The Syntax of Time

The Phenomenology of Time in Greek Physics and Speculative Logic from Iamblichus to Anaximander

PETER MANCHESTER

STUDIES IN PLATONISM, NEOPLATONISM, AND THE PLATONIC TRADITION

BRILL

THE SYNTAX OF TIME

ANCIENT MEDITERRANEAN AND MEDIEVAL TEXTS AND CONTEXTS

EDITORS

ROBERT M. BERCHMAN JACOB NEUSNER

STUDIES IN PLATONISM, NEOPLATONISM, AND THE PLATONIC TRADITION

EDITED BY

ROBERT M. BERCHMAN
(Dowling College and Bard College)
AND
JOHN F. FINAMORE
(University of Iowa)

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BY

PETER MANCHESTER

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PREFACE AND ACKNOWLEDGMENTS

I have left these chapters marked by the time it has taken me to begin, execute, and declare an end to this project. The first three are essentially the same as those presented in 1984. They are frozen in time with respect to bibliography, but have been a basis, from then until now, for my instruction in the doctoral program in philosophy here at Stony Brook, where the positions taken still seem to be holding up.

The three, the chapters on Husserl, Plotinus, and Aristotle, have always accompanied a fourth on Parmenides. Until this year, that meant a reprise to the article I wrote in 1977–78 for the January, 1979 Parmenides issue of *The Monist*, "Parmenides and the Need for Eternity," which was formally the first composition for the project "the syntax of time." The Husserl, Plotinus, and Aristotle chapters were written over the subsequent five years to explain and defend unconventional ways I had characterized their positions in notes for that paper, giving the set of four a certain unity and finish. There was always supposed to be a fifth chapter on Heraclitus, by way of pointing toward Anaximander and my translation of his famous phrase, "according to the syntax of time." This was not forthcoming, however, until Thanksgiving 1999.

By the millennium it seemed the manuscript was complete—that is until January of this year, when I discovered that the entire expository strategy of the 1979 Parmenides paper was based on an error. This meant it could no longer be reprinted. I needed to write my way out the same door I had come in through twenty-five years earlier. The Parmenides chapter is now entirely new.

Through these years, I have had the sustaining interest and enthusiasm of graduate students at Stony Brook. In spring of this year, in PHI 600 (Ancient Philosophy), our topic was "Heraclitus, Parmenides, Empedocles, and the Vocation of Philosophy," with Peter Kingsley as guest for a month. As in other PHI 600 seminars on Plato and Platonism and on Aristotle over the years, the level of work has been very high. I want in particular to acknowledge the Greek Cabal that formed around a previous seminar on the Presocratics in fall 1997, and then refused to die the following spring. This has evolved into an ongoing extracurricular Greek group, who, among

other things, have helped me review the translations of Aristotle and Parmenides presented in the appendices for elementary errors. (Any remaining errors are all substantive, and all mine.) Too many to name, it is the many doctoral students in philosophy I have met at Stony Brook from 1986 to the present that I want first to acknowledge, for their stimulation, collegiality, and probing attention.

For the opportunity to work at Stony Brook, I thank Thomas J. J. Altizer and Robert C. Neville, and for the invitation to participate in the graduate program in philosophy, Edward S. Casey. They are all very good at making books, and, together with their encouragement, their example should have helped me get this one made more quickly.

The welcome I have felt in the study of ancient Greek philosophy was extended to me first by the late Arthur Hilary Armstrong, F.B.A., M.A. in Classics (Cambridge), Gladstone Professor of Greek in the University of Liverpool, Visiting Professor of Classics at Dalhousie University, Halifax, whom I met there in the fall semester of 1975 as a post-doctoral fellow in classics, with support from the Killam Foundation of Canada, for which I would like to express my continuing gratitude. I had written a dissertation comparing Heidegger and Augustine on temporality (*The Doctrine of the Trinity in Temporal Interpretation*, Graduate Theological Union, 1972), and had decided to abandon the Heidegger discussion and look into the Greek background of Augustine, specifically Plotinus. I wrote to Armstrong saying I needed an "antidote to Heidegger," and he was delighted to assist.

