεννύναι μᾶλλον ἢ πυρκαϊήν⁹³

This fragment is typically translated as a cautionary moral maxim:

Arrogant pride ought to be extinguished even more urgently than fire.

⁹¹ Nietzsche, *Philosophy in the Tragic Age of the Greeks*, 1962 61. For an excellent essay contextualizing this early work, see Kirkland, "Nietzsche and Drawing Near to the Personalities of the Pre-Platonic Greeks".

⁹² Nietzsche, *Philosophy in the Tragic Age of the Greeks*, 1962 60.

⁹³ DK 43. I follow the Greek edition of the texts in Kahn, *The Art and Thought of Heraclitus*; translations are my own. I refer to fragments according to the DK ordering, which has the advantage of being widely recognized. Its arbitrary composition is, furthermore, an advantage for my purposes, for it avoids prejudicing the interpretation along the lines of contemporary arrangements.

To modern ears, the fragment is unremarkable. So long as ὕβρις is understood in the moralistic sense as an arrogant pride (cf. page 13), the meaning appears straightforward: such pride is exceedingly dangerous and must be quenched before it gets out of control.

Our ongoing reevaluation of the meaning of ὕβρις, however, casts suspicion on this interpretation. Moreover, fire is an important cosmic principle in Heraclitus' thought. In his commentary, Charles Kahn recognizes (without any apparent hesitation) that such an interpretation would make this "the only fragment where fire is presented in negative terms, as a purely destructive force." In fact, he seems pleased that his interpretation also requires that Heraclitus "implicitly qualifies his praise for the principle of war and conflict."⁹⁴ In other words, this interpretation puts the fragment at odds with the rest of Heraclitus' corpus on the subjects of both fire and strife, with which the fragment is intertwined.

Heraclitus is well-known as the philosopher of movement, and this is because he is a philosopher of life, understood in terms of soul.⁹⁵ "The soul is the originary principle, the rising vapor out of which other things condense," he says. "It is always flowing."⁹⁶ Like Nietzsche, however, Heraclitus understands the activity of life as a struggle of forces in tension. He is opposed to all those who "would that strife [ἔρις] might vanish from among gods and men," for strife is what brings living things into being.⁹⁷

One must perceive that war is common to the things that exist, and strife is fitting, and that all things come into being and are disposed according to strife.⁹⁸

⁹⁴ Kahn, 241.

⁹⁵ Heraclitus does not use the term ζώη; instead, he speaks of ψυχή. βίος appears twice (DK 48, 62) as the counterpart of death.

⁹⁶ DK A15.

⁹⁷ DK A22.

⁹⁸ DK 80. Reading δίκη as "customary," though not in a specifically human sense, i.e., "the way," "the normal course of nature" (Liddell and Scott, *Greek-English Lexicon*). Also reading the manuscript's "χρεώμενα" instead of the editorial "χρεών" (c.f. Kahn, *The Art and Thought of Heraclitus* 66).

The counter-thrust brings together, and from what is at variance comes
beautiful attunement, and all things come to be according to strife.⁹⁹

Strife therefore appears as the basic character of existence. Such strife is not merely external to things; rather, things are constituted by an inward struggle of forces in tension with one another. “A thing agrees with itself by being at variance with itself; it is a concord [ἀρμονία] turning back on itself, like that of the bow and the lyre,” he says.¹⁰⁰ Strife is therefore the basic principle of life—“the name of the bow is life”¹⁰¹—and of the living cosmos.

In light of the centrality of strife to his conception of life, Heraclitus is able to give a precise characterization of the soul:

This is the definition of soul: increasing itself.¹⁰²

Strife is therefore not oriented toward self-preservation, but instead indicates the tension that pertains to the increase of force in relation to itself. As Nietzsche perceives (page 114), this self-increase or overflowing fullness, which Heraclitus elsewhere calls κόρος (satiety, surfeit), is closely associated in Greek thinking with ὕβρις—so much so that the two often seem interchangeable.¹⁰³ Fire, which appears in many shapes and whose nature is to increase and intensify when sated, is therefore a suitable figure for the essential movement of the cosmos.¹⁰⁴ For Heraclitus, fire is also a figure of self-determination. “No one of gods or men” has made (ποιέω) the cosmos, he says. To the contrary, it is alive, an “ever-living

⁹⁹ DK 8.

¹⁰⁰ DK 51

¹⁰¹ DK 48

¹⁰² DK 115; cf. DK 45.

¹⁰³ Cf. Kahn, *The Art and Thought of Heraclitus* 276, commenting on DK 65: “In Greek *koros* ‘satiety’ suggests *hybris*.” In the common conjunction ὄλβος—κόρος/ὕβρις—ἄτη, the two appear to be almost equivalent (see Doyle, “Ὀλβος, Κόρος, Ὑβρις and Ἄτη from Hesiod to Aeschylus,” 1970). It is typically unclear which—if either—comes first (see Michelini, “Ὑβρις and Plants” 36n5). As we will see below (page 119), this association is particularly pronounced in the case of plant life. Regarding the relation between the abundance of good things and ὕβρις in a very different context, see Aristotle, *Nicomachean Ethics*, 1934 1124a29.

¹⁰⁴ DK 67; see also DK 111.

fire” (πῦρ ἀειζῶον), kindling and going out according to its own, internal measure.¹⁰⁵ By identifying the cosmos with fire, Heraclitus asserts its independence from any external measure. The cosmos, like the soul, is *self*-increasing fire. Furthermore, like the burning sun of which Heraclitus also frequently speaks, fire is not merely a light but also a source of warmth and nourishment, holding away the winter chill, causing crops to grow, and making food of plants and animals. Fire is “importunity and surfeit” which “will distinguish and compel all things.”¹⁰⁶ In its self-exceeding, oversaturated display of force, fire gives impetus to all that exists, ordering the coming to be and passing away of things.

In light of Heraclitus’ conception of life in terms of strife, self-overflowing, and fire, we can revisit the fragment that mentions ὕβρις explicitly, offering a somewhat different interpretation:

ὕβριν χρῆ σβεννύναι μᾶλλον ἢ πυρκαϊήν.¹⁰⁷

There is a necessity that quells ὕβρις even more than fire.

The fragment speaks of the limits of both ὕβρις and fire understood as cosmic principles: both must be checked or quelled (σβεννύναι) according to necessity (χρῆ), the former more so than the latter. Although fire grows voraciously, it is not simply boundless. Rather, it possesses a measure or limit according to which it kindles and is quelled. Such a limit, arising from the necessity of its essence, is not an extremity beyond which nothing is possible. Rather, it is the rhythmic movement of expansion and contraction which belongs to the activity of fire and grants that activity its character (“in measures kindling and in measures going out”¹⁰⁸). These “πυρὸς τροπαί”—“reversals” or “turnings” of fire, in

¹⁰⁵ DK 30.

¹⁰⁶ DK 65 and 66.

¹⁰⁷ DK 43.

¹⁰⁸ DK 30.

Heraclitus' words—mark the necessary delineations of fire as a determinate activity.¹⁰⁹

What, then, is ὕβρις? Understood in terms of its close connection with κόρος, ὕβρις indicates life in its essential activity of “increasing itself.” And yet, the activity of life is not simply boundless extension, either. It also involves a limit arising from the necessity of its own nature—even more so than fire.

While the record of Heraclitus' thinking remains fragmentary, it is possible to understand ὕβρις as an ontological concept in his philosophical outlook which is related to questions concerning life, growth, and the limits that pertain to the movements of φύσις. There is an important aspect of ὕβρις, however, on which Heraclitus remains silent: its vegetal character.

§5.2.2. *Vegetal ὕβρις*

Among the most illuminating passages concerning ὕβρις are those in which the Greeks speak of the ὕβρις of plants.¹¹⁰ Because of their removal from questions of social prerogatives, such passages offer a particularly fruitful insight into a more originary sense of ὕβρις, conceived from within the movement of life.¹¹¹ According to Ann Michelini's research, the vegetal character of ὕβρις is reflected in “a strong association in everyday prosaic terminology between human ὑβρίζοντες and ὑβρίζοντα δένδρα” in the classical period.¹¹² Even where ὕβρις belongs clearly to human beings, she points out, Greek authors take frequent recourse to a horticultural vocabulary, as if even in these contexts

¹⁰⁹ DK 31A; see also DK 90 and, especially, DK A5, where “necessity” indicates the ordering of the changes of the cosmos.

¹¹⁰ For an overview of contemporary scholarship on ὕβρις, see pages 12 and following.

¹¹¹ See Michelini, “Ὑβρις and Plants” 36-37. It is significant in this respect that ὕβρις was taken by the Greeks to affect social groups as well as individuals.

¹¹² Michelini, 43.

ὑβρις retains something of the inhuman: “For ὑβρις, blossoming,” Aeschylus writes, “has ripened a growth of delusion.”¹¹³

Certain plants are noteworthy in this respect for their tendency to become exceptionally hubristic under the right circumstances. Aristotle points to the example of grape vines, which “go all to leaf, becoming excessively hubristic on account of receiving [too much] nourishment,” and Theophrastus adds that the vine also needs regular pruning to encourage fruitfulness.¹¹⁴ For Theophrastus, the almond tree is especially prone to manifestations of too much ὑβρις (fig. 12¹¹⁵):

The best land for all trees is loose, light, and damp, since such land offers good nourishment and makes them grow rapidly, except for trees of such strength that they become full of nutriment [πλήθος τροφῆς] and excessively hubristic, like the almond.¹¹⁶

In both cases, the ὑβρις of a plant appears prominently when the plant receives excessive nourishment. The close relationship between ὑβρις and κόρος emphasizes this point: although wide in its metaphorical applications, κόρος has the concrete primary sense of having enough (or too much) to eat. We might say that ὑβρις/κόρος indicates an oversaturation of force, the condition of the plant that has accumulated an intensive degree of power. As Theophrastus says, this is a function of the “strength” of the particular plant. Thus, the suitability of the environment for the plant depends upon its own strength of growth:

¹¹³ Aeschylus, *Persians*; *Seven Against Thebes*; *Suppliants*; *Prometheus Bound*, 2009 *Persians* 821-8.

¹¹⁴ Aristotle, *Generation of Animals*, 2000 725b34-35; 2.7.2; Cf. Theophrastus, *De Causis Plantarum*, 1976 3.15.4. Cf. Michelini, “Ὑβρις and Plants” 36-37n7 concerning Theophrastus’ sources: “Both Theophrastus’ botanical works draw upon a number of earlier works, among which are technical treatises by authors such as Androtion, the oral reports of gardeners and farmers, and earlier generalizations by such obscure φυσιολόγοι as the Sybarite Menestor.”

¹¹⁵ Fig. source: van Gogh, *Almond Blossom*.

¹¹⁶ Theophrastus, *De Causis Plantarum*, 1976 3.6.8.



FIGURE 12. *Almond Blossom*

The countryside can be good for a plant in two ways: either with respect to the suitability of its nature or with respect to the coordination of its might and power. For example, lean soil accords with almond trees, for when the soil is deep and rich the trees become excessively hubristic and fruitless through good nourishment [τὴν εὐτροφίαν].¹¹⁷

In Nietzschean terms, the issue concerns the particular coordination of forces (might, power) that characterize a particular living thing and its interaction with the nourishment that is incorporated into the assemblage. When these combinations of force become particularly intense, yet remain fundamentally compatible with the flourishing of the plant in question, the ὕβρις of the plant intensifies and it becomes fruitless. The fig tree, for example, “grows more vigorously if it is watered, but then its fruit is inferior.”¹¹⁸ Likewise with lupine in rich soil, which “fails to bear, going wood-mad [ὕλομανῶν] and excessively hubristic.”¹¹⁹

This does not mean that the especially hubristic plant ceases to grow. To the contrary, such a plant is fruitless but fecund, proliferating madly.¹²⁰ It would be more correct to say that the procreative growth of the hubristic plant occurs so intensely that the plant ceases to produce fruit fitting for human consumption. As the decorated hero is seized by ὕβρις in the precise moment that he stands within the broader currents of force that characterize life *apart* from its restriction to the contest and πόλις, so also the plant becomes particularly hubristic in the moment it ceases to bear the fruit which sustains the πόλις and instead simply *grows*: the prodigality of the plant manifests its ὕβρις.

¹¹⁷ Theophrastus, 2.16.8.

¹¹⁸ Theophrastus, *Enquiry into Plants*, 1999 2.7.1; see also the discussion of remedies at 2.7.5 and various diseases of over-nurture at 4.14.6 and Theophrastus, *De Causis Plantarum*, 1976 5.9.10-13.

¹¹⁹ Theophrastus, *De Causis Plantarum*, 1976 3.1.5.

¹²⁰ “Offspring, in fact, are seldom treated as the fruit of the parent tree in Greek; children are far more likely to be called off-shoots or branches” (Michelini, “Ὑβρις and Plants” 40).

In Euripides, ὕβρις belongs to the exuberant movement of natural growth and decay exemplified by the bacchic wand or “thyrsus,” a branch of the god’s sacred tree wound with wild vines:

Consecrate yourselves to Bacchus,
with stems of oak or fir,
dress yourselves in dappled fawn skins,
trimmed with white sheep’s wool.
As you wave your thyrsus,
revere the ὕβρις it contains:
all the earth will dance at once.¹²¹

Before becoming known predominantly as a wine-god, Dionysus was known to the Greeks as Lord of Trees, Blossom-Bringer, and Abundance of Life.¹²² Here ὕβρις is associated with the inner character of the plant insofar as that plant is sacred—*i.e.*, removed from the profane demands of human consumption. The plant is hubristic insofar as it belongs to the god of blossoming and abundance (not, for example, to the economy of grain and harvest). Rather, it belongs to a living movement—a dance—that pertains to “all the earth.”

ὕβρις can therefore be said to be “excessive” in two senses. In one sense, it is excessive *from the perspective of the gardener*, for whom fruitless growth exceeds the purposes for which the tree has been planted and nurtured.¹²³ In another sense, *from the*

¹²¹ Dodds, *Euripides* ll. 109-115.

¹²² “To the Greeks of the classical age Dionysus was not solely, or even mainly, the god of wine. Plutarch tells us as much, confirming it with a quotation from Pindar, and the god’s cult titles confirm it also: he is Δενδρίτης or Ἐνδένδροπος, the Power in the tree; he is Ἀνθιος the blossom-bringer, Κάρπιος the fruit-bringer, Φλεὺς or Φλέως, the abundance of life. His domain is, in Plutarch’s words, the whole of the ὑγρὰ φύσις—not only the liquid fire in the grape, but the sap thrusting in a young tree, the blood pounding in the veins of a young animal, all the mysterious and uncontrollable tides that ebb and flow in the life of nature. Our oldest witness, Homer, nowhere explicitly refers to him as a wine god; and it may well be that his association with certain wild plants, such as the fir and the ivy, and with certain wild animals, is in fact older than his association with wine” (Dodds, xi-xii). For these themes in connection with the passage just quoted, see Dodds, 80-82.

¹²³ Michelini herself ultimately adopts this perspective when she interprets ὕβρις as putting “self-aggrandizement before the performance of the social role assigned to it” (Michelini, “Υβρις and Plants”

perspective of its own growth, the plant is excessive because it has become an intensified activity of self-exceeding. In Nietzschean terms, vegetal ὕβρις is excessive because it is joyful.

The fecundity of ὕβρις appears in the poets, where it sometimes marks the inexorable growth of insolence towards blindness and disaster:

The stalk of ὕβρις grows anew.¹²⁴

But *what* grows? *What* is exceeded? In this passage from Aeschylus, ὕβρις appears as re-growth—a generation that recapitulates itself with a force that is difficult to dissipate. In another passage, Aeschylus' chorus puts the point precisely:

Prior ὕβρις loves to birth new ὕβρις.¹²⁵

ὕβρις is not, therefore, the name for a temporary overflow or aberration of life. On the contrary, its excessive movement occurs *from* ὕβρις *to* ὕβρις—or, more precisely, ὕβρις is an activity of relation, structured according to excess, in which the relata are not external to the relation itself. When we say that the grape vine has gone wood-mad, the prior “tame” vine and the later “unruly” vine are themselves nothing but other moments of the ὕβρις relation that is characteristic of plant life as such.¹²⁶ In this sense, the question of *hybris* in the plant comes to be situated within the broader context of φύσις and the question of growth.

38-39). To be more precise, however, we would have to recognize the gardener *herself* as an activity of ὕβρις and will to power and see her perspective—as well as her habit of preemptively consolidating vegetal forces through pruning—as activities of *interpretation* in the Nietzschean sense (see the passage from the *Genealogy* quoted on page 104).

¹²⁴ Aeschylus, *Persians; Seven Against Thebes; Suppliants; Prometheus Bound*, 2009 *Suppliants* 104ff.

¹²⁵ Or “engender, bear” (τίκτειν). Aeschylus, *Aeschylus, II, Oresteia*, 2009 *Agamemnon* 764.

¹²⁶ That these other moments are relations does not, of course, imply that they are posterior to their relata—which latter are also ὕβρις relations, etc.

Nietzsche's youthful intuition appears justified: the concept of ὕβρις speaks to the joyful blossoming forth of all that comes to be and passes away according to φύσις. By conceiving vegetal life in terms of ὕβρις and the "will to the accumulation of force," Nietzsche is able to abandon the insistence upon unity that characterizes Hegel and Goethe's approaches to living things. Whereas these philosophers understand the unity of the plant as central, Nietzsche's "plant" is a crude fiction masking a multiplicity of growth, a ravenously unbounded vegetal exuberance. In this sense, plants are for Nietzsche an emblematic form of that "terrible impulse" of ὕβρις that belongs to life as such.

And yet, Nietzsche's interpretation of ὕβρις remains hampered by his resistance to the errors of his predecessors, who insist upon the unity of the organism. In his fervent insistence upon multiplicity, Nietzsche's account of ὕβρις becomes enmeshed in a theory of expenditure that is ultimately unable to take account of the particular type of "self" that is involved in self-overcoming—the limit or measure that also belongs to plant life. When he defines life as "a multiplicity of forces, connected by a common mode of nutrition," it must be said that he is much abler to account for the multiplicity of forces than he is their common mode.¹²⁷

For Nietzsche, as for Hegel and Goethe, the question concerning vegetal life comes to be articulated in terms of *unity* and *difference*. For each philosopher, as we have seen, the most important aspects of their thinking resist this articulation, but remain underdeveloped. In the Greeks, we are beginning to see a different approach: while remaining sensitive to the importance of unity and multiplicity, the Greek understanding of ὕβρις resituates the question concerning plants in terms of *excess* and *limit*. The relation between fire and vegetal life that appeared in Heraclitus' discussion of their "quelling" and measure, for example, is a central image in Aristotle's understanding of the limit and proportion which belongs to the hubristic activity of the nutritive, vegetal activity of

¹²⁷ Nietzsche, *Will to Power*, 1968 §641, quoted on page 108.

soul.¹²⁸ Because of this different concern, nutrition has a more central role in the Greek conception of plant life than it does in Hegel, Goethe, or Nietzsche.

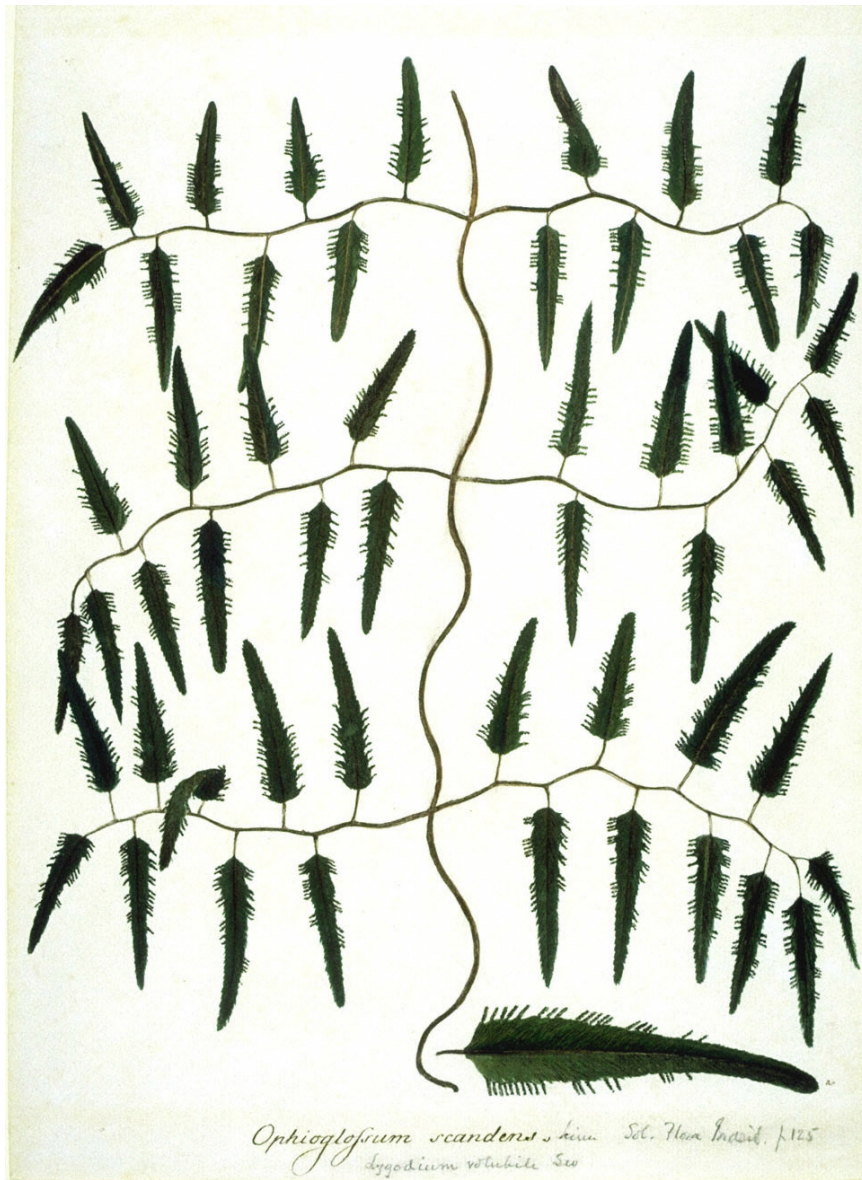
The remainder of this essay focuses on Greek philosophy, exploring the ὑβρις of plant life in terms of excess and limit, the broad movement of φύσις, and the activity of nutrition. The next chapter begins with Aristotle, who remains sensitive to the hubristic character of plant life while providing a much more robust account of vegetal nutrition as the modality of growth.¹²⁹

¹²⁸ See Chapter VIII.

¹²⁹ Fig. 13: Parkinson, *Cucumis Mello Var. Agrestis*, 1769; fig. 14: Parkinson, *Lygodium Volubile*, n.d.



FIGURE 13. *Cucumis melo*



Ophioglossum scandens Linn. *Sel. Flac. Indid.* p. 125
Lygodium volubile Sw.

FIGURE 14. *Lygodium volubile*

Part III

CHAPTER VI

BETWEEN ΦΥΣΙΣ AND ΖΩΗ

Yet what about the plant? Here already we are uncertain.

MARTIN HEIDEGGER

In Nature, the plant is the most *natural* thing. It is natural *life*.

JACQUES DERRIDA

When Aristotle sets out in *On the Soul* to discern and articulate the originary principle of living things, he reproaches his predecessors for ignoring vegetal life.¹ To their identification of life with perception and locomotion, he objects by way of counterexample, for the plant has neither yet is alive. Plants therefore exercise a pivotal role in the development of Aristotle's line of inquiry into living being, setting the study upon its proper path. Plants bring clarity to the inquiry by presenting life in its simplicity. The very minimalism of plant life, however, also makes it enigmatic: is vegetal life *too* meager to be that "through which living belongs to all things?"² For Aristotle, as for Hegel, plants partake in a partial kind of soul.³ Thus, the same bareness of vegetal life that grants it a methodological privilege also entails a deficiency of being. In its vegetal mode, life both appears with an instructive simplicity and simultaneously recedes into occlusion.

¹ A much earlier version of this chapter's thesis appears in Kerr, "Phytology, Between φύσις and ζωή," 2019. Among the sources that I have fruitfully consulted for this chapter and the next but have not quoted directly, I make special mention of Baracchi, *Aristotle's Ethics as First Philosophy*, 2011, Gotthelf and Lennox, *Philosophical Issues in Aristotle's Biology*, Klein, "Aristotle, an Introduction", Lennox and Bolton, "Being, Nature, and Life in Aristotle", McNeill, *The Time of Life*, 2006, Nussbaum and Rorty, *Essays on Aristotle's De Anima*, and Owens, *Aristotle: Collected Papers*, 1981. Epigraph sources: Heidegger, *Fundamental Concepts*, 1995 62, Derrida, *Of Grammatology* 148.

² Aristotle, *De Anima*, 1979 415a35.

³ "τὸ τοιοῦτον μῶριον τῆς ψυχῆς." Aristotle, 413b8.

In Aristotle, plant life grants access to the being of the living but for precisely this reason is difficult to apprehend in its specificity and remains itself eclipsed. On the one hand, Aristotle wants to account for a non-zoological life; on the other hand, his account remains subservient to and enmeshed within the zoological categories that such an account would serve. In this chapter, I attempt to trace the ambivalence involved in Aristotle's account of plant life, focusing especially on the opening chapters of his text and the account of striving in book III, chapters 9-10.⁴ On the basis of my analysis, I interpret this ambivalence toward plants as the attempt to articulate a fundamentally different kind of soul than the sensitive soul with which his text is largely concerned: a phytological form of life that has more in common with φύσις than with animal life (ζωή). Phytology would then be the vegetal pivot which for Aristotle holds φύσις and ζωή together in their difference.⁵

The first section of this chapter situates the role of plants in Aristotle's inquiry. This inquiry has a twofold aim of revealing the truth of both the soul and of φύσις. As the form of life which responds most adequately to this demand, vegetal life comes to the forefront of Aristotle's approach. At the same time, as I discuss in the second section of the chapter, Aristotle views vegetal life as deficient; his account is oriented primarily toward animal life. In the third section, I trace the way in which this ambivalence concerning plants plays out in the case of particular activities of the soul, especially striving and imagination. Finally, the fourth section interprets this ambivalence as productive in relation to the twofold aim of Aristotle's inquiry. Aristotle's ambivalence concerning plants, in other words, responds to the ambivalent character of life itself.⁶

⁴ I am grateful to the faculty and participants at the 2018 Collegium Phaenomenologicum for the many conversations concerning ὁρεξις in plants that inspired this chapter.

⁵ For a broader discussion of the twofold character of φύσις, see Brogan, *Heidegger and Aristotle*, especially ch. 2-3.

⁶ In general, Aristotle's method is to let things speak. See Owens, *Doctrine of Being*, 1978 129-131: "Things are directly known and studied"; "Things are in some ways the same, in some ways different. If a different term were used every time the definition differed, all danger of confusion would vanish. So too would be

§6.1. Vegetal Beginnings

Aristotle begins *On the Soul*⁷ with an invocation of what is beautiful and worthy. While exacting and difficult to a superlative degree, the inquiry into the soul is also beautiful, worthy, and wonderous. Despite the difficulty of taking hold of the soul, it nevertheless belongs among the first things by virtue of its way of bearing up understanding. Such an understanding has a twofold aim: it not only illuminates the soul itself as a principle of life but also illuminates all things according to that truth which belongs to φύσις. It is with these considerations that Aristotle begins the text and simultaneously poses the problem of how to begin:

Beautiful and worthy things bear up understanding, and one more than another according as it is either more exacting or better and more wonderous. Because it is both of these, we would with good reason situate inquiry concerning the soul in what is first. Coming to know it seems to gather together all things toward truth, and to do so greatly, and most of all toward the truth of φύσις. For it is something like a principle [ἀρχή] of animals.⁸ So we seek to contemplate and to come to know both φύσις and the distinct being of it, and then as much as comes along with it (some of which seem to be affections of the soul itself and others to belong to animals because of the soul). But to take hold of anything trustworthy about it is the *most* difficult of *all* things in *every* way. [...] There will yet be a great deal of puzzling and

lost in the expression the unity and interrelations that groups of things have among themselves. The term would be made technically precise and definite. But it would thereby shut out of its air-tight compartment much of the indefinable richness contained in things.”

⁷ I refer to Mark Shiffman’s excellent translation of *On the Soul* (Aristotle, *De Anima*, 2011) and to the Loeb Classical Library translations of other Aristotelian texts. The translations are frequently modified following the Oxford Classical Texts edition of the Greek.

⁸ Or “living things.” I discuss the ambiguity on page 147.

wandering about for the proper starting points of the inquiry. For different beginnings [ἀρχαί] belong to different things.⁹

On the one hand, Aristotle's thinking inquires into the soul as the animating principle of animal life. In many ways, *On the Soul* is a book about sensation (αἴσθησις), which is the characteristic activity of animals, and its various correlates.¹⁰ After the doxography and general definitions, the account of sensation occupies roughly two thirds of the remaining text.¹¹ The evident activity of animals is in large part to perceive (perhaps something edible, beautiful, etc.), desire what they perceive, and travel to it; this is the characteristic zoological activity with which the text's account of perception is primarily concerned as it builds toward an initial account of noetic activities. On the other hand, the inquiry into the distinct being of the soul is at the same time an inquiry concerning φύσις. According to Aristotle, this is because φύσις is a principle (ἀρχή) of animal life in some way. What does this mean? To a first approximation, the observation concerns movement: insofar as the soul is a principle of movement, it is related to φύσις as "the distinct being of things having a principle of movement in themselves as such."¹² For Aristotle, however, the point is stronger. The inquiry into the soul reveals a twofold character of life and discloses a fundamental relation between vegetal life and φύσις. In its relation to the soul, the truth of φύσις appears as "something like" a principle of life.¹³

What, then, is the status of this originary principle of the soul, which is not exactly an ἀρχή but rather "something like" one? To establish an originary principle from which an

⁹ Aristotle, *De Anima*, 1979 402a1-11, 21-23 (emphasis added). Although most translators naturally read "αὐτῆς" at 402a8 with both "φύσιν" and "οὐσίαν," I read it only with the latter. This makes better sense of the conceptual structure of the passage, which concerns on the one hand the truth of φύσις (402a6) and on the other hand the "τὴν οὐσίαν καὶ τὸ τί ἐστι" of the soul (402a13).

¹⁰ I use "sensation" and "perception" equivalently.

¹¹ By my count, the doxography occupies roughly five Bekker pages, the general definitions two, nutrition one, perception more than seven, and intellect just over two.

¹² Aristotle, *Metaphysics*, 2003 1015a14-16. For some difficulties with this simple connection, see Aristotle, *De Anima*, 1979 405b30-406b15, discussed in Chapter VII.

¹³ "ἔστι γὰρ οἷον ἀρχή," Aristotle, *De Anima*, 1979 402a7.

inquiry into these things can proceed, Aristotle declares, will require a great deal of puzzlement and wandering. This puzzlement in finding an originary principle for his *inquiry* is entangled in the task of the inquiry itself, namely, to find the originary principle of *the soul*. Thus, the litany of perplexities (ἀπορίαι) with which Aristotle initiates his study concerns both the inquiry and the soul.¹⁴ To find an origin for the inquiry would be to find a phenomenon that can hold together the twofold aim of the inquiry as an investigation concerning both φύσις and the zoological activities of the soul. Such a phenomenon, as we will see, will be “something like” an origin for both φύσις and animal life (ζωή). The problem of securing an origin for the inquiry and soul together therefore means: what is the originary principle in living things that holds φύσις and ζωή in relation without collapsing them into identity?

In the early portions of his text, Aristotle proceeds by declaring a series of new beginnings to the inquiry, each culminating in a difficulty which arises from the twofold character of the study of the soul. Aristotle first turns toward the opinions of his predecessors, declaring that the inquiry ought to begin with prior opinions about what belongs to the soul “according to φύσις.”¹⁵ Some of these predecessors looked for the principle of the soul by attending to φύσις, identifying the soul with the elements (fire, air, etc.). Most looked for the principle of the soul by attending to animal life, identifying the soul with perception and locomotion, and “it is pretty much these two thoughts that we have inherited from our forebears concerning soul,” as Aristotle concludes, for these men “suppose soul to be what gives motion to animals.”¹⁶ Soul does, of course, give motion to animals, but this observation remains only on the zoological side of the inquiry. In their own fashion, both those who emphasize φύσις and those who emphasize animal life deny the twofold character of the inquiry into the soul by deciding it in one direction or the

¹⁴ Aristotle, 402a13-403b19.

¹⁵ Aristotle, 403b25-26.

¹⁶ Aristotle, 403b27-28, 404a8-9.

other. Here Aristotle introduces the corrective that will become the linchpin of his analysis: the soul of plants. Plants redress inherited opinions through their inability to be resolved either on the side of φύσις simply or on the side of animal life.¹⁷ Plants, as we will see, appear as a hybrid form of life, relating φύσις and animal life (ζωή) together in their difference. The doxography therefore ends in the realization that the inquiry into the soul will have to begin with vegetal life, for only here do we find an originary principle that is common to both plants and animals.

§6.2. Between Plant and Animal

In light of the centrality of vegetal life, Aristotle's initial tension between the inquiry into φύσις and the inquiry into the zoological activities of the soul undergoes a shift: the philosopher becomes increasingly concerned with the tension between the soul of plants (φυτά) and that of animals (ζῷα). On the one hand, animal life is manifestly associated with soul. "Life is found in animals and plants," observes the pseudo-Aristotelian author of *De Plantis* in a spirit consonant with his authorial pretensions. "But in animals it is apparent and obvious, whereas in plants it is hidden [κεκρυμμένη] and not manifest."¹⁸ On the other hand, the terms of Aristotle's inquiry—especially the doxography—reveal the importance of vegetal life. For this reason, Aristotle comes at the soul "again as if from the beginning," starting from the question of what is most common to all soul.¹⁹ While this new approach remains with plant life throughout, it nevertheless does so abstractly, in the end offering only a "sketch that traces the outlines around the soul."²⁰ This is because the account of what is most common—in which we find the famous definition of the soul as

¹⁷ See Aristotle, 410b20-411a2 and 411b19-24.

¹⁸ Aristotle, *Minor Works*, 1936 815a10-14. Quoted on page 8.

¹⁹ Aristotle, *De Anima*, 1979 411b28-412a4.

²⁰ Aristotle, 413a10.

“the first actuality of an organized natural body”²¹—ends up articulating only *that* the soul is and fails to bring to light its *generative*, originary principle. Aristotle therefore takes up yet another beginning for his inquiry, beginning from the phenomena themselves, those things that “are more readily apparent but unclear.”²² By this point, in keeping with the trajectory of this series of beginnings, the phenomena in question are primarily plants; in them, the originary principle (ἀρχή) of the soul comes to light. This is a principle of nourishing, growing, and withering, and it is only “due to this principle [ἀρχή] that life belongs to living things.”²³ This prepares the way for Aristotle’s final beginning which, starting from the vegetal soul as an originary principle, carries his analysis through to the end of the text.²⁴

This trajectory, which moves from the twofold aim of the Aristotelian inquiry toward the vegetal beginning that finally secures a starting point for Aristotle’s account, gives pride of place to plant life.²⁵ And yet, that vegetal beginning is forgotten almost as quickly as it is established. After a single chapter concerning the nutritive soul, Aristotle proceeds to devote twenty to the zoological activities (primarily perception and thought) with hardly a backward glance. In this sense, the account of the nutritive soul, which pertains especially to plants, exists only *en route* to the sensitive soul which forms the central focus of the text. *On the Soul* is a zoology text, the main focus of which is to articulate the activities of the living animal. At the same time, however, to give an adequate account of sensation requires a prior account of an insensitive form of life, a movement of growth and reproduction which surges forth and withers away of its own accord:

²¹ Aristotle, 412b5-6.

²² Aristotle, 413a11-13.

²³ Aristotle, 413a26-413b3.

²⁴ Aristotle, 415a16-435b26.

²⁵ I consider each of these moments in greater detail later in this chapter and, especially, in Chapter VII.

But if one is to say what each of them is—the noetic, the perceptive, or the nutritive—then one must rather primarily say what thinking is and what perceiving is. [...] But first one must speak of nutrition and reproduction; for the nutritive soul belongs already to all the others and is the first and most common potency of soul, through which living belongs to all things.²⁶

In the account of the soul, sensation and thinking are primary in the order of importance, but nutrition is first in the order of inquiry. The discourse concerning the vegetal is a necessary propaedeutic for an account to which it is ultimately secondary. It is in this spirit that Aristotle is able to remark offhandedly in his later treatment of sensation that “the soul is demarcated mainly by two distinctive features: (1) motion with respect to place and (2) thinking, judging, and perceiving.”²⁷ What is first (nutrition) has here entirely vanished into what is primary (sensation). Nutritive life is hidden in the inquiry into life, appearing only in a privative relation to life in general and its full paradigm, the human animal.²⁸

The aim of Aristotle’s study is the truth concerning animals and—in fact, most of all—the truth concerning φύσις (see page 131). If the inquiry into the soul is what first discloses the truth concerning φύσις, it is plant life in particular that situates the soul within the movement of φύσις and constitutes the keystone of this disclosure.

Nevertheless, the vegetal soul discloses the truth of φύσις *as* a principle of zoological life. Although Aristotle’s account must take account of the nutritive soul, it is driven by a zoological aim and conceptual logic. In Homer, φύσις shows itself under the guise of the plant which bears and secures the difference between animal and human only through its uprooting and disappearance (see page 8). In Aristotle, similarly, the truth of φύσις

²⁶ Aristotle, *De Anima*, 1979 415a17-24.

²⁷ Aristotle, 427a18-19.

²⁸ Although none are extant, Aristotle is often thought to have composed separate treatises on plants and nutrition (although the existence of the latter is somewhat more doubtful).

appears through the activities of nutritive growth that must ultimately escape the account, even while leaving their mark upon it.

§6.3. Two Sites of Ambivalence

For Aristotle, the most striking feature of plants is that they *lack*: they lack striving, perception, locomotion, imagination, and thought. “In some living beings all of the potencies of soul that have been mentioned are present, in others a few, and in some only one,” he observes. “In plants the nutritive alone is present.”²⁹ Whereas animals possess the various potencies of soul in different combination, plants do not. Instead, plants have a “partial kind of soul.”³⁰ We should not, however, understand by this the simple claim that plants have one part of soul among others, just as animals would then also have one (or more) parts of the soul. Aristotle never makes a similar claim about animals and is generally reluctant to speak of “parts” of the soul without distancing himself from such language.³¹ Instead, we should understand that plants are noteworthy for having a kind of soul that is in some sense “partial,” that is, deficient: plants appear as a nascent, germinal form of life.

And yet, plants nevertheless live and move in complex ways: they turn toward the light, modulate the unfurling of their blossoms according to the time of day, seek out nutritious soil, etc.³² Most importantly for Aristotle, plants *grow*. Growth is the movement most proper to nourishment, and it is on this basis that “all plants appear to live, since they clearly have within themselves a potency and principle [ἀρχή] through which they continue growing and withering.” Plants grow “in both and indeed all directions” because

²⁹ Aristotle, *De Anima*, 1979 414a29-414b1. See also 432b15f, 413a34-35, 415a2, and Aristotle, *Parts of Animals*, 1937 641b8.

³⁰ Aristotle, *De Anima*, 1979 413b8.

³¹ See for example Aristotle, 402b1-17, 411b5-13, 413b11-414a1, 432a22-432b7.

³² Which of these phenomena—and which others—might Aristotle have discussed in his lost treatise on plants? We do not know.

they “live toward their ends.” In the case of plants, such growth is definitive, for “no other potency of soul occurs in them”: no perception, striving, local motion, or thought.³³ Thus the partiality of the plant soul—its restriction to nutritive growth—serves not only as a mark of deficiency but also as an intensifier: unlike animals, which grow in accordance with a fixed arrangement of organs, plants proliferate in many different directions; unlike animals, which generally cease growing at the point of maturity, plants *continue* growing and withering. In this respect, Aristotle’s interpretation of vegetal life is closely akin to those of Goethe, Hegel, and Nietzsche: the plant is pure growth.³⁴

In this intensive form, the phenomenon of vegetal growth introduces further ambivalences into Aristotle’s account of life. In the previous section, we saw that nutritive life has an ambivalent status in the beginning of Aristotle’s inquiry into the soul as the originary principle (ἀρχή) of animal life. In virtue of the primacy of vegetal growth, this ambivalence persists throughout Aristotle’s account, especially with respect to the activities of striving (ὀρεξις) and imagination (φαντασία).

§6.3.1. *Vegetal Striving*

Once philosophy recognizes the essential character of growth for vegetal life it becomes very difficult to maintain a separation of growth from the other activities of life, as I have shown in previous chapters. The same is true for Aristotle. In particular, the question of growth becomes entangled with the question of desire or striving (ὀρεξις). Insofar as it is by growing “in both and indeed all directions” that plants “live toward their ends,” growth

³³ Aristotle, *De Anima*, 1979 413a25-413b1.

³⁴ For background concerning Aristotle’s theory of growth as it relates specifically to “increase” as a change in size, see Aristotle, “Generation and Corruption,” 1955. I.5 and the helpful commentary in Haas and Mansfeld, *Aristotle on Generation and Corruption, Book 1* 171-193. As this essay has made clear, the issue of growth in plants is important in part because vegetal growth is not merely an increase in size. See also my discussion of nutritive growth in Chapter VII.

appears as a *stretching or reaching toward* that would have much in common with striving (fig. 15³⁵). As we will see, Aristotle is ambivalent on this point.

The striving aspect of vegetal growth appears implicitly in Aristotle's general definition of the soul as the first actuality of an "ὀργανικόν [organized, organic, instrumental] natural body."³⁶ The connection with striving occurs in the word ὀργανικόν. We usually hear ὄργανον (organ, instrumental part) in relation to ἔργον (work, deed): the organ is the part that has a specialized place in the work of a whole, such as the leaves whose proper work involves protecting the fruit. By growing in such and such a way, the leaves shelter the fruit in its formation and ripening. In this sense, the organ exists toward its end. So conceived, the "organized body" would be an instrumental body existing toward its ends, without necessarily being one that strives. Aristotle, however, steers us away from this interpretation, insisting that he is speaking neither of artifacts nor of parts.³⁷ Rather, he speaks of a *living* body *as* ὀργανικόν—that is, as having its "source of motion and rest within itself."³⁸ Unlike an artifact or instrumental part which is moved by another and is related to its end only in that sense, the body *qua* ὀργανικόν "lives toward" its own end, moving according to its own tendencies: the plant grows and withers. To call such a body "ὀργανικόν" draws attention to its self-moving propensity toward its end. Again, then, should we not see in this ὀργανικόν body a kind of restlessness and a germ of striving? In his etymological work, Robert Beekes finds confirmation of this connection in the relation between ὀργανικόν and a cluster of words concerning organic movement: ὀργή (a natural impulse), ὀργάω (to grow ripe, ready to bear, to swell), and ὀργάς (a fertile

³⁵ Fig. source: Parkinson, *Epilobium Billardierianum*, 1770.

³⁶ "σώματος φυσικοῦ ὀργανικοῦ." Aristotle, *De Anima*, 1979 412b1-4.

³⁷ Aristotle, 412b12-28. Although he draws analogies to artifacts (such as axes) and parts (such as eyes), he is careful to indicate the inadequacies of these analogies.

³⁸ Aristotle, 412b17-18.



FIGURE 15. *Epilobium billardierianum*

stretch of land).³⁹ It is no accident that these are originally botanical words, invoking a series of resonances particularly well-suited to Aristotle's discussion of the conative element of the living body: *as* an ὀργανικόν body, the creature lives towards its ends. The growth of plants is therefore particularly illustrative of such a striving (ὄρεξις) understood as reaching and stretching out (ὀρέγω).

This is the spirit in which Aristotle discusses striving in book III, chapters 9-10:

Movement is always for the sake of something and is either accompanied by imagination or is striving [ὀρέξεως ἔστιν]. For nothing is moved that is not reaching out [ὀρεγόμενον] or fleeing, except by force. [...] So then it is clear that such a potency of the soul, what we have called striving [ὄρεξις], causes motion.⁴⁰

Since self-movement is already a reaching out (ὀρεγόμενον), and since "it is the essence of the soul to move itself," striving belongs to the soul as such, including the soul of plants.⁴¹ Indeed, in book III, chapter 9 Aristotle digresses concerning the relation between striving and the various aspects of the soul. Striving is strange, he reflects, because it is not confined to one aspect but is rather present in the nutritive, sensitive, and noetic powers alike.⁴²

But *for what* does the plant strive? "Every striving is for the sake of something," its object (τὸ ὀρεκτόν).⁴³ Here the language of vegetal striving seems to falter. In the case of

³⁹ Beekes and Van Beek, *Etymological Dictionary of Greek* (corresponding entries, especially the entry for ὄργια). Similar observations are made, although in a rather different connection, in Krell, *Daimon Life* 9.

⁴⁰ Aristotle, *De Anima*, 1979 432b17-18, 433a32-33.

⁴¹ "ἔστιν ἡ οὐσία τῆς ψυχῆς τὸ κινεῖν ἑαυτήν." Aristotle, 406a17.

⁴² "εἰ δὲ τρία ἡ ψυχὴ, ἐν ἑκάστῳ ἔσται ὄρεξις." Aristotle, 432b5-8. In this section of his text, Aristotle is reflecting upon the Platonic division of the soul.

⁴³ "ἡ ὄρεξις ἔνεκά του πάντα." Aristotle, 433a16. Martha Nussbaum explains the meaning of ὄρεξις as follows. "1. It strongly implies directedness towards an object. It connotes, then, in the inner realm, not a vague state of yearning or being affected, but a focusing on something, a pointing toward something. 2. It is active more than passive; it is a going for, a reaching after (whether bodily or psychic) as opposed to being overwhelmed, or an empty being in need. Or rather, it indicates how wanting, which might be taken to be simply a form of passivity, is at the same time active: instead of a pure passive being-affected, we have a complex

animals, Aristotle tells a tidy story: locomotion occurs when, at the behest of striving's correlate object, striving works by means of parts such as joints to move the animal toward its practical good. As he points out, however, this story requires sensation, which plants lack.⁴⁴ Plants, by contrast, exhibit an indeterminate movement, one not oriented toward an objective counterpart and terminus.⁴⁵ In sending roots into the earth and turning leaves toward the light, plant growth exhibits a polarity that is oriented toward an elemental register of the world rather than toward discrete objects.⁴⁶ What sense, then, can we make of Aristotle's invocation of vegetal striving?

As a natural ὁργανικόν body, a plant stretches, reaching out (ὀρέγω), growing and withering in all directions as long as it lives. It moves by a natural impulse (ὀργή) or striving (ὄρεξις). As Aristotle reminds us, this movement of nutritive growth is also a *reproductive* activity:⁴⁷ the plant grows ripe and its fruit swells (ὀργάω), the more so if it is situated in fertile land (ὀργάς). In fact, among the various works of life, this nutritive work is the one that most belongs to φύσις:

responsiveness that receives from the world and in turn focuses itself towards the world" (Nussbaum, *The Fragility of Goodness* 274). Although it will become clear in what follows that this interpretation is inadequate to the manifestation of ὄρεξις in plant life, this inadequacy is precisely the difficulty that Aristotle addresses. Compare Hayes, "Being Ensouled" 334n10: "The only usage of *orexis* in the Pre-Aristotelian Greek is located in the ethical fragments of Democritus," in which context "The role of *orexis* is clearly object-linked and preoccupied with wanting or willing."

⁴⁴ For one place where this basic story is told, see Aristotle, *De Anima*, 1979 book III, chapter 9. If advances in the science of botany have since made the idea of plant sensation attractive and even natural for the modern mind, nevertheless the idea is not Aristotle's.

⁴⁵ Are there exceptions, such as the movement of the Venus Flytrap closing around its prey? Aristotle does not betray any awareness of such plant activities, so the difficult question of whether such movements have more in common with animal locomotion than the more typical movements of the plant does not arise in his existing texts.

⁴⁶ Note that the indeterminate character of these movements does not imply that they are crude or unresponsive. Rather, it suggests only they respond to something other than discrete objects. On the finely calibrated movements of plants, see the impressive Ceccarini et al., "Speed–Accuracy Trade-Off in Plants", which investigates "whether climbing plants scale movement velocity as a function of the difficulty to coil a support" and shows that "plants are able to process the properties of the support before contact" and "strategically modulate movement velocity according to task difficulty" (abstract).

⁴⁷ Aristotle, *De Anima*, 1979 415a26.

For among the works of living things, the one which most belongs to φύσις [...] is to make another like itself—an animal an animal, a plant a plant—so as to partake so far as it is able in the eternal and divine. All living things strive [ὁρέγεται] for this and for the sake of this do whatever they do according to φύσις.⁴⁸

Aristotle here places plants in explicit continuity with all forms of life with respect to their activity of striving. In contrast to the object-oriented movement discussed throughout book III, this type of striving—which we might call nutritive striving—is common to all living things. With respect to their nutritive growth, living things strive not for any determinately correlated object but for the continuance found in reproduction, a participation in the eternal. Insofar as vegetal life *just is* this activity of growth understood as nutritive striving, we should say that the plant strives for the perpetuation of striving itself.⁴⁹

§6.3.2. *Vegetal Imagination*

Aristotle's ambivalence about vegetal striving introduces a related ambivalence concerning imagination (φαντασία). In his explicit discussion of imagination (book III, chapter 3), Aristotle presents imagination as something different than but related to thinking: imagination is that whereby perceptions are gathered together and held present, even when the perceived thing is absent.⁵⁰ An animal, for example, must be able to maintain some unified perception of a thing in order to accomplish the movement from desire to fulfillment that is characteristic of such activities as hunting prey. Memories, dreams, and hallucinations also involve the imagination. He ends this discussion of imagination,

⁴⁸ Aristotle, 415a27-415b3.

⁴⁹ This theme appears in greater detail in Chapter VII, pages 176ff.

⁵⁰ Aristotle, *De Anima*, 1979 427a17-429a9.

however, with a hint that there is more to be said on the subject.⁵¹ At the end of his analysis of striving (book III, chapter 10), having discussed the striving movements of plants, animals, and humans in various combinations, Aristotle offers a surprising conclusion: “speaking generally then, as has been said, the living thing, *as* striving, is likewise able to move itself, and it is not striving without imagination.”⁵² Imagination, it turns out, belongs to striving writ large.⁵³

Once again, however, there is a difficulty. For Aristotle, imagination is consistently associated with perception.⁵⁴ Since they do not have vision, plants cannot possess imagination in its most zoologically proper sense. As in the case of striving, then, plants must possess “something like” imagination. The philosopher himself admits that “the question concerning imagination is obscure.”⁵⁵ Without attempting the difficult challenge of giving a comprehensive account, I highlight two aspects of imagination that shed some light on the question concerning imagination in plants.⁵⁶

First, imagination is involved in the retention of absent perceptible things.⁵⁷ To the extent that striving is “for the sake of” something that is not already achieved, it would seem to involve holding present in some fashion that which is not present, *viz.*, that for which striving strives. Second, Aristotle says that imagination is one of the comportments

⁵¹ “So if imagination involves nothing else than we have stated,” etc. “Let this suffice about the nature and cause of imagination”—that is, for now. Aristotle, 428b30-429a1, 429a8-9.

⁵² Aristotle, 433b27-31.

⁵³ Ronald Polansky’s critical commentary on this passage puts the point starkly: “*Phantasia* is thus the necessary and sufficient condition for desire” (“desire” is his translation of ὄρεξις). Polansky, *Aristotle’s De Anima* 524.

⁵⁴ See for example Aristotle, *De Anima*, 1979 427a15, 428b11-16.

⁵⁵ Aristotle, 414b16.

⁵⁶ For a standard overview of the textual data and interpretive positions, see Rees, “Aristotle’s Treatment of *Phantasia*”. For a recent attempt to render a systematic account of imagination, see Schofield, “Aristotle on the Imagination”. In a telling footnote (p. 256n20), Schofield remarks that his carefully constructed rendition of imagination “would not be true of animal imagination; but animal imagination is an obscure corner of Aristotelian doctrine.” Plant imagination is presumably even more obscure.

⁵⁷ In this sense, imagination is related to memory. See for example the comments in *On Memory and Recollection*, Aristotle, *Aristotle*, 1957 449b30-451a18.

by which we distinguish (κρίνω) things.⁵⁸ Since striving involves something like a selection, distinguishing that for the sake of which striving occurs, this would seem to involve the imagination. In fact, Aristotle holds this power of distinguishing (along with thinking and perceiving) to be one of the foremost distinctive features of the soul in general.⁵⁹

Although Aristotle does not explain what the imagination of plants entails, we might find a suggestion in his invocation of ants and bees as examples of notably imaginative animals.⁶⁰ As the ant and bee retain the anthill and beehive and so return to them, does not the flower similarly retain the sun through the dark night and turn east in expectation of its rising? Plants, however, do not perceive. In animals, as we saw above, striving is determinately related to an object. For this reason, animal imagination is similarly objective: the animal retains the image of the predator or prey, distinguishes between poisonous and healthful berries, etc. Aristotle stresses the etymological connection between the words imagination (φάντασία) and light (φάος) as a way of showing the special relationship between perception and imagination.⁶¹ Insofar as vegetal striving, by contrast, is indeterminate, vegetal imagination must be a type of indeterminate imagination. Because they lack perception, plants cannot relate to the sun as to a discrete object (τὸ ὁρεκτόν) of striving. In their heliotropic activities, however, plants nevertheless exhibit an imaginative relation to light. As the flower turns during the night, it distinguishes between the western time of sunset and the eastern time of sunrise, retaining the heliotropic orientation of growth even in the absence of its solar pole. More generally, the growth of plants distinguishes between gravitropic and heliotropic orientations,

⁵⁸ Aristotle, *De Anima*, 1979 428a1-4.

⁵⁹ “Now the soul is demarcated mainly by two distinctive features, viz., (1) local motion and (2) thinking, distinguishing, and perceiving.” Aristotle, 427a17-19. Cf. 432a15-17.

⁶⁰ Aristotle, 428a10-11, reading “δοκεῖ, οἷον μύρμηκι μὲν ἢ μελίττῃ ἢ σκώλῃκι δ’ οὐ” for “δοκεῖ δ’ οὐ, οἷον μύρμηκι ἢ μελίττῃ ἢ σκώλῃκι.” See Aristotle, *De Anima*, 1976 462, Aristotle, *Aristotle’s Psychology*, 1976 263, and Ross, *De Anima* 286-287.

⁶¹ Aristotle, *De Anima*, 1979 429a3-4.

discriminates among light, water, and mineral gradients, etc. Vegetal imagination, then, is a form of imagination that befits the indeterminate (non-objective) activity of vegetal striving. Alongside Aristotle's assertion of the relation between light and vision, then, we might discern a sense in which plants, with their special relationship with the light, are imaginative in a different, vegetal, manner.⁶²

§6.4. Phytology: Between φύσις and ζωή

I have spoken of Aristotle's "ambivalence" in order to identify a productive tension in his account. From this perspective, the philosopher's apparent discomfiture toward life in plants is not a weakness but a strength, a sensitive response to the difficult position vegetal life occupies. This ambivalence is expressed in three structural tendencies in the text. First, he endeavors to bring plants together with "all the other animals."⁶³ This, as we noted, is one of the primary accomplishments of the doxography. As the exemplar of life (ζωή) in its most basic form, the plant belongs to zoology. Plants grow, metabolize, reproduce, and strive. Second, Aristotle is rightly adamant about keeping plants and animals separate. This is because such activities as striving and imagination do not, properly speaking, belong to nutritive life. To adequately grasp striving involves recognizing its close affinity with perception and locomotion, as Aristotle often reminds us.⁶⁴ From a zoological perspective, we cannot understand the movements of living creatures without invoking the perception whereby they sense the object of their movement and the desire or fascination

⁶² I note in passing another horizon that opens at this point: if we follow this line of inquiry, are we led to something like a vegetal thinking (νόησις)? After all, Aristotle discerns a close relationship between imagination and thought, although he does not explicate the relationship in great detail. "The object of striving is the beginning of thought," he observes, and imagination itself is "a sort of thinking" ("νόησιν τινα," Aristotle, 433a19-20, 433a11). We habitually underestimate the degree to which Aristotle sees a germ or type of the human and divine capacities already in the plant; one wonders again what nuances the lost treatise on plants might have contained. Perhaps it is significant that he begins his discussion of thinking in *On the Soul* by quoting Empedocles' claim that understanding "grows" (Aristotle, 427a23).

⁶³ "καὶ τοῖς φυτοῖς ὑπάρχει καὶ πᾶσι τοῖς ζώοις," Aristotle, 432a29-30.

⁶⁴ See for example Aristotle, 413b19-23, 431a8-14, 434a1-3.

which gives to that movement its impetus. Imagination, suspended between perception and thought, requires both in order to appear intelligible. Plants, by contrast, are insensible and sessile. The work of nutrition—metabolism, growth, and reproduction—is simply not driven by the process which moves from perception through striving and imagination to the traveling movement that characterizes animal life. Therefore, to collapse the distinction between the nutritive and sensitive activities into a facile sameness would be both textually and phenomenologically faithless. Third, Aristotle recognizes that the vital activities of nutritive life nevertheless exhibit *something like* the striving that is proper to the animal. The movements of plants, whether aerial or subterranean, exhibit an orientation or polarity that is *something like* an imaginative striving, although it cannot be understood in precisely the same terms. Aristotle's challenge is to articulate the proximity and difference involved in this relation.

The repeated expression “something like” (τις) indicates the basic tension in Aristotle's phytology: in the very task of articulating the differences between plants and animals, he brings plants and animals into increasing proximity. At each point of zoological distinction, he must eventually admit a lack of distinction, for it turns out that striving, imagination, etc. also belong to the vegetal. At the same time, this increasing proximity appears asymptotic. That is, as the vegetal and animal are brought ever closer, the impossibility of their eventual conjunction becomes more acute. Although striving, etc. belongs to vegetal life, nevertheless it is not the *same* striving: a subtle but fundamental difference persists, even if it is difficult to articulate. In this sense, Aristotle's is a fruitful ambivalence, giving articulation to the hidden and latent life in plants.

This basic Aristotelian ambivalence toward the vegetal is reflected in the terms for “living thing” and “animal,” which are homonymous in the typical neuter (τὸ ζῷον). To speak of “living things” refers paradigmatically to animals; inversely, speaking of animals ambiguously includes plant life. Plants are a kind of life (ζωή) and living thing, but they are

not so in the full and proper sense of being animals (τὰ ζῷα). This difficulty, which already appears beginning in the doxographic passages of *On the Soul*, is particularly pronounced in the passages on striving and imagination (book III, chapters 9-10), where the nutritive soul in general and plants in particular are mentioned frequently. In these passages, it is often difficult to know whether the “living creatures” in question include plants or not.

Taking their name not from life (ζωή) but from φύσις, plants indicate a *different* life before or beneath life. In his discussion of longevity in certain plants, Aristotle makes the point by saying that, with respect to φύσις, plants are separate and peculiar over and against the animals (ιδίαν πρὸς τὰ ζῷα).⁶⁵ The proximity between plants (φύτα) and growing (φύομαι) simultaneously marks a difference vis-à-vis zoological life (ζωή). To nutrition belongs a separate and peculiar kind of activity, a striving (and corresponding imagination) understood as conation without terminus in an object. From this activity of growth comes the name not only for the plant but also for the coming to be and passing away of existing things (φύσις). Similarly, the word σύμφυτος (“natural,” but also “thickly wooded”) refers literally to a togetherness (σύν) with vegetative growth.⁶⁶ In this sense, we might identify on the one hand a life that is sensitive (ζωή) and on the other a life which subsists in a conative movement of growth and decay (φύομαι/φύσις).

Aristotle’s repeated and precise formulation for this difficulty is the declaration that “plants *seem* to live.”⁶⁷ Plants appear among and alongside the living without being identical to them. And yet, an account of soul which follows φύσις must give pride of place to the vegetal soul, for “this alone is common to both animals [ζῷα] and plants.”⁶⁸ Thus:

⁶⁵ “περὶ δὲ τοῦ πολυχρόνιον εἶναι τὴν τῶν δένδρων φύσιν δεῖ λαβεῖν τὴν αἰτίαν· ἔχει γὰρ ἰδίαν πρὸς τὰ ζῷα.” Aristotle, “Length and Shortness,” 1957 467a11-12. The comment specifically concerns trees, since the subject is longevity.

⁶⁶ Hence the common meaning “congenital” and the meaning “grown together” in some contexts.

⁶⁷ Aristotle, *De Anima*, 1979 410b22, 411b28-29, 413a26. Emphasis added.

⁶⁸ Aristotle, 411b29-30.

We seek to discern and to understand both the φύσις and distinct being of it, and then also whatever comes along with it (and of these, some seem to be affections belonging to the soul itself, others rather to come about in animals [ζῷα] because of soul).⁶⁹

When Aristotle stresses the φύσις of the soul, we should hear especially that vegetal aspect of the soul belonging to φύσις, to the realm of growth and decay. This vegetal aspect, in turn, forms the beginning and principle of animal life. This, then, is the role of Aristotle's phytology in the structure of his text: plant life, which constitutes the origin of animal life, is addressed first, followed by "whatever comes along with it"—namely, sensation, local motion, intellect, etc. in animals (including human beings).

From a perspective which emphasizes the constitutive role of phytological life, the more fundamental distinction in *On the Soul* is not the oft-remarked tripartite division of the soul into the nutritive, sensitive, and noetic activities. Rather, it is the delineation of the sensitive (zoological) from the nutritive (phytological) forms of life. In fact, it is this distinction that Aristotle stresses at each of the schematic pivots of his discussion: the conclusion of the doxography; the final passage of book I; the beginning of the proper account of soul in book II, chapter 2; the account of the relation of the parts of soul in book II, chapter 3; and the final pages of the text.⁷⁰ We might say the distinction between plant and animal life functions as a refrain which anchors the organizational hierarchy of Aristotle's account. The considerable diversity in animal powers (*i.e.*, some animals are stationary or lack various senses, human beings carry out noetic functions that other animals do not, imagination works differently in different animals, etc.) is secondary to—and in contrast with—the more important and reliable distinction between zoological and phytological soul (notwithstanding the dependence of the former upon the latter).

⁶⁹ Aristotle, 402a8-11.

⁷⁰ Aristotle, 410b22; 411b28-30; 413a34-35; 414b1; 415a2; 434a25-29; 435b1-2.

We are therefore in a position to say that the inquiry into the soul is twofold precisely because the soul itself is twofold. Approached from without, in perspective of Aristotle's broader philosophy of nature, the *inquiry* into the soul is concerned both with φύσις and with ζωή. Approached from within, in the perspective of the inquiry, this duplicity is carried by vegetal life, a nascent form of life that holds together φύσις and ζωή in their difference.

The twofold aim of Aristotle's inquiry—to reveal the truth both of φύσις and of the activities of animal life—leads the philosopher to begin his investigations with the primacy of plant life. As we have seen, the place of this originary form of life is marked by an increasing ambivalence. On the one hand, plants offer the necessary corrective that sets the twofold inquiry on its proper path. On the other hand, vegetal life appears primarily in terms of its deficiency and the account passes over the vegetal in favor of the animal. This ambivalent phytology continues to subtend Aristotle's zoological philosophy, especially in the cases of striving and imagination.

Although Aristotle's explorations are fundamentally zoological in their concerns, he remains emphatically committed to the priority of the vegetal. There is no "oversoul" that would encompass the vegetal and animal, he argues, just as there is no figure that encompasses both triangles and rectangles. Whatever triangles and rectangles share is not itself a figure: as different patterns, they have no pattern in common. Likewise, the phytological and zoological souls are not instances of the same kind of soul. Instead, the phytological soul persists implicitly in the zoological, Aristotle says, as the triangle persists implicitly in the rectangle.⁷¹ This is an asymmetrical relation: although we can straightforwardly draw the diagonal to reveal the triangle implicit in the rectangle, there is

⁷¹ Aristotle, 414b20-32.

no way to reverse the operation, producing a rectangle from a triangle by adding a fourth line. In the same way, Aristotle says, “the perceptive does not exist without the nutritive, but the nutritive exists apart from the perceptive in plants.”⁷² Thus, *only* the originary principle (ἀρχή) of plants is common to all life.⁷³ Nutritive growth enacts an autonomy of the living that is not shared by sensitive life.

What can we say, then, of the autonomous peculiarity of vegetal life? Aristotle offers a brief but suggestive possibility for articulating the peculiar nature of plants at the beginning of book III, chapter 11. Simple animals that possess only the sense of touch still possess striving and imagination, he argues, but in an unusual sense: “perhaps,” he ventures, “just as they are in motion indeterminately [ἀορίστως], so also they imagine and strive indeterminately.”⁷⁴ Aristotle makes nothing of the point, but perhaps vegetal growth, which moves “in all directions,” would be another case of indeterminate motion.⁷⁵ As we saw mentioned earlier, Aristotle draws a contrast between animals, whose growth is fixed in relation to a point of maturity, and plants, whose mode of growth means they are “always being born anew.”⁷⁶ The striving growth of plants does not find a determining limit in an object (τὸ ὁρεκτόν) but rather extends indefinitely.

In the *Enquiry into Plants*, Aristotle’s student, Theophrastus, continues the spirit of his teacher. His study focuses on the “parts” of plants,⁷⁷ whereby he means whatever “belongs to the plant’s own growing-forth,” including in this reckoning “even those things

⁷² Aristotle, 415a2-3.

⁷³ Aristotle, 411b28-30.

⁷⁴ Aristotle, 434a4-6.

⁷⁵ Aristotle, 413a29.

⁷⁶ Aristotle, “Length and Shortness,” 1957 467a13.

⁷⁷ Theophrastus emphasizes that “part” does not mean the same thing for plants as it does for animals. “It is a waste of time to take great pains to make comparisons where that is impossible,” he says of the relation between plants and animals, “and in so doing we may lose sight also of our proper subject of inquiry” (Theophrastus, *Enquiry into Plants*, 1999 1.1.4). Whereas the study of parts in animals proceeds by *e.g.* dissection, the study of parts in plants is a study of the “form generally” (Theophrastus, 1.1.4.). The proximity between Theophrastus and Goethe on this point is unmistakable.

to which the plant gives birth.”⁷⁸ For Theophrastus, then, the concept of “part” brings together growth and reproduction. As a consequence of having “the power of growth in all its parts, insofar as it has life in all its parts” the plant does not possess a fixed arrangement of organs; rather, “the multitude of parts will be indeterminate and always changing.”⁷⁹ Plants have an indeterminate character that results from the procreative movement by which they constantly overflow themselves:

The plant is prodigal [πολύχουν] and manifold [ποικίλον], and so it is difficult to describe according to the whole: in proof whereof there is nothing common we could seize which would belong to all.⁸⁰

Because this prodigality (πολύ-χέω, literally “pouring forth much/many”) belongs to the nature of plants, they are difficult to describe according to the whole. There is no part that would serve as a unifying commonality, if only because the parts of the plant are essentially proliferative.

Considered according to the whole, Theophrastus concludes, one can say only that the plant is prodigal.⁸¹ The conception of the plant as a vegetal pouring-forth approaches Aristotle’s idea of vegetal life as striving to partake in the eternal and divine, and it is this aspect of vegetal growth that Aristotle and Theophrastus call ὑβρις.⁸² The ὑβρις of plant life—its procreative and self-surpassing activity, its indeterminate and striving growth—will be our point of departure as we move further into Aristotle’s account of plants in the next chapter.

⁷⁸ Theophrastus, 1.1.2, 1.1.3.

⁷⁹ Theophrastus, 1.1.4, 1.1.2.

⁸⁰ Theophrastus, 1.1.10.

⁸¹ Theophrastus, 1.2.3.

⁸² Aristotle, *Generation of Animals*, 2000 725b35, concerning vines. Cf. Theophrastus, *Enquiry into Plants*, 1999 2.7.6 (of almond trees), Theophrastus, *De Causis Plantarum*, 1976 2.16.8 and 3.1.5 (of lupine), and Theophrastus, *De Causis Plantarum*, 1976 3.15.4 (of grape vines).

In conclusion, Aristotle's zoological psychology depends upon a phytology which conditions his account but which remains resistant to the terms of zoological inquiry. If life is hidden in plants, the life of plants is also hidden in Aristotle's primarily zoological account of the soul. This inclusion—precisely in the mode of the hidden condition by which an account of animal life is possible—means that vegetal life becomes the inarticulate fulcrum that constantly realizes the passage from φύσις to ζωή while maintaining their difference. I have suggested that this inarticulation is not a shortcoming, but rather follows the things themselves: plants grow, strive, and move, but they do so indeterminately and unboundedly (ἀορίστως). Ultimately, Aristotle supplements this analysis with a theory of limit: unlike the limitless growth of fire, Aristotle notes, those things which come to be from φύσις have a limit (πέρας) and proportion (λόγος) of growth.⁸³ This theme will be the focus of the next chapter, in which I discuss Aristotle's specific account of nutrition. The following chapter (Chapter VIII) turns to Plato's *Timaeus* in order to further develop the indeterminate striving of the plant—"itself somehow twisting to and fro within itself around itself according to φύσις," in *Timaeus*' description.⁸⁴

⁸³ Aristotle, *De Anima*, 1979 416a16-18.

⁸⁴ Plato, *Timaeus*. *Critias*. *Cleitophon*. *Menexenus*. *Epistles*, 2005 77C. Fig. 16: Parkinson, *Peperomia Leptostachya*, 1769; fig. 17: Parkinson, *Polystichum Mohritides*, n.d.



FIGURE 16. *Peperomia leptostachya*



FIGURE 17. *Polystichum mohritides*

CHAPTER VII

CONCERNING NOURISHMENT

The plant is a *measuring being*.

FRIEDRICH NIETZSCHE

The previous chapter focused on the role of plants in the broader framework of Aristotle's *On the Soul*.¹ The inquiry into the soul, Aristotle says, reveals the twofold character of life. For this reason, it requires an originary principle that would hold together φύσις and ζωή in their difference. This principle is the vegetal soul: although it is a “partial” kind of soul, it is that through which life belongs to all living things. On the one hand, then, plants are living things like the animals (ζῷα) at which his account aims; on the other hand, plants stand in a private relation to this life, having more in common with the growing life of φύσις than with the sensate life of animals. This ambivalence appears in a pronounced way in Aristotle's discussions of striving (ὀρεξις) and imagination (φαντασία), each of which he alternately denies and affirms of vegetal life. I highlighted the discomfitted vocabulary of Aristotle's botany: plants “seem to” live, having “something like” striving and imagination.² Throughout that chapter's discussion, I focused on *growth* as the characteristic activity of plants, thereby emphasizing their namesake (φύομαι) and their proximity to φύσις.³ As this essay has shown, however, vegetal growth is also a reproductive activity (chapters III and IV) and a nutritive activity (chapters V and, in expectation, VIII). In Aristotle's own preferred vocabulary, the vegetal soul is primarily called θρεπτικόν, usually translated “nutritive.”⁴

¹ Epigraph source: Nietzsche, *Early Notebooks*, 2009 138.

² For this vocabulary, see pages 148ff, 131ff, and 147ff.

³ See page 148.

⁴ See page 169.

This chapter examines Aristotle's specific account of this nutritive soul as it appears in section II.4 of *On the Soul*. After the general introduction and doxography of Book I (discussed in Chapter VI, Book II begins Aristotle's own account of the soul. Chapter 1 begins "again as if from the beginning"⁵ with the general definition of the soul, which goes through a number of iterations. At the end of Chapter 1, this definition—the soul as the first actuality of an organized, natural body that has life as its potency—is called a sufficient "sketch that traces the outlines around soul."⁶ In Chapter 2, Aristotle begins again from "another angle," this time taking into account the generating cause.⁷ It is here he explicitly identifies the vegetal potency for growing and withering as the originary principle of the soul.⁸ Chapter 3 then considers, in a general way, the relation between this vegetal power and the other activities of the soul (*e.g.*, perception) and concludes that another beginning is needed, namely, one that renders an account that begins from the particular activities in question. Aristotle therefore begins Chapter 4 by declaring the primacy of growth, nutrition, and reproduction, "for the θρεπτικόν soul belongs already to all the others: it is the first and most common potency of soul, the one through which living belongs to all things."⁹ This is the task which occupies the rest of his chapter, after which the remainder of Book II (chapters 6-12) considers perception.

I begin my treatment of II.4 in the middle of the section, considering two views of nutritive growth that Aristotle rejects. In the first section of the chapter, I introduce Aristotle's idea that the vegetal soul is a proportion and distinguish this nutritive sense of proportion from the perceptive proportionality that is characteristic of animal life. As nutritive proportion, the soul is characterized by a limit, and the second section of the

⁵ Aristotle, *De Anima*, 1979 412a4.

⁶ Aristotle, 413a10.

⁷ Aristotle, 413a11-16.

⁸ See especially Aristotle, 413a21-413b1.

⁹ Aristotle, 415a23-26.

chapter takes up this concept in relation to both Aristotle and Heraclitus. The final section addresses Aristotle's account of nutrition on its own terms, highlighting the fact that the single activity of growing, nourishing, and reproducing is an activity that essentially relates to itself as its own object.

§7.1. Proportionality

Before discussing Aristotle's own account as he develops it in section II.4, it will be helpful to consider his rejection of two received opinions concerning the living activities of the vegetal soul. These rejections appear in the middle of section II.4, as Aristotle considers the close relationship between growth and nourishment. He first criticizes the views of Empedocles, who explains the growth of plants by conceiving their soul as a specific combination of elements: their earthy roots naturally grow earthward, and their fiery leaves and blossoms naturally grow sunward. The problem with this view is straightforward: if the life of the plant were in the elements, there would be nothing that would hold these elements together, preventing them from separating. "What is it that holds together the fire and earth that are tending in opposite directions?" Aristotle asks. "For it will be separated out, if there is not going to be something preventing it," but then this principle that holds the elements together is the soul.¹⁰ The soul cannot be identified with the elements; rather, it must be a principle that holds them together. This Empedoclean idea is related to one Aristotle rejects in the doxography, when he speaks of those who "say that soul is some kind of attunement [ἁρμονία], since attunement is a blend [κρᾶσις] and combination [σύνθεσις] of opposites, and the body is composed of opposites."¹¹ According to such a view, the opposites (wet/dry, cold/hot) constitute an attunement insofar as they are blended together in the body. This "blending" is not a *mere*

¹⁰ Aristotle, 415b28-416a8. Compare page 190f.

¹¹ Aristotle, 407b30-32.

combination, but rather a consistent proportion, as in the ratio of water and wine in the crater or the relative tuning of an instrument's strings. Aristotle agrees with one aspect of this view, for he affirms that the soul is a proportion (λόγος).¹² He argues, however, that the proportionality of the soul cannot consist in the proportion of the parts of the body. Since there are many such ratios in the various parts of the body, the advocate of such a view would be forced to conclude that there are as many souls as there are different proportions in the body.¹³ Empedocles is correct in identifying the vegetal power of the soul with a certain proportionality, but this proportion consists neither in the proportion of the elements that compose the body nor in the proportions by which its various parts stand in relation. Rather, the vegetal soul consists in a proportion that is also a principle that holds together the elements in their characteristic combinations.

Aristotle contrasts the *nutritive* proportionality that is characteristic of vegetal life with a *perceptive* proportionality that is characteristic of animal life. In the doxography, Aristotle objects to those who argue that the soul must be made of the elements in order to perceive things made of the elements. While it is true that the soul must be “like” things in order to perceive them, Aristotle admits, what is perceived in things is not primarily their elements; rather, the soul perceives the *proportion* of elements by virtue of which each thing is a determinate thing.¹⁴ Aristotle further clarifies that the proportionality on the side of the creature does not belong to a part of the body (namely, the sensitive organ) but to the perceptive power of the soul: this power, he says, “is some kind of proportion [λόγος τις], and the power of the organ belongs to it.”¹⁵ This is why excess sensation destroys the

¹² Among other passages, one might note this occurring at the end of the series of general definitions given at II.2 (Aristotle, 414a14, 414a26).

¹³ Aristotle, 408a5-24.

¹⁴ Aristotle, 409b19-410a10.

¹⁵ “The sense organ is that in which primarily this sort of power [to perceive] exists. In one way, then, they [the power and the organ] are the same thing, but their being is different. The sensing organ would be extended, while certainly sensitivity and sense cannot be extended. Rather, the latter is some kind of proportion, and the power of the organ belongs to it” (Aristotle, 424a26-28).

organs, for “the proportion [λόγος] that is the perception is destroyed, just as the concord [συμφωνία] and pitch of a lyre is destroyed when the strings are struck hard.”¹⁶ The point is not that an excess of sensation merely destroys the *organ* (although that may also happen), but rather that it destroys the *proportion* of the sensitive soul. This perceptive proportion is a mean (μεσότης: medium, middle) between extremes. As he points out, for example, we do not perceive things that are exactly the same temperature as ourselves, for there is then no difference involved.¹⁷ On the other hand, a difference that is too great will destroy the sense organ (as when one gazes directly at the sun) or even the whole creature (as when one dies of exposure).¹⁸ The sensitive mean articulates a “zone” within which it is possible to perceive what is other than the creature. Perceptive receptivity requires a certain active tension that allows the thing perceived to enter into relation with the receptive power as something different than it without being overwhelmed and destroyed. No such receptive tension would be required if perception were only the imposition of matter: one need not appeal to the operation of a sensitive mean in order to explain the violent amputation of a limb, for example.¹⁹ What is perceived of things is not, Aristotle argues, their matter: sensation receives things “not in virtue of what each of them is said to be, but insofar as it is such-like, according to the proportion [λόγος].”²⁰ That is, it is not the concrete material thing as such that sensation receives, but rather the proportion in virtue of which the thing is what it is. The proportionality characteristic of the nutritive soul, by contrast, does not occur according to such a “mean.”²¹ As we will see in his rejection of Heraclitean thinking, Aristotle rather understands the nutritive proportion as a type of limit.

¹⁶ Aristotle, 424a32-34.

¹⁷ Aristotle, 424a1-11.

¹⁸ Aristotle, 435b8-19.

¹⁹ See Aristotle, 424b11-12.

²⁰ Aristotle, 424a23-25.

²¹ Aristotle, 424a34-424b3.

Aside Do plants perceive?²² They certainly *seem* to: flowers follow the course of the sun, tendrils grow toward the light, roots seek out the most nourishing soil, etc. In Aristotelian terms, we would say that the striving of plants seems to be closely related to a kind of perception. “Being pleased or being pained is the being-at-work of the sensitive mean [τῇ αἰσθητικῇ μεσότητι] in relation to the good or bad as such,” he explains. “In their being-at-work, avoidance and striving [ὄρεξις] are this.”²³ The activity of striving is already the activity of a sensitive mean. In accordance with our earlier discussion, we might suspect that this perception, like vegetal striving and imagination, is “indefinite” insofar as it is not oriented toward a particular, determinate object. Near the end of the *On the Soul*, Aristotle appears ambivalent on this point:

Sensation is not necessarily present in all living creatures [οὐκ ἀναγκαῖον ἐν ἅπασιν τοῖς ζῶσιν], since those whose body is simple cannot have the sense of touch, without which nothing can be a living creature [οὔτε ἄνευ ταύτης οἶόν τε οὐθὲν εἶναι ζῶον].²⁴

But a living creature must necessarily have sensation [τὸ δὲ ζῶον ἀναγκαῖον αἰσθησθαι ἔχειν].²⁵

Plants have no sensation, because they are earth.²⁶

²² I leave aside the question of the philosophical status of contemporary scientific advances. On the subject of plant perception, see Runyon, “Volatile Chemical Cues Guide Host Location and Host Selection by Parasitic Plants” and Gagliano et al., “Out of Sight but Not Out of Mind”. For a discussion of specifically optical perception in plants, see Baluška and Mancuso, “Vision in Plants via Plant-Specific Ocelli?”.

²³ Aristotle, *De Anima*, 1979 431a11-13.

²⁴ Aristotle, 434a27-30.

²⁵ Aristotle, 434a31.

²⁶ Aristotle, 435b1-2.

Contextually, this rapid vacillation between affirming and denying the necessity of sensation involves an implied qualification: sensation is not necessarily present in living creatures *as such*, but it is coextensive with life in *certain* living creatures, etc. The passage therefore recalls the ambiguous status of plants vis-à-vis life (ζωή) as such.²⁷ Ultimately, however, Aristotle denies sensation to plants.²⁸ “Plants do not perceive, although they have a partial kind of soul and are somehow affected by the things tangible to them [πάσχοντά τι ὑπὸ τῶν ἀπτῶν] (for they get cold and warm),” he explains. “The cause is that they do not have a mean [μεσότης], that is, the sort of originary principle [ἀρχή] that receives the forms of things perceived, but are instead affected with the matter.”²⁹ Aristotle seems to be reasoning from the phenomena: although plants are affected by *e.g.* light, their receptivity to it does not exhibit a perceptive “mean” analogous to the occurrence of sensation in animals.³⁰ The “indefinite” type of striving and imagination that Aristotle discusses can have no analogue in perception, which requires a determinate perceptive mean.

²⁷ See page 147 and following, above.

²⁸ *E.g.*, Aristotle, *De Anima*, 1979 424a33.

²⁹ Aristotle, 424a34-424b3.

³⁰ In the explicit terms of the account, the issue concerns the *simplicity* of plants. Although the vegetal soul belongs to an “ὀργανικόν” (organized; cf. page 139) body, plants are “utterly simple” (παντελῶς ἀπλᾶ, Aristotle, 412b1-2). To be “simple” in this sense, Aristotle explains, means to consist of a single element, such as fire or air (Aristotle, 435a11-435b1). Because the various forms of perception depend upon touch, he reasons, and because touch requires an earthy body, the body of the living creature cannot consist in any single element besides earth. At the same time, however, it cannot be composed *only* of earth. “For touch is a kind of mean between all the tangible qualities,” he explains, “and this is why we do not perceive by means of bones or hairs or other such parts, because they are earth. And for this reason plants have no sensation, because they are earth.” The idea here is that earth, which is cold and dry, could not of itself account for the ability of touch to receive *e.g.* what is hot and wet. Aristotle continues: “Without touch, no other sense can be present, and the sensitive organ is not simply earth nor any other single element” (Aristotle, 435a23-435b4, cf. 414b8-9). Touch must therefore be conceived as a mean between the various tangible qualities. Plants, being composed of earth, are therefore unable to touch and, consequently, unable to perceive in general. In the doxography, Aristotle surveys those thinkers who believe the soul to consist in the elements (Aristotle, 404b7-405b30, 409b19-411a25). The survey concluded, Aristotle remarks that “each of the elements has found someone to award it the prize except earth; no one has spoken up for it” (Aristotle, 405b8-9). For Aristotle, as we know, the soul is not a body at all but rather is *of* a body. Nevertheless, he speaks up for the neglected element in his own way: it turns out that in the first (vegetal) instance, soul belongs to a body that is simply earth. Once again, the simplicity of plants, by virtue of which they offer the exemplary beginning for the inquiry into the soul, is ambivalent.

§7.2. πῦρ and πέρας

After rejecting the Empedoclean approach, Aristotle next criticizes the views of the Heracliteans, who identify the growth of plants with their nutritive activity and therefore with a single element: namely, fire (πῦρ). Unlike the other elements, fire grows as it consumes nutriment (fuel), so it would appear to be a principle of the sort needed to account for the nutritive activity of the soul. But Aristotle also rejects this view, for there is an important difference between fire and soul:

For the growth of fire is unlimited [ἄπειρον] as long as there is fuel; but of all things that hold together by φύσις there is a limit [πέρας] and a proportion [λόγος] of size and growth—and these things are of soul but not of fire, and of proportion [λόγος] rather than of matter.³¹

Although it exhibits something like the power of nutritive growth, fire is unlimited. The fire Aristotle has in mind is evidently something like a voracious forest fire that spreads boundlessly, nourishing itself relentlessly in its expansion. The activity of the soul which is manifest in growth and nutrition, by contrast (for “nothing withers or grows by φύσις without nourishing itself”³²), is proportionate (fig. 18³³). Aristotle here indicates a sense of proportionality that is different than that which characterizes perception and is defined by a mean. Rather, this sense of proportion belongs to the movements of φύσις insofar as living things are held together by such movements. Furthermore, this sense of proportion constitutes a limit by which those things which hold together by φύσις do so in a determinate way.

³¹ Aristotle, 416a16-18.

³² Aristotle, 415b27-28.

³³ Fig source: Parkinson, *Dendrobium Involutum*, 1769.



FIGURE 18. *Dendrobium involutum*

Aristotle's contrary impulse notwithstanding, I turn to Heraclitus in order to develop the sense of the limit and proportion here in question.³⁴ In the fragments which have been preserved, the fire to which Heraclitus most often appeals is not the raging inferno invoked by Aristotle but rather that brightest flame, the sun. The Ephesian's pyrophilosophy expresses a profound conception of proportion (or measure) in relation to limit that has more in common with Aristotle than the Stagirite's criticism might suggest:

The sun is overseer and sentinel of cycles, for determining the changes and times which bring all things forth.³⁵

The sun will not transgress its measures.³⁶

The limits belonging to dawn and evening [ἑσπέρας] are Ursa Major and, opposite Ursa Major, the boundary of luminous Zeus.³⁷

The sun is extinguished in old age, but rekindled again.³⁸

The sun is new every day.³⁹

Fire, returning in time, will distinguish and bind together all things.⁴⁰

The "was," "is," and "will be" are fire, the endlessly living, kindling in measures and extinguishing in measures."⁴¹

³⁴ I do not argue that Aristotle misunderstands or misrepresents the Heracliteans or their founder. Admittedly, the later philosopher's treatment of his predecessors is sometimes opportunistic, but the question of authenticity would be irrelevant to this essay. It will suffice in this context to note that Aristotle knew the Ephesian philosopher as a near contemporary and founder of a living school, whereas we know "Heraclitus" as the author of a few surviving fragments.

³⁵ DK 100.

³⁶ DK 94.

³⁷ DK 120.

³⁸ Quoted in Plato, *Republic*, 2013. VI, 498A (numbered XLVIII B in Kahn, *The Art and Thought of Heraclitus*).

³⁹ DK 6.

⁴⁰ DK 66.

⁴¹ DK 30. "Endlessly living" (ἀείζων) could also be translated "boundlessly living" or "ever-living."

The sun gives light and growth, bringing forth the changes and times for all things (πάντα) considered as growing-forth (φύσις).⁴² These changes and times are not abstract categories, but the sustaining fire that brings forth growth, nourishing things and granting them endurance, allowing time to each thing. To the sun belong measures (μέτρα) which are not external, such that they might be transgressed, but instead belong to its occurrence essentially. These measures are limits, boundaries which mark the sphere of brightness in which the celestial fire illuminates, between dawn and evening, the sphere of terrestrial space and time even more than luminous Zeus.⁴³ The measures of the sun therefore manifest (a) the course of the sun, its place among the heavenly bodies and gods, (b) the cyclical time of the sun, its own internal rhythm of extinguishing and rekindling, and (c) that luminous power that determines the changes and times in which all things grow: that measure, in the fullest sense, *in which* things come to pass and therefore which distinguishes and binds together all things. As rhythmic activity—ῥυθμίζειν, “to bring into a measure of time or proportion”⁴⁴—fire appears as that which brings things forth in the proper measure and proportion. Thus the sun always possesses a power of newness and rekindling according to which the things of φύσις grow forth and wither away.⁴⁵ In its rhythmic return, fire images the measure and proportion that first distinguishes and therefore binds together all things. Thus fire indicates the perduring increase of life in which occur the measured kindling and extinguishing of whatever grows and withers.

⁴² “Ἡλιος is the clock of the world, the world-clock; not an instrument that indicates times, but that which makes the seasons possible, which brings all. We cannot understand the seasons in the sense of fixed spells of time or as stretches in homogenous time, but as the times of days and of years. These times of years are not the lingering but the bringing.” Heidegger and Fink, *Heraclitus Seminar* 35. My reading of the sun/fire fragments is indebted to this seminar, despite the very different set of concerns exemplified therein.

⁴³ This reading would be enriched with a discussion of lightning in Heraclitus, which also belongs to the fragments concerning fire.

⁴⁴ Liddell and Scott, *Greek-English Lexicon*.

⁴⁵ Compare DK 1, in which the sense of proportionality that most properly belongs to life appears instead in its fundamentally cosmic significance: “All things come to be according to this proportion,” which “distinguishes each according to its φύσις.” In this fragment, Heraclitus plays on the ambiguity between the cosmic proportionality and his own words—an important theme which is nevertheless beyond the scope of this essay.

This solar fire is one of the primary images through which Heraclitus' thought reaches us. In other fragments, however, these empyrean themes are developed more explicitly in other terms, and it becomes clear that the figure of fire images a certain aspect or dimension of being that manifests itself in the soul as the principle of living things. As the light of the sun is not itself the things of φύσις but is instead that in or *according to which* the things of φύσις grow and wither, so also the cosmos is not the simple sum of whatever exists but rather—as proportion—the appearing-together and the manifesting-arrangement of all things that are.⁴⁶ Likewise, life is not for Heraclitus this or that living thing, but rather the proportion according to which the living thing appears as living. Soul is not a thing behind the creature that constitutes its truth, but rather the animation or life activity in which the being alive of the creature becomes manifest.⁴⁷ In Chapter V, I discussed Heraclitus' philosophy of life, focusing on the element of strife or tension.⁴⁸ As we saw there, Heraclitus defines life in terms of self-increase:

The soul is a proportion increasing itself.⁴⁹

Like Aristotle, Heraclitus recognizes the voracious, expansive character of fire's growth. At the same time, however, it is not because the soul has *no* limit that it appears as boundless. Rather, it is because the soul is *a certain kind of limit*: namely, a proportion which grows, increasing itself. There is thus a certain boundlessness to life which belongs for Heraclitus to its very sense of measure and proportionality.

⁴⁶ DK 30.

⁴⁷ In this connexion, Heraclitus is very close to the concept of χώρα introduced in Chapter VIII (see page 200ff). I noted earlier that “soul” is Heraclitus' preferred way to speak of life (page 115).

⁴⁸ See page 115ff.

⁴⁹ DK 115, quoted on page 117. In that context, I translated λόγος as “definition”; we are now in a position to translate it as “proportion.” Johnstone rejects this translation because it would be “difficult to see how this ‘measure’—regardless of whether it is conceived of as a set proportion or as a set amount—could ‘increase itself,’ or what the point of this comment about augmentation might be” (Johnstone, “On ‘Logos’ in Heraclitus” 18). To grasp the sense in which the activity of life is an activity of increase that occurs as a proportion in relation to a limit is admittedly difficult, but in this difficulty consists the philosophical issue in question.

In a related fragment, Heraclitus makes explicit the relation between the sense of limit which belongs to the soul and its living proportionality. “You will not find the limits [πείρατα] of the soul by going,” he warns, “even if you travel over every way, so abundant is its proportion.”⁵⁰ There are indeed limits of the soul, but these limits cannot be understood as extensional determinations, the sort which could be found by traveling to the perimeter. As Heidegger explains, “πέρας in Greek philosophy is not ‘limit’ in the sense of the outer boundary, the point where something ends.” It is not that which can be found by going. Rather, “the limit is always what limits, defines, gives footing and stability, that by which and in which something begins and is.”⁵¹ Heraclitus thus here indicates this sense of limit as that by which something “begins and is” by situating the limit in the measured proportionality of an activity of life that is “abundant”⁵² insofar as it is characterized by a movement of self-exceeding. In Deleuze’s interpretation of Heraclitus,⁵³ such abundance and self-increase means “going to the limit.” He clarifies: “Here, limit [*peras*] no longer refers to what maintains a thing under a law, nor to what delimits or separates it from other things. On the contrary, it refers to that on the basis of which it is deployed and deploys all its power.”⁵⁴ In this sense, the limit is the measure, because it indicates the degree and kind of power that belongs to the activity of life. “This ontological measure,” he continues, “is closer to the immeasurable state of things” than any external measure, and “closer to the hubris and anarchy of beings.”⁵⁵ The soul, as the activity of living, is not measured by an

⁵⁰ DK 45. “Proportion” here is “λόγος,” which could also be translated “measure.” See DK 31B and Kahn, *The Art and Thought of Heraclitus* 129.

⁵¹ Heidegger, “On the Essence and Concept of Φύσις,” 1998 206.

⁵² “βαθύς”: deep, abundant, strong, or profound (Liddell and Scott, *Greek-English Lexicon*). Cf. the “βαθείης τάρφεσιν ὕλης” in Homer, *Iliad*, 1999 5.555.

⁵³ This interpretation occurs largely through Nietzsche’s reading and bears the marks of that mediation.

⁵⁴ Deleuze, *Difference and Repetition*, 1994 37 (brackets original).

⁵⁵ Deleuze, 37. Conceiving things in themselves—as “hubris,” “anarchy,” “absolute immanence,” or “complete power” in Deleuze’s diverse vocabulary: ultimately, as “a life”—reveals the necessity of a sense of limit and measure that is not imposed upon but arises from things as they occur. Deleuze, *Pure Immanence*, 2002 27.

external limit to which it attains or fails to attain. Rather, the determinate limits of the soul are to be found internally, in the determinate proportionality by which it begins to be and is. Neither, however, is this proportionality a homeostatic event. Rather, life occurs as a determinate proportionality that consists in a specific manner of self-increase and ὕβρις. This is why ὕβρις is a particularly incisive word in Heraclitus philosophical vocabulary, for it names the self-overflow *as such*: that preeminently vegetal condition marked by an intensive degree of power and oversaturation of force.⁵⁶ ὕβρις—perhaps more than fire—indicates a limit constituted out of the inner movement of abundant self-increase.

§7.3. Nourishing-Growing

In identifying fire primarily with the sun, Heraclitus does not neglect the aspect of nourishment that dominates Aristotle's image of the voracious, all-consuming flame. Instead, he shifts its locus. For Aristotle's all-consuming forest fire, Heraclitus substitutes the measure of the solar passage: a fire which not only gleams but also grants nourishing light and warmth to living things. Thus fire is both "need and satiety," the necessity and excess that belong to life as nourishment.⁵⁷ In the surviving fragments, however, there is little development of this aspect of Heraclitus' thinking. Among the ancients, it is rather Aristotle who takes up the philosophical questions concerning nutrition most directly, as we have seen.

What, precisely, is the "θρεπτικόν soul?" As I mentioned above (page 156), this is Aristotle's preferred term for that sort of soul that is especially characteristic of plants but which ultimately belongs to all living things. Usually translated "nutritive," θρεπτικόν more precisely means "of or promoting growth"⁵⁸ and is closely associated with "increase"

⁵⁶ For the previous discussion of ὕβρις in Heraclitus, see page 117ff.

⁵⁷ DK 65.

⁵⁸ Liddell and Scott, *Greek-English Lexicon*.

(αὔξῃσις).⁵⁹ The word is derived from the verb, τρέφω, which is likewise often translated “nourish.”⁶⁰ These translations are potentially misleading, however, if we have in mind a modern concept of metabolism. In fact, the primary sense of τρέφω is “to grow, to cause to grow” referring to the kind of growth that is characteristic of living creatures, as Émile Benveniste explains in detail:

In reality, the translation of *tréphō* by ‘nourish’ in the use that is actually the most common does not suit all the examples and is itself only an acceptance of both a broader and a more precise sense. In order to account for the ensemble of semantic connections of *tréphō*, we have to define it as: ‘to encourage (by appropriate measures) the development of that which is subject to growth.’⁶¹

In order to remain as close as possible to this complex of meaning, I will translate “θρεπτικόν” as “nourishing-growing,” despite the inelegance of the expression.

I return now to *On the Soul* II.4 and to the beginning of Aristotle’s specific discussion of the nourishing-growing activity of the soul. The passage begins with two claims about priority:

But if one is to say what each of them is—the noetic, the perceptive, or the nourishing-growing [θρεπτικόν]—one must rather first say what thinking is and what perceiving is. For in the order of λόγος, the forms of being-at-work

⁵⁹ See e.g. Aristotle, *Nicomachean Ethics*, 1934 1098a1.

⁶⁰ Beekes and Van Beek, *Etymological Dictionary of Greek* 1505 (“τρέφω”).

⁶¹ He continues: “With *paídas*, *hippous*, we would translate it as ‘to nourish, to raise (children, horses).’ But there is also *tréphein aloiphén* ‘to encourage the increase of fat’ (*Od.* 13. 410); *tréphein khaítēn* ‘to let his hair grow’ (*Il.* 23. 142). It is here that a peculiar and ‘technical’ development is inserted, and it is precisely the sense of ‘curdle.’ The Greek expression is *tréphein gála* (*Od.* 9. 246), which must now be literally interpreted as ‘to encourage the natural growth of milk, to let it attain the state towards which it is tending,’ or, prosaically, ‘to let it curdle.’ This is nothing other than an idiomatic connection of *tréphein* to the sense of ‘to let grow, to encourage growth’ that it has everywhere. From the standpoint of Greek, there is no difference between *tréphein khaítēn* ‘let the hair develop itself’ and *tréphein gála* ‘let the milk develop.’ Nor is there any difference between *tróphies paides* ‘children who have grown (and attained the adult age), and *kúmata tróphonta*, *kúma tróphi* ‘waves that have attained their full development.’ Emile, *Problems in General Linguistics* 252. Compare Liddell and Scott, *Greek-English Lexicon*, “τρέφω.”

and the actions are prior to the potencies for them, and prior to actions one must contemplate correlative objects. [...] So first we must speak of τροφή and reproduction, for the nourishing-growing [θρεπτικόν] soul belongs already to all the others: it is the first and most common potency of soul, the one through which living belongs to all things. Its works are reproduction and the exercise of τροφή.⁶²

According to Aristotle, (a) activities are prior to capacities, and (b) correlative objects are prior to activities. “Correlative objects” (ἀντικείμενα) are not just *any* objects; rather, they are the specific object to which a relative activity is relative. Without entering a lengthy digression concerning relatives, we might simply say that correlative objects are the objects that the activity is “of,” as seeing is *of* a visible thing and thinking is *of* an intelligible thing.⁶³ In combination, these two principles of priority indicate that an account of the capacity for sight, for example, will first require understanding the activity of seeing, and an account of the activity of seeing will first require understanding the thing seen. Aristotle also emphasizes this priority in the *Categories*, where he explains that an activity of the soul is defined in reference to the correlative object, but the correlative object is not defined in

⁶² Aristotle, *De Anima*, 1979 415a17-26. I read “τροφή χρῆσθαι” as “exercise of τροφή” against the usual translation, “use of nutriment.” χρᾶσθαι with a dative noun is often used in this way. According to Aristotle, “the exercise of anything [χρῆσθαι παντί] is this: when the capacity is for the thing, someone does this very thing” (Aristotle, *Protrepticus*, 2017 57, 57.23 [B84]). See Coates and Lennox, “Unity of Nutritive and Reproductive” n21. I also depart from the usual translations in my rendition of lines 20-22: “εἰ δ’ οὕτως, τούτων δ’ ἔτι πρότερα τὰ ἀντικείμενα δεῖ τεθεωρηκέναι, περὶ ἐκείνων πρῶτον ἂν δέοι διορίσαι διὰ τὴν αὐτὴν αἰτίαν, οἷον περὶ τροφῆς καὶ αἰσθητοῦ καὶ νοητοῦ.” περὶ ἐκείνων is typically interpreted as referring backwards to τὰ ἀντικείμενα, and οἷον περὶ τροφῆς καὶ αἰσθητοῦ καὶ νοητοῦ is therefore read as a list of three ἀντικείμενα. It is equally permissible, however, to read περὶ ἐκείνων as referring forward to οἷον περὶ τροφῆς καὶ αἰσθητοῦ καὶ νοητοῦ (for an example of this grammatical construction, see Aristotle, “Topics,” 1960 125a33-37). On this reading, the need in question is the *general* need to investigate the activity of nourishment, the perceptible thing, and the intelligible thing, rather than *specific* need to investigate ἀντικείμενα in every case. Likewise, the cause of this need is not the priority of correlative objects over activities *only*; rather, the cause is the entire structure in which correlative objects have priority over activities and activities over potencies. My translation follows this latter reading. For a detailed case for the same interpretation—albeit in a much different context—see the recent Coates and Lennox, “Unity of Nutritive and Reproductive”, to which my reading is on this point greatly indebted.

⁶³ Cf. Aristotle, *Metaphysics*, 2003 1021a26-31; see also Polansky, *Aristotle’s De Anima* 202.

reference to the soul: my perception of a sunflower depends upon the sunflower, but the sunflower does not depend upon my perception of it.⁶⁴

At this point, however, two problems arise. First, why is the nourishing-growing power of the soul characterized by two works (“reproduction and the exercise of τροφή”) instead of one? After all, the feeding habits of, say, a housecat are very different from its habits of mating and childbearing. To this observational objection we might add a logical one: if activities are prior to capacities, then one would expect that the duplicity of activity (nutritive growth versus reproduction) would correspond to a duplicity of capacity (a nourishing-growing power versus a reproductive power). The problem has puzzled commentators.⁶⁵ Furthermore, why does Aristotle, who typically stresses the reproductive activity of the soul over the nourishing-growing activity, identify the single power of the vegetal soul in terms of the latter, rather than the former?⁶⁶ At one point in II.4, he even entertains the alternative suggestion explicitly: “since it is right to assign every thing its name from its end, and its end is to reproduce, the primary soul would be that which is reproductive.”⁶⁷ Despite the suggestion, he nevertheless persists in preferring the term “nourishing-growing.”

In order to address this problem, we must resist the common impulse to think in zoological terms. To the extent that Aristotle is thinking primarily of plants (rather than animals such as housecats), the apparent difficulty is dispelled: in vegetal life, as we have noted repeatedly in this essay, there is *not* typically any neat division between growth and reproduction; rather, the characteristic activity of the plant is nourishing-growing *qua*

⁶⁴ The point in the *Categories*, which concerns the status of correlatives, is the straightforward observation that knowledge or perception requires its objects, but the objects do not require knowledge or perception. See Aristotle, “Categories,” 1938 7b15-8a12.

⁶⁵ See Coates and Lennox, “Unity of Nutritive and Reproductive” for one example. See also Polansky, *Aristotle’s De Anima* 200-207 and Aristotle, *De Anima*, 2016 200-202.

⁶⁶ See for example Aristotle, *De Anima*, 1979 415a26-29, Aristotle, *Generation of Animals*, 2000 731a21-33, Aristotle, *Generation of Animals*, 2000 735a18-20, etc.

⁶⁷ Aristotle, *De Anima*, 1979 416b22-23.

reproductive proliferation. In the *History of Animals*, Aristotle makes the point forcefully: plants have no other function than reproduction, he says, whereas animals both reproduce and feed.⁶⁸ The philosopher is not denying that plants nourish themselves; rather, he is asserting that the activity of nourishment is not other than that of reproduction in the vegetal case. The local preference in this case for the term “reproduction” rather than “nourishing-growing”—an artifact of the context in which the passage occurs in the *History of Animals*—emphasizes the essential fungibility of the terms.

In the first (vegetal) instance, then, the activity which belongs to the nourishing-growing power of the soul is not essentially two but one. This is why Aristotle turns immediately to τροφή in the passage quoted above.⁶⁹ Although most translations render τροφή as “food” and understand this as the correlative object of nourishment, such a reading cannot make sense of the passage, as commentators have noticed.⁷⁰ This mistranslation concerns an artifact of the language. Whereas Aristotle’s terms for the perceptive and noetic powers of the soul (νοητικόν, αἰσθητικόν) have direct counterparts naming the correlative objects of those corresponding activities (τὸν νοητόν, τὸν αἰσθητόν), the term for the nourishing-growing power (θρεπτικόν) has no such counterpart. Aristotle therefore often takes recourse to the related term τροφή, which has two meanings. As the direct nominal form of the verb τρέφω, it refers in the first place to

⁶⁸ “τῶν τε γὰρ φυτῶν ἔργον ἄλλο οὐδὲν φαίνεται πλὴν οἷον αὐτὸ ποιῆσαι πάλιν ἕτερον,” Aristotle, “History of Animals,” 1965 588b25-26.

⁶⁹ See page 170.

⁷⁰ To take one illustrative example, Ross dodges this difficulty by simply declaring Aristotle’s reasoning in 415a20-25 to be “rather careless.” “The reasoning here is rather careless. A[ristotle] first says that we should study the objects of the faculties before we study the faculties themselves; and this is quite reasonable. Nutrition, for instance, being the absorption of food, we must know what food is before we can understand what nutrition is. τροφῆς, in l. 22, being treated as corresponding to τὸ αἰσθητόν or τὸ νοητόν, must mean ‘food’; but in l. 23, being parallel to γέννησις, it must mean ‘the absorption of food.’ In ll. 22-23 it is said to follow from what has just been said that we must treat first of nutrition and generation; but this in fact follows not from what has just been said, but from what follows in ll. 23-25, viz. that nutrition and generation are the basic faculties whose presence constitutes life” (Ross, *De Anima* ad loc.). Once τροφή in 415a22 is understood as referring to the activity (rather than the correlative object), however, Aristotle’s claims *do* follow, as I explain.

“nourishment” or “nurture”—that is, to the activity of nourishing-growing. In this sense, τροφή often entails but is distinguished from simple increase (αύξησις), for increase is merely quantitative, whereas τροφή pertains to the substance of the living creature.⁷¹ By derivation, τροφή also has the second meaning: it is a typical way to refer to “nutriment” or “food” as that which serves such growth.⁷² In this case, however, the fact that Aristotle pairs τροφή with reproduction indicates that it refers to an activity. The point becomes clearer when Aristotle repeats himself a few lines later: “Since the same potency of the soul is nourishing-growing and reproductive, it is necessary first to draw distinctions concerning τροφή, for it is by this activity [ἔργον] that such a potency distinguishes itself from the others.”⁷³ As in the previous passage, we read here that a single potency of the soul is characterized by both nourishing-growing and reproduction (fig. 19⁷⁴). In this case, however, Aristotle suggests that there is a standpoint from which the two activities can be seen as one: namely, when understood in terms of the activity of τροφή.

Since activities must be understood in terms of their correlative objects, the question which next arises concerns the correlative object of the activity of τροφή. To the extent that τροφή involves nourishment, one might think that its correlative object is food (τροφή in the objective sense). Many of Aristotle’s interpreters have made this suggestion.⁷⁵ Indeed, food is necessarily involved in nourishing-growing. Nevertheless,

⁷¹ Aristotle, *De Anima*, 1979 416b13-14.

⁷² Liddell and Scott, *Greek-English Lexicon*. In fact, the ambiguity is somewhat more pronounced, since Aristotle sometimes even uses the term τροφή as a synonym for θρεπτικόν. Compare Polansky, *Aristotle’s De Anima* 202: “Though the term τροφή obviously can mean food, it has wider possibilities. The term can also refer to the nutritive faculty and even to its operation. This is somewhat similar to the way the term for sense perception, aisthesis, can refer to the faculty, its operation, and even the object and the sense organ. Aristotle can speak unambiguously of the faculty of nutrition by the term threptikon or threptikh, which he employs in ii 4 at 415a17, a23, and 416a19. Hence when he uses τροφή in passages that can mean more than one thing, this must be by design.”

⁷³ Aristotle, *De Anima*, 1979 416a19-22.

⁷⁴ Fig. source: Parkinson, *Marsilea Polycarpa*, 1769.

⁷⁵ Ronald Polansky is one excellent example. In contrast to my own reading, his interpretation maintains an essential distinction between reproduction and nourishment, but justifies their relation to a single potency by suggesting that they have a single correlative object. On his account, *food* is the object not only of



FIGURE 19. *Marsilea polycarpa*

food is not a correlative object in Aristotle's sense.⁷⁶ This can be seen by the fact that "food is acted upon by the one feeding," as the philosopher explains, "but not the feeder by the food."⁷⁷ As we saw above,⁷⁸ correlative objects are logically and ontologically prior to their activities: the visible object, for example, acts upon the seer. Food does not have this relationship to nourishing-growing: the feeder acts upon the food, not vice versa.

According to Aristotle, the correlative object to which the activity of τροφή is relative is what shares in life: the living creature, the ensouled body as ensouled. "Since nothing nourishes itself [τρέφεται] that does not share in life, the thing nourished [τὸ τρεφόμενον] would be the ensouled body, as ensouled," he explains: "thus τροφή is *relative to what is ensouled*."⁷⁹ In this way, Aristotle is able to lay out the precise structure of nourishing-growing:

There are three things involved: that which is nourished [τὸ τρεφόμενον], that by which it is nourished [ὃ τρέφεται], and that which nourishes [τὸ τρέφον].

What nourishes is the primary soul, what is nourished is the body that has this, and that by which it is nourished is the food.⁸⁰

nourishment but also of reproduction, which cannot occur without food: "Reproduction fits within the nutritive capacity because the food that is employed for the growth and maintenance of the organism also becomes in its ultimate rendering the seed that serves for propagating new life, and many living things naturally reproduce themselves by means of seed" (Polansky, *Aristotle's De Anima* 204). On his reading, the unity of the two activities is guaranteed by their common object, and Aristotle's preference for the term "nourishing-growing" is the natural outcome of a focus on food. That food might be necessary for reproduction, however, does not entail that it is the correlative object of reproduction. For a survey of other examples, see Coates and Lennox, "Unity of Nutritive and Reproductive" n18.

⁷⁶ Actually, food *is* a correlative object in Aristotle's thinking, but that of taste, not of nourishing-growing. See Aristotle, *De Anima*, 1979 434b18-24.

⁷⁷ Aristotle, 416a34-35.

⁷⁸ See page 170.

⁷⁹ Aristotle, *De Anima*, 1979 416b9-11 (emphasis added). Some translators render "τροφή" as "food" in this context, but Aristotle thinks the *activity* is relative to its *correlative object*, not vice versa. Compare Aristotle, II.6, especially 418a23-26: "The perceiver is not acted upon by the thing perceived [...] and it is relative to these [things perceived] that the distinct being of each sense is naturally ordered." See also Aristotle, 429a17-18: "as the perceptive potency is relative to the perceptible thing, so the intellective potency is relative to the intelligible thing."

⁸⁰ Aristotle, 416b21-24.

The active participle (τὸ τρέφον) indicates the activity, the primary soul; the passive participle (τὸ τρεφόμενον) indicates the correlative object, the body as ensouled.⁸¹ Food has a specific place as one of the two necessary conditions “by which” nourishment occurs (the other is vital heat, as Aristotle immediately explains).⁸² Aristotle’s understanding that the correlative object of τροφή is the ensouled body *qua* ensouled—that is, the existing living creature—also furnishes further reason for thinking that reproduction and nutrition are related to one potency of the soul, the nourishing-growing. We saw above that nourishing-growing (τροφή) and reproduction are essentially one activity in their first (vegetal) occurrence. We are now able to see that nourishing-growing and reproduction both have the same correlative object: the living creature as an ensouled body.⁸³

From this perspective, we can return to the the passage which begins the discussion of τροφή in II.4 (quoted on page 170), including what I previously elided:

For in the order of λόγος, the forms of being-at-work and the actions are prior to the potencies for them, and prior to actions one must contemplate correlative objects. For these reasons, one ought to delineate the following things: τροφή, the perceptible object, and the intelligible object.⁸⁴

Many translators render “τροφή” here as food, arguing that (a) the list in which it appears is a list of correlative objects and (b) the correlative object of nourishing-growing is food.

This produces an apparently tidy reading: “the edible thing, the perceptible thing, and the

⁸¹ For other instances of this typical grammar, see Aristotle, 418a23-26 and 429a17-18, quoted above. Compare Aristotle, 416b17-20: on the one hand, nourishing is related to its correlative object, whereas “on the other hand, food furnishes the necessary materials for the activity, so without food it would not exist.”

⁸² Aristotle, 416b28-30. Coates and Lennox understand the point to be significant: “Showing that Aristotle understands both nutrients and heat as necessary conditions for nutrition thus speaks strongly against the standard interpretation of the antikeimenon of nutritive soul. Being a necessary condition of nutrition or reproduction is not sufficient for qualifying as the antikeimenon of either” (Coates and Lennox, “Unity of Nutritive and Reproductive” n32).

⁸³ Aristotle, *De Anima*, 1979 416a15-17.

⁸⁴ Aristotle, 415a17-23.

intelligible thing.” As I have shown, however, Aristotle does not consider food the correlative object of nourishing-growing. When τροφή is understood as the activity of nourishing-growing, however, Aristotle’s list appears as rigorously precise: the three things mentioned (the activity of τροφή, the perceptible thing, and the intelligible thing) *are* the correlative objects of three activities of the soul. This is because the thing which nourishes and the thing nourished are, in the end, the *same* thing: the ensouled, living creature. As Aristotle stresses, the correlative object of nourishing-growing is not merely a body which happens to be nourished, but rather the *ensouled qua ensouled*.⁸⁵ In its perceptive and noetic activities, the soul relates to something *else*: namely, perceptible and intelligible things. The nourishing-growing activity of the soul is crucially different, for in this activity the soul relates to *itself*. Since this “self” in question is nothing other than the activity of nourishing-growing, the activity of τροφή is ultimately related, in the most essential analysis, to activity of τροφή. We have thus arrived at the full solution to the problem introduced above, namely, the question of why Aristotle prefers to speak of “nourishing-growing” before “reproduction.” Although either would be fitting, the former highlights the sense in which this primary soul-activity has *its own activity* as its correlative object.

In Chapter VI, I suggested that the ambivalent place of plant life in Aristotle’s philosophical project reveals that “the plant strives for the perpetuation of striving itself.”⁸⁶ This sensibility appears in Heraclitus’ definition of the soul (cf. pages 117 and 167) as a proportional activity of increase in which what increases is that activity of increase itself. Here, the same conative element of vegetal life has been brought to light by Aristotle’s explication of nourishing-growing. To put the point inelegantly: the plant nourishes nourishing. Or—because “the plant” just *is* an activity of nourishing—more precisely:

⁸⁵ Aristotle, 416b9-11, quoted on page 176.

⁸⁶ Page 143.

nourishing nourishes nourishing.⁸⁷ In Aristotle's own terms, "this originary principle of the soul is a potency to hold alive this potency as such."⁸⁸

At one point in his discussion of the proportionality of vegetal soul, Aristotle contends that the nourishing-growing soul is what holds together the mixture of elements in living creatures.⁸⁹ This is presumably a reference to Plato's *Timaeus*, where plants are introduced into Timaeus' cosmology precisely in order to address the difficulty of understanding such a mixture. Like Aristotle, Plato is concerned with articulating the relationship between the activity of life and its correlate object. Like Aristotle, Plato is ultimately interested in the vegetal soul *en route* to the human soul. Whereas Aristotle begins with the vegetal activity of nourishing-growing, however, Plato begins with the human being and works backward to uncover the necessity of the vegetal. In Timaeus' account, the difficulty of understanding the relationship between the activity of life and its correlate object emerges because this life is first of all *not* a nourishing-growing life. Rather, in the dramatic presentation of Timaeus' speech, the human being is first constructed *without* the activity of nourishing-growing. It is due to the failure of this configuration that plants are introduced into the account. Animals life (including that of the human animal), according to the Platonic account, is impossible without the activity of the vegetal soul. This vegetal activity is a φύσις that is "akin" to the human, in Timaeus' words: different, but blended together with it. Like Aristotle, Plato articulates an understanding of vegetal life that sees it as a proportionality that articulates a self-exceeding relation of the activity of nourishment with the thing nourished. However, Timaeus' account addresses this activity more precisely in terms of movement. For Aristotle, the activity of the soul is always a kind of

⁸⁷ Here "nourishing" must be understood in the properly Aristotelian sense so as to include at the same time "growing" and "reproducing." "Nourishes" must be understood likewise.

⁸⁸ Aristotle, *De Anima*, 1979 416b18-19.

⁸⁹ Aristotle, 416a5-10, quoted on page 158.

movement. Timaeus, however, characterizes this movement precisely as a kind of movement that is both wild and balanced. The next chapter, then, explores this understanding of vegetal life by taking up Timaeus' account in detail.

As this chapter has argued, Aristotle understands vegetal life in terms of a proportionality and limit that belongs to the movement of nourishing-growing, the latter understood as a self-relation of the activity of nourishment to that which is nourished. In the course of the study, I distinguished the concept of nutritive proportionality from that of perceptive proportionality by indicating that the former consists in a type of limit (πέρας), and I began developing this concept further in relation to Heraclitus' philosophy. After receiving additional development in the next chapter, the question concerning the proportionality and limit that characterizes vegetal life will reappear in the concluding chapter, where it will be brought into explicit relation to the question of reproduction, which Aristotle holds to be equally characteristic of the single activity—growing, nourishing, reproducing—that he calls the primary soul.⁹⁰

⁹⁰ Fig. 20: Parkinson, *Canavalia Cathartica*, 1769; fig. 21: Parkinson, *Rodriguezia Rigida*, 1768.



FIGURE 20. *Canavalia cathartica*



FIGURE 21. *Rodriguezia rigida*

CHAPTER VIII

A CHORIC LIFE

The specific activity of life—which is the being of all things—is not primary, but is poured forth as from a spring. [...] Imagine the life of a great plant, the originary principle of which goes through the whole while remaining also not scattered about the whole but settled in the root. This vegetal principle grants the whole multiplicity of life to the plant while remaining itself not a multiple being but rather the originary principle of the multiplicity of life.

PLOTINUS

In *Physics* IV.II, Aristotle offers an influential misreading of Timaeus' χώρα:¹ “Plato, in the *Timaeus*, says that matter [ύλη] and χώρα are the same.”² But Plato rarely uses the word ύλη, and never to mean an Aristotelian “matter.” Rather, Plato uses the word in its everyday sense: to mean “timber.”³ This identification between χώρα and matter is nevertheless taken up in Plutarch and the great stream of Platonic interpretation that flows from Middle Platonism onward. But what if this misreading indicates far more than it realizes? Suppose χώρα really is, at least in some sense, identified with ύλη: not as Aristotelian matter, but precisely as *timber*. The χώρα, lodged at the heart of the difficulties involved in thinking about the living movement of φύσις, would then indicate a vegetal aspect of life.

Despite the brevity of their appearance, plants enjoy a pivotal importance in the *Timaeus*. First, Timaeus would not be able to give his “guest-gift of speeches”⁴ to Socrates without them: the human body, Timaeus says, “sprouted” legs and hands, the marrow is a “universal seed” that gives to life its “roots” and in which the various forms of souls are

¹ Although usually translated “space,” I leave χώρα untranslated because the meaning of the term is what this chapter places into question, especially in its relation to vegetal life.

² Aristotle, *Physics*, 1957 209b. Epigraph source: Plotinus, “*Enneads*” §3.8.10 1-13.

³ Sallis, *Chorology*, 1999 152-153.

⁴ Plato, *Timaeus*, 1922 20c. English translations are based on Plato, *Plato's Timaeus*, 2001 and are frequently modified.

“planted,” the brain is a “field” to hold the “divine seed,” the skin of the head grows by “budding” as it is “watered” by moisture around the brain, the hair “took root” in the scalp and “sprouted” there, and so forth.⁵ He apparently needs the metaphorical vocabulary of plants in order to give his account its proper shape and character. Second, Timaeus also speaks of a more fundamental need for plants: the formation of the human being is impossible without them.⁶ The discussion of the role of plants in the formation of the human being—the only extended discussion of plant life in Plato’s dialogues—recounts how the gods, after fashioning the human creature, contrive plants to be cultivated as nourishment. Plants, strangely rooted in the ground while still being living things (ζῷα), are the means by which Timaeus is able to render life and body compatible in the construction of the human animal. Early in the dialogue, Timaeus claims that “one must determine how the accounts are also akin to those very things of which the accounts are interpreters”:⁷ in their dependence on flora, at least, the constitution of the cosmos (κόσμος) and the constitution of Timaeus’ story (μῦθος) agree.⁸

Nevertheless, commentators have been strangely silent concerning the importance of Timaeus’ botany. Archer-Hind lauds the text: “Brief as is Plato’s treatment of the subject, the union of poetical imagination and scientific grasp which it displays renders this short chapter on plants singularly interesting.”⁹ At the same time, however, he gives no attention to the relation between vegetation and its anthropological context. Taylor’s magisterial commentary cannot avoid the botanical passage, but he follows the tenor of Archer-Hind’s remarks, as does Cornford.¹⁰ Sallis’ more recent book, *Chorology*, does not mention plants

⁵ See Plato, *Timaeus*, 1922 45a, 73b-d, 76a-b.

⁶ Plato, 76e-77c.

⁷ Plato, 29b.

⁸ This chapter focuses on the second way in which plants achieve prominence in the *Timaeus*. The complicated issue concerning the role of plants as metaphor—which has appeared tangentially on more than one occasion in this essay—is beyond the scope of this study.

⁹ Archer-Hind, *The Timaeus of Plato* 288.

¹⁰ Taylor, *A Commentary on Plato’s Timaeus* 540-544; Cornford, *Plato’s Cosmology* 302-303.

even once.¹¹ Similarly, Skemp's line by line commentary on Plato's botany deals comprehensively with every aspect of the passage *except* this feature.¹² Although Karfik's analysis of the generation of the human body notes the important parallel between the instability of the world soul/body and that of the human soul/body and even mentions the importance of nutrition in the latter case, he does not discuss the passage concerning plants.¹³ These surprisingly univocal examples are, it appears, representative.

This chapter explores the role of plants in the creation of the cosmos as it occurs in Plato's *Timaeus*, focusing on the parallel relation between (a) the structural position of plants in the formation of the human being and (b) the structural position of the χώρα at the crucial turning point of the text. According to my interpretation, Timeaus' account is crafted so as to render the human-plant relation a microcosm of the cosmos-χώρα relation. By reading the neglected passage concerning vegetation in this light, it becomes possible to situate Timaeus' botany firmly in the conceptual and rhetorical structure of the dialogue. In the first two sections, I show how Timaeus introduces plants to address the difficulty of understanding how life relates to the living creature (especially the human being). The third section details the distinction he makes between wild and cultivated plants, which leads to an interpretation of χώρα in terms of movement in the fourth section. The fifth section returns to the discussion of plants, showing how plants are the microcosmic analogue to the cosmic χώρα. This is because of their nutritive character, which I address in the final section. My interpretation therefore has two aims. Primarily, I aim to show how Plato gives articulation to the activity of plant life, especially through analogy with the χώρα. Secondly, I also aim to put into question the status of plants in the broader cosmology that Timaeus develops. Although the χώρα is not itself vegetal, the fact that

¹¹ Sallis, *Chorology*, 1999.

¹² Skemp, "Plants in Plato's *Timaeus*."

¹³ Karfik, "The Constitution of the Human Body in Plato's *Timaeus*" 177.

Timaeus' speech depicts it as the cosmic counterpart of terrestrial plant life provides an opportunity to reconsider those aspects of the *χώρα* that are most analogous to the vegetal.

§8.1. Anthropology and Zoology

Timaeus' speech, in which consists the bulk of the dialogue that bears his name, answers to a specific set of dramatic conditions. According to the plan of speeches Hermocrates, Critias, and Timaeus lay out for Socrates, the purpose of Timaeus' account is to generate human beings, delivering them to Critias to be made into citizens of a city.¹⁴ This stipulation has two broad ramifications for the interpretation of the text: Timaeus' sprawling cosmology is fundamentally (a) anthropological and (b) zoological in character.

(a) Despite its reputation as a cosmological text, the *Timaeus* is in many ways focused on human beings. Timaeus reminds his audience of this when he begins his speech with the necessity to “invoke what has to do with ourselves.”¹⁵ As commentators have pointed out, the cosmology constitutes a minority part of Timaeus' speech by measure; the “microcosmology” of the human being occupies the largest part.¹⁶ Plato crafts Timaeus' account in such a way as to emphasize the parallels between the cosmic and human constructions, presenting them as mirror images of one another.¹⁷ This becomes most explicit in Timaeus' discussion of human eyes, given to us “in order that, by observing the circuits of intellect in heaven, we might use them for the orbits of thinking within us, which are akin to those.”¹⁸ In this way, Timaeus' cosmology prepares for his

¹⁴ Plato, *Timaeus*, 1922 27a-b.

¹⁵ Plato, 27d.

¹⁶ By Stephanus pagination, the generation of the cosmos occupies about twenty-seven pages (27c-41b, 47e-61c) and the constitution of the human being about thirty-six (41b-47e, 61c-91c). For a different (though complementary) perspective on this point, see Karfik, “The Constitution of the Human Body in Plato's *Timaeus*” 167.

¹⁷ “The parallel of macrocosm and microcosm runs through the whole discourse” (Cornford, *Plato's Cosmology* 6).

¹⁸ Plato, *Timaeus*, 1922 47b. Examples could be multiplied: the human body is initially a micro-sphere crafted by micro-gods, etc. See also Karfik, “The Constitution of the Human Body in Plato's *Timaeus*” 168-172.

anthropology not merely by providing materials (e.g. a cosmos in which humans will live) but also by providing the structural features of the anthropology.

(b) If the *Timaeus* is concerned primarily with the human being, the problem of the human being appears foremost as a problem concerning its life. In fact, the original impetus for Timaeus' far-reaching cosmology arises explicitly from a question of life. Early in the dialogue, Socrates complains that his affect toward the previous day's speech is as that of someone who had gazed upon living creatures but found them to be mere paintings. Such a person might have a desire to see not only images but living bodies, moving and struggling.¹⁹ Socrates' earlier speech had spoken of political arrangements and the education of the soul, but his words did not take into account the nature of men and women as living creatures belonging to the movement of φύσις.²⁰ Without this prior register of existence, Socrates' account of the city remains lifeless and immobile. To remedy the lifelessness of Socrates' account, Timaeus will therefore speak, "beginning from the birth of the cosmos and ending in the φύσις of mankind."²¹ Such an account of humans *qua* living creatures begins by acknowledging that the cosmos itself (along with the creatures in it) is not made but *born*. That is, the cosmos and its creatures are not manufactured members of the world of artifacts; rather, they are living things which belong to φύσις. In this sense, the whole cosmos "was truly born an animal."²² As Timaeus

¹⁹ Plato, *Timaeus*, 1922 19b.

²⁰ For a discussion of the identity of this prior speech, see Sallis, *Chorology*, 1999 21-31. In this sense, "Socrates' discourse serves to mark certain *limits* that impose themselves on the fabrication (ποίησις) of the city, limits that limit the extent of the technical order that could be imposed" (Sallis, 29).

²¹ "ἀρχόμενον ἀπὸ τῆς τοῦ κόσμου γενέσεως τελευτᾶν δὲ εἰς ἀνθρώπων φύσιν" (Plato, *Timaeus*, 1922 27a).

²² Plato, 30B-C. Compare Cornford, who notes that Plato models his conception of human life "on the inexpugnable foundation of the order of the universe." We should only add that this order must be *living* if it is to constitute such a basis. Unfortunately, Cornford neglects this aspect and therefore interprets Plato to be offering us an *artificial* cosmos (a "machinery"), explicitly contrasted with a living one. See Cornford, *Plato's Cosmology* pp. 6, 31. Because of this observation and the further elaboration that the birth of the human being receives in the course of the dialogue, I can affirm only the first half of Cornford's interpretation: "The whole leads up to the central problem of human life, the establishment of rational control over the bodily nature" (Cornford, *Plato's Cosmology* 147). The problem is fundamentally *not* one of control; still less one of control over nature. Rather, the question concerns how nature occurs in such a way that the life of the human creature can be intelligible in a cosmic context. Sallis is more sensitive to the tension at issue

insists at the beginning of his speech, what is “most important” is that “all things begin at the beginning which is φύσις.”²³ From this perspective, the cosmic animal and all the animals in it are “akin according to φύσις,” and Timaeus’ task is to articulate the originary principle (ἀρχή) of this life.²⁴

Aside Notably, in the dramatic order of the dialogue, Timaeus does not himself do this. Beginning with a distinction between being (associated with the same and the soul) and becoming (associated with the other and the body), Timaeus first suggests that the demiurge secures the relation between the two by forcefully binding the elements (earth, air, fire, and water) together.²⁵ At this juncture, the demiurge appears as a craftsman who looks to a blueprint and then imposes its intelligible order upon recalcitrant materials by force. Conceived in this manner, however, the resulting unity remains problematic; the movements of the cosmos remain gripped by a fundamental incongruence analogous to that of the music scale.²⁶ In light of this problem, Timaeus declares, it is unclear whether “we have spoken correctly in naming the heaven ‘one,’” or whether it would be “more correct to say that it’s many and indefinite?”²⁷ In its first appearance, the human microcosm recapitulates these terms. Because it involves binding “immortal soul within a body subject to inflow and outflow,” generating a human requires reconciling the “circuit of the same” with the “circuit of the other” so as to establish an “immortal principle of the

here, aptly describing Timaeus’ discourse as “waving between a discourse of production and a discourse of procreation and birth” (Sallis, *Chorology*, 1999 58).

²³ Plato, *Timaeus*, 1922 29b.

²⁴ Plato, 31a; see also 27a.

²⁵ Plato, 27d-28a, 33b, 35b.

²⁶ Namely, the Pythagorean comma, or the incongruence between the system of fifths and octaves in any musical tuning; see Plato, 35b-36b.

²⁷ Plato, 31a.

mortal creature.”²⁸ As Timaeus first tells the story, soul and body are “glued” together by force with “close-packed rivets”; the circuits of the human creature move along without proportion (ἀλόγως), distorting the movements of both the same and the other.²⁹ Because it involves binding “immortal soul within a body subject to inflow and outflow,” generating a human requires reconciling the “circuit of the same” with the “circuit of the other” so as to establish an “immortal principle of the mortal creature.”³⁰ An important element of the drama of this Platonic dialogue is the movement from this initial discourse, which operates according to the assumption of an external force and craft on the part of the demiurge, to a discourse that more adequately answers to the *living* character of the cosmos and the creatures within it. In other words, Timaeus’ programmatic demand that the account begin with φύσις is exhibited in the failure of the account which does not heed the demand.

On the one hand, then, the *Timaeus* is primarily an account of the human being. On the other hand, it is nevertheless an account of the human with respect to a life that is not simply human but rather belongs to the living movement of the cosmos understood in terms of φύσις.

How will such an account proceed? Timaeus rejects the possibility of a proof or demonstration. While accounts of purely intellectual matters may admit of such methods, an account which concerns φύσις requires a different orientation, since “accounts are also akin to those very things of which the accounts are interpreters.”³¹ An account which will bring to light the coming to be and passing away of things must itself come from φύσις.

²⁸ Plato, 43a, 43d, 42e.

²⁹ Plato, 42e-43d.

³⁰ Plato, 43a, 43d, 42e.

³¹ Plato, 29b.

Such a discourse will be far from a proof; in fact, it will not even always be in agreement with itself.³² Because it strives to articulate the movements of φύσις, Timaeus' account must begin in a way of thinking that follows alongside things in their generation: it must be a *living* account. This requirement becomes the basis for his rejection of the attempt to understand the relation of being and not being according to the logic of model and copy. To the extent that this relation is conceived in terms of “likeness” or resemblance, the account would become unbounded (ἄπειρος) and open upon an infinite regress.³³ Timaeus therefore insists that his discourse is not properly a λόγος but a “likely story” (τὸν εἰκότα μῦθον) which receives its determination through being “congenital” (συγγενής) with the cosmos.³⁴ In this way, Timaeus offers a discourse that attempts to follow the articulation of living things—of things *as* living—as they are born.³⁵ For these reasons, it is all the more significant that Timaeus' discussion of plants appears at that point in the dialogue that corresponds to the birth of the human being: here, at precisely the moment when the discourse must follow the movement of life in its uniquely human appearance, Timaeus turns to the life of plants.

§8.2. Life and the Living

Timaeus' treatment of plant life occupies a single paragraph. After the various parts of the mortal animal had been fashioned, we are told, it turns out that its living activity was not yet balanced and appropriate to the creature, so its life would dissipate and leave it empty. For this reason, the gods planted another kind of life: plants. The wild plants are the eldest and most originary, and the cultivated plants are the most suitable support for animal life.

³² Plato, 29c-d.

³³ That is, the model/copy pair would have to be thought as a likeness of something else, etc. (Plato, 31a).

³⁴ Plato, 29d, 29b.

³⁵ The two questions raised here—that of beginnings and that of language—are themselves thematic foci of the dialogue. While a serious treatment of these issues would carry the current study far afield, their definitive treatment is found in Sallis, *Chorology*, 1999.

These plants, too, are living creatures, and they partake of the third form of soul. Its characteristic activity is persistence, moving to and fro within itself while being rooted in the earth.³⁶ The issue Timaeus here addresses concerns the relation of life (ζωή) to the living thing (ζῶον):

When all the parts and limbs of the mortal animal [ζῶον] had been made to grow together according to φύσις, it turned out from necessity that the life [ζωή] it had was in fire and air and for this reason withered away when it was melted and left empty by them.³⁷

In terms reminiscent of Socrates' painted animals, Timaeus asks how it is possible for a living thing to be alive: what, in other words, is the relation between the liveliness and thingliness of the creature? The various "parts and limbs" of the mortal animal, Timaeus explains, "grow together according to φύσις." Thus the various parts of the animal body are related to one another in proportion by way of movement, *viz.*, the movement of growth that is from φύσις. This is not an external movement that forces together two antecedent terms; rather, this is a generative movement in which the various parts and limbs first come to be within the motion of growth which relates them.³⁸

But such a movement of growth also occurs in relation to what it is not: the elements, especially fire and air. Although most commentators have understood this as a reference to the fragile vulnerability of the human creature,³⁹ the issue here is more

³⁶ The foregoing is a summary of Plato, *Timaeus*, 1922 76e-77c. In the rest of the chapter, I work through the text of this paragraph directly.

³⁷ Plato, 76e-77a.

³⁸ We are now far from the "gluing" and "riveting" that characterized the beginning of Timaeus' account. Although the work of the gods is still present, the emphasis has shifted from the register of craft and production to that of φύσις.

³⁹ Taylor is representative in seeing a reference to the harsh sun and wind; other commentators have pointed out various other vicissitudes of life. See for example Taylor, *A Commentary on Plato's Timaeus* 541 and Skemp, "Plants in Plato's Timaeus" 53-54. Although these suggestions have some plausibility, the relation between this passage and earlier passages seems to me definitive, as I explain in what follows.

fundamental: *as* a movement of growth, life is exposed and outward-facing, depending upon a continually renewed influx of the elements (through nutrition, respiration, and sensation) in order to persevere.⁴⁰ As Timaeus points out in an earlier passage, the living creature is “a body subject to inflow and outflow.”⁴¹ Nutriment and sensation crash over the human animal like a great wave, driving it this way and that, “bringing about the most widespread and greatest commotion.”⁴² Here, in the construction of the human creature, this problem takes on a central prominence. “Everything that surrounds us from without is always melting us away,” as Timaeus says: the elements, rushing into the human body, just as readily rush out, leaving the body lifeless.⁴³ On the one hand, there is the living creature, understood in terms of the bodily “parts and limbs” that are not a mere collection of inanimate objects but rather organs generated in a movement of growth which bears them forth. On the other hand, the very life of such a living creature is outside of itself, consisting in fire and air. In this way, the standing together of life (ζωή) and the living thing (ζῷον) appears as a problem.⁴⁴ This is a problem of harmony: within the strife that characterizes the divergent movements that constitute the living creature, it is necessary to find a principle of proportionality that can hold these movements in a kind of balance.⁴⁵ In

⁴⁰ Just prior to this passage, Timaeus elaborates a theory of sensation grounded in the analysis of the elements (Plato, *Timaeus*, 1922 61c-68d). Note that Plato does not share Aristotle’s allergy to speaking of plants as sensitive.

⁴¹ Plato, 43a.

⁴² Plato, 43c. On the relation between this cacophony and the originary cosmic cacophony out of which the demiurge brings order, see Vallega-Neu, *The Bodily Dimension in Thinking* 13-14.

⁴³ Plato, *Timaeus*, 1922 81a, 78a-b.

⁴⁴ A similar problem *logos* occurs slightly earlier in the account. In order to ward off the threat of destruction through gluttony, the gods fashion the intestines as a “receptacle” (ὑποδοχήν) through which nutriment is made to pass more slowly through the body (Plato, 73a).

⁴⁵ This problem recapitulates in microcosm the problem which motivates the demiurge to bring an ordered cosmos out of “discordant” and “disorderly” chaos. Plato, 30a; see also Vallega-Neu, *The Bodily Dimension in Thinking* 7. In the cosmic context, Timaeus depicts the reconciliation of disparate movements as a question of literal harmony: the same and the other are related in various proportions so as to constitute a musical scale. Because they are held together by force, the their relation ultimately remains unmusical, and Timaeus remarks upon the “leftover interval”—the Pythagorean comma—that takes the ugly ratio of 256:243. Plato, *Timaeus*, 1922 35b-36b; see also Vallega-Neu, *The Bodily Dimension in Thinking* 10. On the issue of proportionality with respect to plants specifically, compare pages 158ff.

terms of the preceding chapter, the initial configuration of the human animal lacks the specifically nutritive proportionality that would establish a limit (πέρας) according to which the living creature might remain in existence. Instead, the human being is characterized more by fire, which lacks proportion and simply flares up then wastes away.

Following the pattern established from the beginning of his account, Timaeus therefore insists once again upon the difficulty of finding a relation—a distinguishing principle—that can hold together being and not being in a finite creature. This distinguishing principle is a “life” (ζωή), but a different kind of life than the animal life discussed hitherto:

The gods prepared support for it. They planted [φύτεύω] a φύσις akin to human φύσις, though blending it with different looks as sensation so as to be another kind of animal [ἕτερον ζῷον]. These are precisely our current cultivated trees and plants and seeds that are trained by the agricultural art and domesticated for our use; but formerly the wild kinds were alone, since these were elder to the cultivated ones. For everything that partakes of living [μετάσχη τοῦ ζῆν] may justly and most correctly be called a living creature [ζῷον].⁴⁶

What is needed to address the difficulty of bringing together life and living thing, Timaeus suggests, is a third kind: a nature akin to the human nature, but at the same time different in form so as to be another kind. That in which animal life is able to subsist, then, is plant life: a (vegetal) life before (animal) life (fig. 22⁴⁷). This difference is especially significant in the light of the rest of Timaeus’ account, which considers all the fauna to be variations on human nature: it is only plants that are truly different, although also somehow akin.⁴⁸ In

⁴⁶ Plato, *Timaeus*, 1922 77a-b.

⁴⁷ Fig. source: Parkinson, *Spondias Dulcis*, 1769.

⁴⁸ In the “devolutionary” account of non-human animals given near the end of Timaeus’ speech, all the animals are derived from humans.

the passage just quoted, Timaeus trades his usual term for beginning, “birth,” for the vegetal equivalent, “planting” (φύτεύω). The wordplay involved in the passage emphasizes the “middle” character of the vegetal. On the one hand, the plant (φυτόν) belongs to φύσις; on the other hand, since it is living (ζωή) it is correct to call it an animal (ζῷον). For Plato (as for Aristotle⁴⁹), vegetal life is a *different kind* of life that straddles the boundary between the animal (including the human) and the broader activity of coming to be and passing away that belongs to φύσις writ large.⁵⁰

§8.3. The Wild and the Cultivated

Since the relation between humans and plants is consumptive, Timaeus draws particular attention to the domesticated plants:

These are precisely our current cultivated trees and plants and seeds that are trained by the agricultural art and domesticated for our use; but formerly the wild kinds were alone, since these were elder to the cultivated ones.⁵¹

At the same time, however, he takes pains to point out the wildness of plants: the elder nature of plants is to be untamed. Although this qualification has been largely ignored by commentators,⁵² I suggest that it is an important indicator of how Plato conceives the place of plants in his vision of life and the cosmos.

Wildness belongs to plants in an originary way, according to Timaeus. Within the context of the *Timaeus*, the priority enjoyed by the elder, wild plants is not merely

⁴⁹ See page 147 and following, above.

⁵⁰ Archer-Hind greatly emphasizes the continuity of plant and human life, but fails to appreciate the equal necessity for a radical difference (see Archer-Hind, *The Timaeus of Plato* 286).

⁵¹ Plato, *Timaeus*, 1922 77a.

⁵² Cornford is typical in not mentioning the passage; Sallis follows suit. Taylor’s suggestion that these remarks mean nothing more than to “soften” the application of the term “ζῷα” to the φυτά by pointing out that there are other words used of both animals and plants is unconvincing, as I show in what follows (Taylor, *A Commentary on Plato’s Timaeus* 543).



FIGURE 22. *Spondias dulcis*

chronological.⁵³ In the section of his speech preceding the botanical, Timaeus discusses the different parts of the soul, especially that third kind of soul which is responsible for nutrition and reproduction. In distinction from the intellective and spirited parts of the soul, the third part of the soul is characterized by desires pertaining to the φύσις of the body.⁵⁴ This striving movement of desire, to which belongs the nutritive and reproductive aspects of life, is also called “wild” (ἄγριος). As Timaeus explains, plants partake in this third form of soul.⁵⁵ This nutritive part of the soul is a “wild beast” that has to be fed “if indeed the mortal kind was ever going to somehow *be* at all.”⁵⁶ Both here and in the botanical passage, then, the existence of living animals requires another, “wild” kind of life positioned between φύσις and animal life (ζωή). This life is nutritive/reproductive: it is a movement that involves something (nutriment, progeny) that is both alien to the animal and most fundamentally consistent with it.

For the Greeks, the distinction between wild and domesticated plants corresponds to a network of related concepts. Cultivation is not primarily a technique humans apply to a plant to bring it from a state of wildness to gentility; rather, cultivation belongs to the nature of the plant and its place in the cosmos.⁵⁷ As there is a continuum of life from the movement of φύσις to the human animal (in which plants occupy the middle term), so also there is a continuum of plant life. At one end of the continuum stand the cold, wet plants that are closely associated with the earth and with what is rotten (such as wild grasses); at the other stand the hot, dry plants that are closely associated with fire and air (especially

⁵³ In Timaeus’ cosmology, it would be inappropriate that “an elder be ruled by a younger.” For this reason, the cosmic soul, as “prior to the body in both birth and excellence” and its ruler, must be elder to the body (Plato, *Timaeus*, 1922 34c). So, for example, the earth is “first and eldest” of the gods within the heaven (Plato, 40c). To be elder is to have a more than chronological priority.

⁵⁴ Plato, 70d.

⁵⁵ Plato, 70e, 77b. Together with a passage concerning the mingling of bile and saline power (83c), these are the only occurrences of the word “ἄγριος” in the *Timaeus*.

⁵⁶ Plato, 70e.

⁵⁷ See for example Theophrastus, *Enquiry into Plants*, 1999 1.3.5-6.

the aromatic plants, such as myrrh). At the former extreme, plants are edible only for a limited number of animals (such as snakes); at the latter extreme, plants can be consumed only as seasonings. The earthly plants prefer dark places far from the sun and winter months; the solar plants prefer lands and seasons closer to the celestial fire.⁵⁸ Between these two extremes stand the cultivated plants, which range from the somewhat colder (*e.g.* cereals) to the somewhat hotter (*e.g.* fruits such as dates).⁵⁹ Such plants are “cooked” both in the sense that they are concocted externally by domestic cooking processes and in the sense that they are concocted internally by a process of nourishment that balances the wet and hot elements of their constitution (this process is aided by farming). By contrast, plants at the extremities of this continuum are “wild” and therefore raw (a) in their internal nature, (b) in their resistance to the agricultural arts, and (c) in their unsuitability for domestic cooking.⁶⁰

Domestication must therefore not be conceived as the contrary of the wild but rather as a mode of wildness: under certain conditions, what is wild becomes proportioned and balanced in such a way as to become compatible with human life.⁶¹ The domesticated plants, then, are precisely those “middle” plants whose otherwise wild movements strike a balance between these two extremes. In such plants, what is cold and wet is brought into tune with what is hot and dry in a measured, harmonious way. Like the countryside

⁵⁸ Detienne, *The Gardens of Adonis* 13-15, 37.

⁵⁹ “Their intermediate position is illustrated, especially, in the dual status of the fruit of the vine. This is sometimes a moist and refreshing food, when the first grapes are gathered in July for eating, and sometimes a fermented drink of a fiery nature that is made from the riper grapes picked after the Dog Days, at the rising of Arcturus” (Detienne, 14).

⁶⁰ “So in the earth some come to be and grow out of concocted nourishment, others out of residues and what is in an opposite condition. Now farming concocts and makes productive the nourishment; from this, cultivated fruits are formed. What grows from such cultivation, then, are called ‘cultivated’ because they are benefited by expertise, as if being trained; but those that are unable to be (cultivated) or even are formed out of an opposite condition, these are wild and tend not to grow in farmed land. For farming ruins these by training them, since they come to be out of corruption” (Aristotle, *Aristotle*, 2011 924a16-24). See also Detienne, *The Gardens of Adonis* 14

⁶¹ Is the human animal itself domesticated or wild? This question is asked but left undecided in Plato, *Sophist*, 200b 222b-c.

(χώρα) surrounding the city that enacts an interface between human sphere and the barren reaches beyond such that it is possible for the city to *be* at all, the plant gives space within the movements of φύσις for the activities of human life.⁶²

Such giving-space, however, is a question of movement. Socrates' painted animals remain unsatisfactory because they lack their proper, living movement. In Timaeus' account, the human animal also lacks its proper movement prior to the introduction of plants. But what kind of movement is needed? On the one hand, we are familiar with the autonomous motion which comes forth from the animal, fending off external influences and expressing its own animation; on the other hand, there is the external motion which even so-called inanimate things suffer passively, being moved from without.⁶³ In the *Timaeus*, the former (autonomous) type of movement is characteristic of animal life (ζωή), the intellect (both human and cosmic), and what always is (being/sameness); the latter (external) type of movement is characteristic of φύσις, the body, and what is always being born (becoming/otherness).⁶⁴ The relation *between* these two series of terms, however, cannot be sought in either of these two types of motion. Instead, what is needed is a third kind of movement, a "wild" movement which is neither active nor passive—a kind of movement *simpliciter*. This is not the first time we have seen such a movement: Goethe's account of intensification and Aristotle's account of indefinite striving, for example, have much in common with this wild movement, although they are not articulated in precisely the same terms. In the context Timaeus' broader cosmic account, however, this "third kind" of movement is identified with the χώρα.

⁶² See *e.g.* Plato, *Laws*, 2001 745b-e, 759b, 817a, 823e, 945d, 950d.

⁶³ An animal that flees capture illustrates the former; a rock that is skipped across the surface of a pond illustrates the latter.

⁶⁴ Note that this passive motion is only associated with φύσις in a partial and provisional way.

§8.4. Choric Motion

Timaeus gives at least two reasons for introducing the famous *χώρα* into his likely story. First, his account prior to the introduction of the *χώρα* considers only those things crafted through reason and not those things arising through necessity.⁶⁵ To *genuinely* inquire (ὄντως ἐρεῖ) into the generation of the cosmos, however, one must include “the form of the wandering cause.”⁶⁶ Timaeus therefore declares it necessary to “retreat” (ἀναχωρητέον, “go to the *χώρα*”)—to another beginning, which is provided by the *χώρα*.⁶⁷ The second reason for introducing the *χώρα* concerns the fluidity of the elements. In his initial account of the cosmos, Timaeus says that the gods “borrowed” the elements as if intending to pay them back, but he makes no attempt in that account to speak of the elements themselves.⁶⁸ To do so, making “use of some word that’s trustworthy and stable,” is difficult because they perpetually transmute into one another.⁶⁹ The elements therefore appear as a form of restlessness that accepts no stability. For this reason, they require that *in which* things might show themselves and *from which* they perish: the distinguishing relation Timaeus names *χώρα*.⁷⁰ I wish here to stress one aspect of the complex emergence of the *χώρα* in Timaeus’ speech: in both cases, the *χώρα* appears in relation to a particular kind of *motion*.⁷¹ In the first case, it involves the wandering motion of whatever comes to be from

⁶⁵ Plato, *Timaeus*, 1922 47e.

⁶⁶ “τὸ τῆς πλανωμένης εἶδος αἰτίας” (Plato, 48a).

⁶⁷ Plato, 48b.

⁶⁸ Plato, 42e-43a, 48b.

⁶⁹ Plato, 49b-c.

⁷⁰ Plato, 49e-50a. For a careful analysis of the difficult passage in which Timaeus makes this argument, see Cherniss, “A Much Misread Passage of the *Timaeus* (Timaeus 49c7-50b5)” and the lengthy discussion of the attendant arguments in Sallis, *Chorology*, 1999 102n13.

⁷¹ This emphasis is justified in part by the connection in Plato’s thinking between movement and the soul, the “essence and λόγος” of which is to be a principle of movement that moves itself (Plato, *Phaedrus*, 1952 245e).

necessity; in the second place, it involves the instability of perpetual transmutation.⁷²

Although underappreciated by some of the best commentators, the specific *mobility* of the *χώρα* is a characteristic that is central to its relation with vegetal life, as we shall see.⁷³

The cosmic “third kind”—the *χώρα*—is “a form difficult and obscure,” according to Timaeus.⁷⁴

For it never ceases from its own *δύναμις* at all. It always receives all things, and nowhere in no way has it ever taken on any shape similar to the ones that come into it. For it is laid down by *φύσις* as a molding stuff for everything, being both moved and thoroughly configured by whatever things come into it; and because of these, it appears different at different times.⁷⁵

If the *χώρα* is to give space to all that is, then a difficulty arises: it cannot have a shape of its own, nor can it take on the shape of that which comes into it. After all, “that in which the imprints are fixed,” Timaeus says, “wouldn’t be prepared well unless it’s shapeless with

⁷² Although the *χώρα* is not the focus of this study apart from its vegetal aspect, my interpretation of it is influenced by Sallis, *Chorology*, 1999, especially ch. 3.

⁷³ On the mobile aspect of *χώρα*, compare Sallis, 127: “It is not without paradox that one can speak of the *χώρα* as itself in movement, as something—though not, of course, some thing—that moves. For the *χώρα* is not only utterly amorphous but also invisible, even insistently invisible, whereas the things that can be said, without further ado, to move are visible things, things that occupy some place and move to another, or at least that alter their position or state within a place. But how can the *χώρα* be in a place in which or from which to move?” It is remarkable that Sallis devotes so little attention—not quite a page—to this paradox.

⁷⁴ “χαλεπὸν καὶ ἀμυδρὸν εἶδος” (Plato, *Timaeus*, 1922 49a). The problem is presented as extreme; Timaeus finds himself forced into a remarkably uncertain discourse. “If we say that it’s some invisible and shapeless form—all-receptive, but partaking somehow of the intelligible in a most perplexing way and most hard-to-capture—then we won’t be lying,” he stammers (Plato, 51a-b). The degree of hedging in this sentence is remarkable: (1) the entire construction is conditional; (2) *χώρα* is a shapeless and invisible form; (3) the relation between *χώρα* and intelligibility is impossible; (4) we assert the relation without capturing it; (5) all we can even say when speaking this way is that we are not lying. Beyond this, what can be said? “How,” he asks, “should we speak about this third kind itself, and in what way, and what should we say?” (Plato, 49b). In this chapter, I seek to shed light on plant life by highlighting the parallel between the role of the *χώρα* in the cosmos and the role of the plant in the human microcosm. One could productively do the opposite, rather shedding light on the difficulties surrounding the *χώρα*.

⁷⁵ Plato, 50b-c.

respect to all those looks [τῶν ἰδεῶν] that it might be going to receive from elsewhere.”⁷⁶ It cannot impose a form of its own upon those things which come to be in it, for that would mean those things were simply determined in their form by the χώρα. Instead, it must allow the things to come to be *as* those things which they are. At the same time, it is not simply nothing: it must have some identity and characteristic of its own (“never ceasing from its own δύναμις at all”). In discussing such a paradoxical movement, Timaeus is attempting to articulate a kind of motion between activity and passivity.⁷⁷ This is why he can paradoxically affirm and deny passivity to the χώρα, saying on the one hand that it “nowhere in no way” has ever taken on the shape of what comes to be in it and on the other hand that it is “thoroughly configured” by such things. Similarly, he suggests that the χώρα is filled with powers, but that these work neither in concert nor in opposition to one another.⁷⁸ Instead, the χώρα “sways irregularly in every direction,” being shaken and moved by whatever comes to be in it and shaking them back.⁷⁹ This “wandering” motion is that upon which its capacity to receive all things rests.⁸⁰ And yet such wandering is not mere passivity. Rather, the motion of the χώρα relates such “being shaken” and “shaking back” together in a characteristic manner. Like the domesticated plants, the χώρα indicates a wild movement that is somehow balanced within itself so as to be resolutely receptive of whatever is.

⁷⁶ Plato, 50d. See the helpful example given in Sallis, *Chorology*, 1999 109: “For, in order to be capable of suitably receiving all forms, it must itself be devoid of form, as the base for a fragrant ointment must be as odorless as possible.”

⁷⁷ In grammatical terms, such motion would be in the “middle voice” of the Greek verbal system, which offers a construction that is neither active nor passive. Something analogous might be heard in certain English constructions, such as “it rains,” “the drum beats,” etc. Aristotle’s discussions of the soul also show a predilection for the middle voice.

⁷⁸ Plato, *Timaeus*, 1922 52e.

⁷⁹ Plato, 52e.

⁸⁰ Compare Hegel’s restless “tremulation of vitality,” discussed on page 50.

The verb that corresponds to the noun *χώρα*—viz., *χωρέω*—accentuates the importance of motion. It has a number of related meanings.⁸¹ First, it means to “make room for another, give way, withdraw,” as when one gives way to an opponent in battle or as the earth gives way beneath one’s footing. The sense of withdraw is therefore not one of mere absence; rather, it is of a withdrawing that draws in and grants space. Second, *χωρέω* means to “go forward, advance,” as when one departs upon a journey or when important news spreads through a community. In this more active sense of the word, one still hears the element of receptivity to whatever may come, whether serendipitous or calamitous. At a more basic level, therefore, *χωρέω* simply denotes “to be in motion or flux,” as in the famous saying of Heraclitus: “Heraclitus says somewhere that everything moves [*πάντα χωρεῖ*] and nothing remains still, and, likening the things that are to the flow of a river, he says that you cannot step twice into the same river.”⁸² In this sense, the *χώρα* indicates a form of motion that is neither simply active nor simply passive but is rather a motion in which activity and passivity appear in relation to one another.⁸³

§8.5. The Choric Plant

We are now in a position to return to Timaeus’ botany and the problem to which it responds in the account of the human microcosm. From the beginning, this problem is articulated in terms of movement:

⁸¹ Liddell and Scott, *Greek-English Lexicon*.

⁸² Plato, “Cratylus” 402a.

⁸³ Compare Wood, *Time After Time* 39: “That activity acts on something might suggest a ‘passivity’ on the part of that which is acted upon, an acquiescence, showing that activity presupposes some cooperation, some relation—not least, for example, material on which to act. Here passivity would not be opposed to activity but would complement it. Activity that is appropriate to the circumstances, that conforms to rules, that is tailored to certain objectives could be said to display a certain passivity in allowing its positive determination by something other than itself. Again, if this can be called passivity, it serves to enhance, direct, and specify the activity in question, rather than being opposed to it.” On my interpretation, Plato’s *Timaeus* involves—among other things—the attempt to articulate that movement which relates activity and passivity in these complex ways.

They [the gods] bound the circumvolutions of the immortal soul within an inflowing and outflowing body. And these circumvolutions, as though bound within a prodigious river, neither overpowered it nor were overpowered, but by force both were swept along and also did sweep, so that the whole animal was stirred into motion—but irregularly, moving along by chance and without proportion.⁸⁴

Here the specific incompatibility involved in the generation of the human animal occurs between the circuitous course of the soul and the somatic activity of inflow and outflow. The soul and body each moves and is moved, but neither appears entirely active or passive. Rather, a motion emerges which involves a stirring that belongs to the whole. Such movements, however, lack a relation in which they could become balanced. For this reason, the movements are irregular and lack proportion; life “withers away, melting and being left empty” as a result of the lack of proportional relation between life and living body.⁸⁵ As Timaeus explains, so long as the animal remains subject to such motions, it is “overpowered and utterly destroyed.” The animal therefore requires an “imitation,” on the microcosmic scale, “of what we have called the nurturer and wet-nurse of the all”—*viz.*, the *χώρα*. This microcosmic counterpart would provide some kind of “measured shaking” (*μετρίως σείων*) in which the “wandering affections and parts” of the human animal might be held in relation “according to kinship.”⁸⁶ By coming to be in something else, that which comes to be will then be able to somehow hold fast to being, “or else be nothing at all.”⁸⁷ This counterpart to the *χώρα* is vegetal life: as a form of life “akin to human nature [...] but

⁸⁴ Plato, *Timaeus*, 1922 43a-b.

⁸⁵ Plato, 77a, quoted on page 190.

⁸⁶ Plato, 88d-e.

⁸⁷ Plato, 52c.

different,” it provides a motion that bears the difference that distinguishes and relates being and not being in the human animal and so allows the animal to somehow be.⁸⁸

It is therefore to this type of movement that Plato’s botany next turns:

This living creature we’re talking about now surely partakes of the third form of soul, that which the account has seated between midriff and navel, and which shares in no way at all in opinion and reasoning and intellect, but only in sensation, pleasant and painful, accompanied by desires. For it persists in being entirely subject to impression, itself somehow twisting to and fro within itself around itself. Its formation did not by φύσις⁸⁹ impart to it the ability to reason (while observing) about anything of its own by rejecting motion from without while making use of its own motion. For this reason, it truly lives and is none other than a living creature, but because it has been deprived of self-motion, it stays firmly fixed and rooted down.⁹⁰

Many commentators posit a dramatic break in the text at this point. According to Skemp, with this passage we reach “the more important sentences” which “deal with the status of plants in the universe apart from their relation to man.”⁹¹ Taylor is in virtual agreement, discussing the passage from this point onward without reference to human being.⁹² On this interpretation, the rest of the discussion of vegetation is an aside in which Timaeus seizes the opportunity to pontificate upon the nature of plants. Although this would not be out of the question, nothing in the context suggests such a digression. To the contrary,

⁸⁸ Plato, 77a, quoted on page 190.

⁸⁹ φύσει A F Y, φύσιν W. “The editors all printed φύσιν until Burnet, though Archer-Hind had misgivings. Taylor and Rivaud follow Burnet, but Cornford reverts to φύσιν” (Skemp, “Plants in Plato’s *Timaeus*” 58). See also Taylor, *A Commentary on Plato’s Timaeus* 544. I am content with reading “φύσει.”

⁹⁰ Plato, *Timaeus*, 1922 77b-c.

⁹¹ Skemp, “Plants in Plato’s *Timaeus*” 56. See also Skemp, 53: “The first part (to 77 B 1) deals with plants as human nutriment, the rest of the passage with their status in the universe apart from their fulfillment of this function.”

⁹² Taylor, *A Commentary on Plato’s Timaeus* 543f.

both the opening phrase of this passage (“πᾶν γὰρ οὖν”) and the sentence immediately following the discussion of plants (“ταῦτα δὴ τὰ γένη πάντα”) rather suggest continuity.⁹³ In fact, Timaeus’ discussion of plants is still tied very closely to their nutritive function in relation human beings, for he is justifying the position he has ascribed to plants as the “third kind,” akin to human nature but not identical to it. In order to serve this role, plant life must share a genetic relation (συγγενῇ) with human life while maintaining its own nature.⁹⁴ As we have seen, this nature must appear as a kind of movement: the paradoxical kind of movement between activity and passivity which belongs to the χώρα.

Aside The reading of 77b-c is difficult. According to most editions, “πάσχον γὰρ διατελεῖ πάντα στραφέντι δ’ αὐτῷ ἐν ἑαυτῷ περὶ ἑαυτό τὴν μὲν ἔξωθεν ἀπωσαμένῳ κίνησιν, τῇ δ’ οἰκείᾳ χρησαμένῳ, τῶν αὐτοῦ τι λογίσασθαι κατιδόντι φύσει οὐ παραδέδωκεν ἢ γένεσις.” Are “στραφέντι,” “ἀπωσαμένῳ,” and “χρησαμένῳ” affirmed of plants or denied them? It would initially seem the former, and the passage has been traditionally read in this way. However, this reading poses a problem: if plants are said to indeed fend off motion from without and make use of their own movement, this would present an apparent contradiction between this sentence and both the wording immediately prior, in which plants are said to be entirely passive (πάσχον γὰρ διατελεῖ πάντα), and the one immediately following, in which plants are said to be stationary “διὰ τὸ τῆς ὑφ’ ἑαυτοῦ κινήσεως ἑστερῆσθαι.” Galen, for example, felt the need to emend his text to address the discrepancy.⁹⁵ Taylor notes an additional problem in describing plants as self-moving and unmoved by external motion: “this makes T’s whole theory of κίνησις

⁹³ Plato, *Timaeus*, 1922 77c.

⁹⁴ Cf. Plato, 50d: “it’s fitting to liken the receiver to a *mother*, the ‘from which’ to a *father*, and the nature between these to an *offspring*.”

⁹⁵ See Skemp, “Plants in Plato’s *Timaeus*” 57.

self-contradictory. It was precisely because the οὐρανός rejected motion from without and revolved wholly on itself that it was held to be supereminently intelligent.”⁹⁶ That is, if plants make use of the same motion as the heavens, we cannot make sense of the passage, whose force is to deny λογίσασθαι to them. Taylor therefore points to Zeller, who was the first to argue that the three dative participles are parallel and follow “οὐ παραδέδωκεν,” therefore being *denied* to plants.⁹⁷ On this reading, plants do *not* turn within themselves, fend off motion from without, or make use of their own motion, and correspondingly lack reason. Modern editors and commentators generally prefer this latter reading on both grammatical and conceptual grounds. On the other hand, plants *must* have their own motion, since they have a ψυχή. Since Timaeus (on this reading) denies motion to plants, Taylor is forced to add an implied provision that Timaeus is speaking only in a restricted sense.⁹⁸ While certainly possible—and clearly superior to the traditional alternative—this approach remains unsatisfactory. In fact, Taylor’s analysis appears to rest upon a framework which imagines only two kinds of motion: the autonomous, intelligent movement of the heavens and the reactive movement of things simply moved from without.⁹⁹ As I have argued, it is the third kind of movement, neither active nor passive, that must be at stake here. In this vein, another interesting reading suggests itself: taking “στραφέντι δ’ αὐτῷ ἐν ἑαυτῷ περὶ ἑαυτό” to resonate not with the κύκλῳ κύκλον στρεφόμενον of the heavens¹⁰⁰ but rather with the ἀνωμάλως πάντη ταλαντουμένην of the χώρα.¹⁰¹ Such a reading would receive impetus from the interpretation I have been

⁹⁶ Taylor, *A Commentary on Plato’s Timaeus* 544.

⁹⁷ Taylor, 543.

⁹⁸ Taylor, 543.

⁹⁹ Compare Karfik’s division of motion in the *Timaeus*, which is articulated somewhat differently but also prohibits a third kind, in Karfik, “The Constitution of the Human Body in Plato’s *Timaeus*” 179.

¹⁰⁰ Plato, *Timaeus*, 1922 34b.

¹⁰¹ Plato, 52e; see also 43e in specific relation to the human.

articulating; it would also be warranted on purely lexical grounds¹⁰² and fits well with Timaeus' later mention of διαωρούμενον ἀεὶ in connection with nutrition.¹⁰³ Instead of reading all three participles in parallel with οὐ παραδέδωκεν, the second and third (ἀπωσαμένῳ and χρησαμένῳ) would be read this way while the first (στραφέντι) would be read with διατελεῖ. This reading would have the advantage of following more closely the μὲν/δε construction enjoyed by the second and third participle. All that would then be left would be to clarify the grammar by reconsidering the editorial decision to read the archetypal “ΣΤΡΑΦΕΝΤΙΔΑΥΤΟ” as “στραφέντι δ' αὐτῷ,” preferring instead “στραφέν τι δ' αὐτό.” Taking “δε” in its explanatory force,¹⁰⁴ the passage would then read relatively smoothly: “πάσχον γὰρ διατελεῖ πάντα, στραφέν τι δ' αὐτὸ ἐν ἑαυτῷ περὶ ἑαυτό. τὴν μὲν ἔξωθεν ἀπωσαμένῳ κίνησιν, τῇ δ' οἰκείᾳ χρησαμένῳ, τῶν αὐτοῦ τι λογίσασθαι κατιδόντι φύσει οὐ παραδέδωκεν ἢ γένεσις” (as I translate above). Such textual speculation—which to my knowledge is unremarked in the extant literature—must remain admittedly conjectural. My reading, however, has the advantage of emphasizing the interpretation for which I have argued on other grounds.

It is precisely this paradoxical movement—neither active nor passive, but “somehow twisting to and fro within itself around itself”—which forms the phenomenal basis for the passage, commending plant life to Plato as so suitable an analogue for the χώρα in Timaeus' account of the human being: among living things (ζῷα), plants have the peculiar, choric combination of being at the same time active and mobile (having ψυχή) and nevertheless strikingly passive and sessile (κατερριζωμένον). Seen in this light, it becomes

¹⁰² Liddell, *An Intermediate Greek-English Lexicon* “ΣΤΡΕΦΩ” B.I.1 and B.II.1.

¹⁰³ Plato, *Timaeus*, 1922 78e.

¹⁰⁴ Cf. Smyth, *Greek Grammar* §2836.

clear that the botanical passage responds to twin demands: on the one hand, it answers to an ontological demand which involves the status of life in both its cosmic and microcosmic aspects; on the other hand, it answers to an ontic demand which arises in relation to the specific, observable features of plant life (fig. 23¹⁰⁵). Perhaps this is why many readers find it difficult to decide between a structural-ontological interpretation and a botanical one: Timaeus' aim is precisely to carry out both discourses simultaneously.

The plant is rooted in the ground and deprived of motion with respect to place. At the same time, it possesses its own proper motion, according to which it is a living creature. Nevertheless, it does not reject motion from without, asserting its own motion against it as an active force. Instead, it is moved by whatever comes to be in it, and by wandering, shaking, and twisting within itself it persists in its own δύναμις.¹⁰⁶

§8.6. Nutrition, Revisited

In this chapter hitherto, I have stressed the choric mobility of plants. In the previous chapter, the essential activity of plants was identified as nourishing-growing. So too in the context of the *Timaeus*, where the living movement of plants appears primarily with respect to nutrition. It is specifically the *domesticated* plants—those plants whose wild movements occur in a manner that balances hot, cold, wet, and dry elements in a “middle” that is not only compatible with animal life but sustains it nutritionally—that play a crucial role in Plato's text. Whereas for Aristotle, plants appear *as* nutritive in the sense that their manner of being consists essentially in the activity of nutrition, Plato's account adds the additional recognition that plants are nutritive in the sense of serving as nutriment for another.

Life occurs from necessity. Just as it is this recognition that signals the introduction of χώρα into the macrocosmic account, so also this recognition signals the turn to vegetal

¹⁰⁵ Fig. source: Parkinson, *Stigmaphyllon Ciliatum*, 1768.

¹⁰⁶ Cf. Plato, *Timaeus*, 1922 50b-c, quoted on page 200.



FIGURE 23. *Stigmaphyllon ciliatum*

life in the microcosmic account.¹⁰⁷ For the Greeks, necessity (ἀνάγκη) does not specifically denote what follows a law. Plato writes of the motion of the elements that it is “according to chance from necessity,” (κατὰ τύχην ἐξ ἀνάγκης) in contrast to craft.¹⁰⁸ Rather, necessity names here a compulsion that arises from the character of life itself: as nutritive, life is not enclosed within itself but rather requires another. That is, life is perforce dependent upon what is external to itself, but the necessity of this dependence arises from its *own* nature. The term “χώρα” already suggests this necessity: in an everyday sense, the χώρα, “countryside,” is closely related to nutriment, for it is the land surrounding the city on which depend those who participate in the city’s life.¹⁰⁹

In Timaeus’ account of animal life, plants answer to this compulsion by acting as its food. The movements of life occur in and through “the constantly flowing channel of nutriment” that characterizes every living thing.¹¹⁰ The problem concerning nutrition, then, can be situated in terms of the relation between those movements which appear to be external and those which appear to be internal. As Timaeus explains, it is “since the body is burned and chilled within by what enters it, and again dried up and moistened by what comes from the outside, and suffers everything that follows from this by both motions,” that life does not adhere within the living creature.¹¹¹ “Internal” and “external” do not here name two opposing terms established by a sharply delineated self. Rather, they name a movement of relatedness that belongs to the occurrence of life as such, such that “within”

¹⁰⁷ Plato, 47e and 76e, respectively.

¹⁰⁸ Plato, *Laws*, 2001 889b-c. See also Cornford, *Plato’s Cosmology* 171-176 and Sallis, *Chorology*, 1999 92: “Thus, if one is to translate ἀνάγκη as necessity, it must be insisted that this necessity is not the necessity of law, that it is not that form of necessity to which one would refer in describing something as bound by law. It is rather a necessity that would operate outside the law, that would even determine this very outside; this necessity would be an outlaw eluding the noetic supervision that determines the lawfulness of ποίησις, resisting the rule of νοῦς even if responsive to its persuasion. This necessity is also called the errant form of cause.”

¹⁰⁹ This relation between χώρα and nutriment is highlighted, among other places, in Plato, *Republic*, 2013 414d-e.

¹¹⁰ Plato, *Timaeus*, 1922 43c.

¹¹¹ Plato, 88d.

and “without” are correlates of a motion of infusion. The attempt to bring together the “same” and the “other” after they are first conceived as separate is the error of Timaeus’ first account. Only by beginning with the necessity of a third kind can the “same” and “other” first appear in an originary relation that sustains them in their difference. The question concerning the place of vegetal life, therefore, concerns that which is akin to animal life but blended proportionally with something different so as to be a different kind of life.¹¹² Such a blending, as we saw in Chapter VI,¹¹³ would also mark a limit between φύσις and ζωή.¹¹⁴

In Aristotle, plant life is revealed as an activity of growing-nourishing that has itself as its correlative object. In the *Timaeus*, that relationship is doubled: the plant also appears as nutritive life *par excellence* through which animal life is nourished. Like Nietzsche, Plato largely indicates, rather than elaborates, the issues surrounding the details of nourishment; as we have seen, these are developed with greater specificity in Aristotle’s account.

Whereas Aristotle therefore characterizes nourishment primarily in terms of a self-relation, Plato focuses on understanding the particular kind of motion that is involved in nourishment: a choric, “third kind” of motion that is neither active nor passive. Such movement is indefinite, insofar as it neither expresses a form upon things nor receives its form from things. Nevertheless, such movement also has a specific determination, insofar as it achieves a certain balance or proportion. For this reason nourishing, as this living movement, is that “in which” the same and the other can first come to be together in the living creature. In the concluding chapter, we will highlight the relation between the same and the other by returning to Aristotle’s account to stress the *reproductive* aspect of the single activity of plant life. If—as we have seen in previous chapters—the activity of growth

¹¹² Plato, 77a, quote on page 190.

¹¹³ See page 147 and following.

¹¹⁴ As we noted earlier, this limit requires thinking from the standpoint of life and generation, rather than from a standpoint of logical demonstration (see page 189 and following, above).

is a movement by which the living thing constantly surpasses itself in a proliferative movement of expansion, such expansion is also a movement of nutritive assimilation and reproductive differentiation. In each of these senses, life is constituted in relation to its own outside: or, rather, life appears as a relation in which inside and outside first emerge within the movement of φύσις.¹¹⁵

¹¹⁵ Fig. 24: Parkinson, *Tacca Leontopetaloides*, 1769; fig. 25: Parkinson, *Antigramma Repanda*, n.d.



FIGURE 24. *Tacca leontopetaloides*



FIGURE 25. *Antigramma repanda*

CHAPTER IX

CONCLUSION

δεῖ γὰρ συμφυῆναι, τοῦτο δὲ χρόνου δεῖται.

For one must grow into knowing, and this requires time.

ARISTOTLE

This study has orbited around the concept of ὕβρις.¹ In Hegel, ὕβρις appears in the “restlessness” and “tremulation of vitality” that characterizes in vegetal growth (page 48 and following). In Goethe, it shows itself as the rhythmic interplay between intensification and polarity (page 84 and following). In Nietzsche, it refers to the determination of a will to power in relation to the movements of φύσις (page 112 and following). In Heraclitus, ὕβρις indicates the self-increasing nature of the soul and the necessity of its inner limit (πέρας) or measure (page 117 and following). In Aristotle, it appears as the indeterminate striving (ὀρεξις) that belongs to the power of nourishing-growing so as to constitute a limit and proportion (page 151 and following). In Plato, ὕβρις appears as a wild manner of movement, neither active nor passive, that nevertheless occurs in a harmonious and in that sense determinate manner (page 207 and following). In each case, the philosopher in question reaches for an articulation of a movement belonging to vegetal life that relates indefinite proliferation and self-surpassing with a precise limit and proportionality. By way of concluding this essay, I would first like to press the concept of vegetal ὕβρις one step further, then characterize two limitations of the account I have developed herein.

To speak here of proportion is to speak of a relation, namely, one which belongs to the proliferative movement of vegetal life. According to Aristotle, this movement (which he identifies as the primary activity of the soul) is nourishing-growing, the correlative

¹ Epigraph source: Aristotle, *Nicomachean Ethics*, 1934 1147a22.

object of which is the living creature *qua* ensouled—that is, *qua* the activity of nourishing-growing. However, this Aristotelian account, as it is elaborated in Chapter VII, stands in need of a corrective: it is not enough to say only that the primary activity of the soul is nourishing-growing, the correlative object of which is itself (as nourishing-growing). Such an analysis would risk leaving us with a self-enclosed relation and would fall back into the preservationism that this essay has repeatedly rejected.² As Aristotle insists, the activity of nourishing-growing is also *reproductive*, and we cannot neglect this aspect of the activity that constitutes the occurrence of vegetal life.³

When Aristotle declares that “plants are always being born anew,” he echoes the discussion about the paradox of the living in Plato’s *Symposium*.⁴ “Each one of the living creatures is said to live [ζῆν] and to be the same,” Diotima there says, by “always being born anew,” and this “not only in body but also in soul.”⁵ The paradox here concerns the fact that reproduction means becoming otherwise than oneself yet *thereby* remaining the same. “It always remains alive with respect to something different and new,” as Diotima explains.⁶ Insofar as the primary activity of the soul is reproductive, in Aristotle’s view, its correlative object is not merely itself but rather itself *as different*. In a certain respect, then, Aristotle is able to say that “nothing generates itself”: the single activity of the nourishing-growing soul generates not the living creature itself but a living creature “suchlike” (οἷον) it.⁷ The plant’s growth is not a merely quantitative increase of the same, like the continual increase of sediment at the mouth of a river. Rather, the growth of the living creature is properly reproductive in the sense that it involves a fundamental difference. In Diotima’s terms, it is

² See especially page 92 and following.

³ Although the foregoing discussion has emphasized that Aristotle views nourishment and reproduction as a single activity (see page 170 and following), it does so within a context that emphasizes nourishment at the expense of reproduction.

⁴ Quoted on page 151.

⁵ Aristotle, “Length and Shortness,” 1957 467a13. Plato, *Symposium*, 2001 207d-e.

⁶ Plato, *Symposium*, 2001 207d.

⁷ Aristotle, *De Anima*, 1979 416b17, 416b16.

an ongoing generation that concerns not only the quantitative, regenerative change of the body (*i.e.*, the continual regrowth of hair and nails) but also the generation of the soul (the activity characteristic of the living creature). This is the essential character of nourishing-growing: it is an activity of increase that is aimed at nothing other than the living creature itself, but is aimed at that living creature *as* different from itself.

Insofar as it is reproductive, nourishing, and growing, the plant is essentially an activity of self-differentiation. In the blossoming flower or proliferating rhizome, vegetal life engages in a generative work that intensifies its activity without being reducible to either simple self-maintenance or self-reduplication. In its reproductive aspect, the living creature (a) differs from itself and (b) reveals itself as this activity of differing from itself. “This kind of originary principle of the soul is a potency to hold alive this potency as such,” as Aristotle says.⁸ There is thus an indeterminate aspect of vegetal life and a determinate aspect. On the one hand, nourishing-growing is characterized by a prodigal profusion that answers only to the unbounded essence of life’s movement of self-increase. On the other hand, this movement of increase is not positivity and self-identity, but rather difference and relation. Against both the infinitude of the line, the limit of which is external arrest and termination, and the infinitude of the circle, the limit of which is the determinacy of infinite self-relation, the plant posits the finitude of hubristic growth: an activity defined only in terms of itself, yet defined in terms of a “self” that is a relation of exuberant self-differentiation. “Limit” here is not the terminal point of cessation but the determinate actuality of a life.

Of what is vegetal life a proportion? In Plato’s *Timaeus*, we saw that the particular being of plants makes possible a proportion in the construction of the human being: since the definite “parts and limbs” of the human body and its indefinite “life” would not hold together in proportion, but instead wasted away in dissipation, plants were fashioned as the

⁸ Aristotle, 416b18-19, quoted on page 179.

condition for the possibility of a relation between the two, so that the human being might exist. Aristotle also, making reference to the *Timaeus*, claims that the nutritive and growing soul is what holds together the relation in living creatures.⁹ Thus plants are emblematic sites for such blending, which always involves a certain ὕβρις (it is after all Dionysus, as Socrates points out to Protarchus, who presides over the mixing).¹⁰ But what of vegetal life itself? In a previous chapter, we saw that Aristotle rejects the idea that it is a proportion of the elements.¹¹ We are now able to specify the answer more precisely: the proportionality of vegetal life consists in a relation between the determinate and the indeterminate aspects of growth. To follow a Platonic schema, vegetal growth appears as a relation between the aspects of determination and indetermination that compose the living creature. This relation itself, however, must have a cause—namely, a certain proportionality that grants the relation its characteristic existence.¹² The activity of plant living is such a proportion insofar as it is a ratio of the limited and unlimited according to which living things exist.

Such a proportionality is not a late or accidental aspect of vegetal life; on the contrary, it is originary and essential. We therefore should not think first of two types (determination and indetermination) which are then brought into relation with one another such that the relation can finally stabilize into a proportion. Rather, the related terms present themselves in a plant which always already possesses the existential

⁹ Aristotle, 416a5-10.

¹⁰ Plato, “Philebus,” 1925 61c.

¹¹ See page 158.

¹² The schema is taken from Plato’s *Philebus*. See especially Plato, “Philebus,” 1925 16c, 17a. With characteristic lucidity, Gadamer explains: “But *ontologically* the good mixture of the ontic constituent parts—that is, the being of health, of musical harmony, and so forth—depends upon the *appropriateness* of the shares of the opposed constituent parts. That is, it depends upon the correct proportion. Only this definiteness of proportion, which Plato characterizes ontologically as a unity of indefiniteness and definition, makes a mixture into a unity that can *exist*. A mixture that was not definite in this way would not really be. [...] This measured proportion, after all, constitutes the being of the entity. Proportion means ‘logos.’ Something that is addressed in its proportion is addressed in its being. So the genus of the cause, which is arrived at within this horizon of production, is indeed at the same time an *ontological* moment of definiteness—and not a dispensable one that, say, is only added when the subject is brought into the picture, but, on the contrary, the one in which the meaning of being really presents itself for the first time” (Gadamer, *Plato’s Dialectical Ethics* 141, 143).

character of a relation, appearing *as* aspects of that relation. Such a relation is determined not by antecedent relata but by an appropriate proportion in whose joining and differencing vegetal life is able to exist at all. Heraclitus' dense expression for the occurrence of life—"self-increasing proportion"¹³—is particularly suitable in this respect: the self-increase in which vegetal life consists is the proportionality of a relational activity that gives rise to both determination and indetermination in their appropriate conjunction. The ὕβρις of vegetal life is the characteristic manner of occurrence that belongs to this proliferative self-differentiation: nourishing-growing-reproducing.

When Cyrus essayed to cross the Gyndes, it being there navigable, one of his sacred white horses dashed with ὕβρις into the river, that he might win through it, but the stream overwhelmed him and swept him under and away. At this ὕβρις of the river, Cyrus was very wroth, and he threatened it that he would make it so weak that women should ever after cross easily without wetting their knees.
HERODOTUS

At this point in the essay, I must confess that I have become much like Cyrus' horse: intoxicated with the ὕβρις of my subject matter, I have thrown myself headlong into a current which perhaps exceeds my powers.¹⁴ At the same time, I am reminded that this study began with another river: one which carried Socrates and Phaedrus to the tree that granted a sheltered space for thinking.¹⁵ In the interpretation of that text, I suggested that there is a certain necessary extravagance (*extra-vagari*, wandering about outside) and even vagueness (*vague* as wild, uncultivated, but also *vagus*, strolling, rambling) that must belong to any account which attempts to remain close to the movement of vegetal life.

¹³ See page 167.

¹⁴ Epigraph source: Herodotus, *The Persian Wars*. I.189.

¹⁵ See page 4 and following.

“φύσις,” Aristotle says, “is a traveling to φύσις,” and this means that a philosophical study which strives to follow the growing forth and withering away of things strives to follow a manner of existence that is not simply given but rather always developing—or, one might say, *is* a certain manner of development.¹⁶ The texts that figure prominently in the preceeding chapters all bear the marks of this difficulty. As I have have emphasized throughout the essay, those thinkers who wish to remain faithful to plants must be satisfied to address themselves to a subject matter that remains half-buried in the soil, for only under such conditions can thinking move alongside a life whose character involves not only blossoming revelation but also recession and withdrawal. It is therefore appropriate for me to end this study by highlighting two of its limitations. The first pertains to the subject matter itself; the second pertains to the scope and focus of this essay.

The first limitation I wish to highlight is a tension in my account between the specificity of plant life and the generality of life as such.¹⁷ On the one hand, I suggest that plants are a specific kind of life that must be understood in their own particularity. I have repeatedly stressed the inadequacy of conceiving plants on the model of animal life and the importance of studying plant life on its own terms, advocating a philosophical phytology as an alternative to a merely zoological approach to plant life. In Hegel, I emphasize the passages of the *Encyclopedia* in which the philosopher addresses growth in its uniquely vegetal character. What I find most fascinating in Goethe’s thought is his “delicate empiricism,” which attempts to bring his ideas as close as possible to the specificity of the plant. In Nietzsche, I uncover an ontology that takes its inspiration from plants and attempts to understand everything from physics to societies in those terms. Aristotle’s account of the soul is most fruitful when he attends to the ambivalent position of plant life,

¹⁶ “ἡ φύσις ἢ λεγομένη ὥς γένεσις ὁδός ἐστιν εἰς φύσιν.” Aristotle, *Physics*, 1957 193b13f. The earlier form of the English word “develop” was “disvelop”; both terms had the now obsolete sense of “unfurl, unfold, unveil” (from the Old French *desveloper*).

¹⁷ This tension is mentioned in the introduction (page 11).

suspended between the coming to be and passing away of all that is (φύσις) and the activity that is proper to animals (ζωή). Timaeus' account of the cosmos reveals an extraordinary dimension of plant life precisely insofar as it is able to conceive plants as a "different kind" of life, one akin to animal life yet not the same as it. It is no exaggeration to say that this entire study is motivated by the conviction that the specificity of plant life marks a particularly fruitful site for philosophical reflection.

On the other hand, I have also suggested that the specificity of plant life reveals something broader than the vegetal. This aspect of the study becomes most pronounced beginning with the discussions of Nietzsche and Heraclitus in Chapter V. Although Nietzsche's doctrine of the will to power is inspired by the vegetal occurrence of life, it does not constitute an attempt to understand plants specifically. Rather, Nietzsche takes plants to be emblematic of a broader ontological current that is his real interest. In a similar vein, my readings of Heraclitus in chapters V and VII are able to shed light on vegetal life despite the fact that Heraclitus addresses life only generally, rather than addressing plants specifically. In Aristotle's philosophy, vegetal life occupies a central place in the study of the soul because it persists in the animal and human soul—or, to be more precise, that aspect of the soul which defines the plant is not unique to the plant but rather belongs also to animals and humans. At the same time, that aspect of the soul also remains very close to φύσις. Thus, at the very point that Aristotle speaks of what is most distinctive of the plant (namely, nourishing-growing), he places this aspect in relation to both animal life and the broad movement of φύσις: "For nothing withers or increases by φύσις unless it grows nutritively [τρέφόμενον], and nothing grows nutritively itself unless it shares in life [κοινωνεῖ ζωῆς]."¹⁸ In the *Timaeus*, the generality of life is likewise at the forefront. Because Timaeus depicts plants in terms of their analogue, the χώρα, plants are ultimately

¹⁸ Aristotle, *De Anima*, 1979 415b27-28.

understood in relation to a kind of movement that possesses a cosmic scope and significance.

The tension between these two aspects of the study is deliberate and necessary. In its first appearance in Greek literature, φύσις appears in the μῶλυ plant.¹⁹ On the one hand, what appears is not a plant but φύσις; on the other hand, φύσις only appears in the specificity of the plant. What Homer articulates from the direction of φύσις, this study articulates from the direction of the plant (φυτόν): on the one hand, what phytology studies is not the generality of life or φύσις but the specificity of the plant; on the other hand, what the specificity of vegetal life reveals is also something broader that pertains to the occurrence of life as such. That is, it is the nature of vegetal life to make manifest something concerning life as such. Theophrastus makes the point precisely: in contrast with animals, “the plant has growth in all its parts, inasmuch as it has life [ζωή] in all its parts.”²⁰ What is characteristic of the *uniquely* vegetal manner of growth, in other words, is that it is thoroughly characterized by the appearance of what is *not specific* to the plant: the life of the living creature as such. The tension between the specificity of plant life and the generality of life as such is therefore a limitation of this study insofar as that tension belongs to vegetal life itself as it shows itself to philosophical thought.

The second limitation I wish to highlight concerns temporality. Indeed, the question of temporality is a thread which runs consistently through this essay without being addressed directly. In Hegel, vegetal life ultimately appears as a “tremulation of vitality within itself” that is understood as a “restlessness of time.”²¹ The activity of plants appears as “tremulation,” as movement *qua* movement, which consists in an indeterminate (“restless”) modality of time. Goethe carries this idea further: intensification, understood as an

¹⁹ See page 8.

²⁰ Theophrastus, *Enquiry into Plants*, 1999 1.1.4.

²¹ See page 50.

ever-striving movement, is a temporalizing activity articulated according to the interplay of expansion and contraction. Goethe therefore develops an initial sense for a specifically vegetal temporality, neither linear nor cyclical but rather intensive, essentially plural but rhythmically coherent.²² In this respect, Goethe's influence on Nietzsche can be seen in the latter's identification of life with nutrition and his understanding of nutrition as a modality of rhythmic adjustments.²³ Likewise, Heraclitus' sense of limit and measure, of which the sun's fire is the primary image, is an essentially temporal understanding.²⁴ Although Aristotle and Plato do not place temporality at the forefront of their discussions of plants, a study which takes up the question of vegetal temporality would nevertheless find it helpful to address the implicitly temporal aspects of those discussions. In the *Phaedrus*, for example, the vegetal grove in which Socrates and Phaedrus converse shelters a form of temporality that is distinguished from both the time of the city and the time of the sun's daily passage. In the *Timaeus*, the dramatic necessity for the introduction of plants into Timaeus' account concerns the question of establishing a temporality that is not the cyclical image of eternity (as in the macrocosmic account) but is instead the form of finite endurance in the living creature.

A second essay, following in the footsteps of this one, would develop the concept of vegetal ὕβρις more precisely in its temporal character. Such a study would situate itself in a lineage of philosophy that understands time as belonging to things and therefore as plural.²⁵ As I have briefly indicated, it would draw on many of the same thinkers that feature in this essay, while also turning to others, such as Plotinus, who coins the neologism "to temporalize" (χρονόω) to describe the activity of living creatures and who

²² See page 81 and following.

²³ See page 108.

²⁴ See page 165 and following.

²⁵ This lineage is phenomenological, in the sense that it develops an understanding of time by attending to the occurrence of things as they appear. For recent examples of the philosophy of time carried out within this lineage, see Scott, *The Lives of Things*, Vallega-Neu, *The Bodily Dimension in Thinking*, and Wood, *Time After Time*.

begins his account of φύσις by investigating the way in which plants strive for (and achieve) contemplation.²⁶ It would also have fruitful recourse to Augustine, for whom temporality is finite and plural because it belongs to the “swelling” or “distension” of living things, and who begins his considerations of time by imagining himself as a plant.²⁷

In this essay, however, I have for the most part endeavored to avoid these questions. The necessity for doing so arises not from the nature of my subject, but only from the form of the essay: any study must suffer limits if it is ever going to exist. The question of vegetal temporality therefore constitutes the immediate horizon of the present study, in the sense that it is a crucial element that orients and defines my explorations of vegetal life while never itself being adequately explored. By introducing the question of vegetal temporality in connection with the study of plant life, however, this study motivates another which would take up the question in a sustained way.

There rises a tree. O pure rising-over!

RAINER MARIA RILKE

Plants appear.²⁸ We find ourselves next to a tree; there it is, rising. The roots are hidden beneath the earth; the crown is hidden above the branches. We remain yet in the middle, situated within an interval of place and time. This essay has not attempted to articulate for vegetal life an origin or an end. Rather, it has attempted to come alongside the plant *in medias res*, in the midst of its growing and withering, and give thoughtful articulation to its essential occurrence as ὕβρις. To the extent that the experiment is successful, the ὕβρις of plants has emerged as the ontological character of vegetal existence that appeared first in

²⁶ Plotinus, “Enneads.” III.7.11.30; III.8.1.1-7.

²⁷ Augustine, *Confessions*. XI.ii.

²⁸ Epigraph source: Rilke, *Duino Elegies & The Sonnets to Orpheus* 82, quoted on page 1.

terms of unity and multiplicity (Hegel, Goethe, Nietzsche) and second in terms of limit, prodigality, and proportion (Heraclitus, Aristotle, Plato). Plant life occurs neither as identity in excess nor prodigality under constraint; rather, it is a proportionality that relates determination and indetermination in their appropriate difference, a choric movement that grants life shape without thereby containing it, a modality of reproductive growth both unending and finite.

What is at stake in this study is the possibility of an encounter between philosophy and vegetal life that calls for a rethinking of the latter and therefore of the former. This essay is therefore an exercise in listening, and its success is measured by the degree to which it invites the soul to become more sensitive to the occurrence of “a nature akin to human nature yet different.”²⁹ Such an invitation is threefold. First, it occurs as an invitation to notice the subtle ways in which vegetal life has shaped the thinking of certain figures in the history of philosophy, often in tension with the broader terms of their own projects. Second, it consequently occurs as an invitation to rethink our philosophical concepts and approaches by rendering them more responsive to the specifically vegetal dimension of life. Third, it occurs as an invitation to cultivate an intensified awareness of and attention to the vegetal life which everywhere surrounds us—and in which we, too, find ourselves rooted and nourished.

²⁹ Plato, *Timaeus*, 1922 77a, quoted on page 190.

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