It was my privilege to grow into friendship and collaboration with Hilary Armstrong, starting with that semester in classics at Dalhousie in which I read *Ennead* III, 7 *On Eternity and Time* with him. Initially he resisted my Husserl-motivated interpretation, but finally warmed to it. At the time he was struggling to complete the translation of the Sixth Ennead for the Loeb, and we had much conversation about philosophical Greek. I owe to him whatever judgment I am able to exercise about how to balance philosophical and philological considerations when they come into conflict in the reading of ancient texts. I also learned a great deal from him about directness and clarity of voice, though these are lessons I have found harder to put into practice.

To all who have cared to see this work complete, my thanks.

Peter Manchester
Stony Brook University
Thanksgiving, 2004

CHAPTER ONE

TWO-DIMENSIONAL TIME IN HUSSERL AND IAMBLICHUS

The Problem of the Flowing of Time

Beginning with Aristotle, philosophers have regularly attempted to correct familiar ways of speaking that construe time itself as a motion—a passing, for example, or more canonically, a flowing. They have just as regularly failed. Because it is sustained by the ancient comparison to a river, the notion that time flows is past rooting out. And yet it remains a difficult, even a doubtful observation.

Time cannot itself be a motion, Aristotle explains, since motions are faster and slower, and faster and slower are discriminated with respect to time. Time is not motion, he concludes, but at best "something about motion."[1]

Plotinus rejects even an indirect connection to physical motion. To make time a feature of motion or something defined in relation to it (e.g. the measure of motion) turns time into a redundant accompaniment, a motion running alongside of every motion.[2]

Still, a Platonist like Plotinus must confront the systematically decisive text in *Timaeus* according to which time is a "moving image of eternity."[3] But Iamblichus, the fourth century Neoplatonist for whose interpretation of Plotinus we are preparing in this chapter, stipulates that the "moving" of time is neither like, nor among, sensible motions, since it is motion *with respect to eternity alone*.[4]

Contemporary writing has belabored the point beyond tidy attribution. A recurring objection goes like this: If in some way it makes sense to say that time flows, then it ought to be possible to say which way it flows. Does it flow from the past, welling up into the present and spilling out into the future? Or from the future, looming nearer

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[1] *Physics* IV, 10: 218b10–11, 219a10.
[2] *Enneads* III 7 (45), 7–10.
[3] Plato, *Timaeus* 37D.
[4] Commentary on *Timaeus*, Fragment 64 (Dillon). *Iamblichi Chalcidensis in Platonis Dialogos Commentariorum Fragmenta*, Ed. John M. Dillon (Leiden: E. J. Brill, 1973).

and nearer and then 'coming to pass'? We speak of it in both ways. Beneath this antinomy another confusion lurks: Is it time itself that flows, or events that flow through time? Are we, the observers, being carried along by the stream, or are we on the bank watching it flow by? Or maybe both?

With this last alternative we are brought back to Aristotle: If something flows, it is meaningful to ask how fast it flows. But this does not apply to time. His complete statement is:

> Again, all change is faster and slower, but time is not; for the slow and fast are defined by time: fast is much movement in a short time, slow little in a long time. But time is not defined by time, neither by being a certain quantity of it nor a quality.[5]

Is it true that "time is not defined by time"?

The physicist David Park has given a very beautiful and satisfying definition for how 'fast' time goes: It moves "at a rate of one second per second."[6] He makes this suggestion half seriously, half tongue in cheek, but considerable implicit justification for it can be found in the classical physical tradition, especially as it comes into focus in the work of Isaac Newton.

In the familiar Scholium to which Newton relegates his remarks on such physical quantities as time, space, place, and motion, concepts that are "sufficiently well known to all" as to require no formal definition, he says that:

> Absolute, true, and mathematical time, of itself, and from its own nature, flows equably without relation to anything external, and by another name is called duration; . . .[7]

We need not concern ourselves here with the distinction between absolute and relative time, since Newton emphasizes that the equable flowing belongs to time "in itself and from its own nature (*in se et naturâ suâ*)." He accepts the common impression that it is somehow

---

[5] *Physics* IV, 10: 218b, lines 14–16. (Here and throughout these studies, citations from Aristotle will be from the author's translation of the treatise on time, presented complete in Appendix 1).

[6] David Park, *The Image of Eternity*: *Roots of Time in the Physical World* (Amherst: University of Massachusetts Press, 1980), p. 107.

[7] *Philosophiae Naturalis Principia Mathematica*, Scholium I to Definitions. *Sir Isaac Newton's Mathematical Principles of Natural Philosophy and His System of the World*, revised translation with comments by Florian Cajori (Berkeley and Los Angeles: University of California [1934], in two volumes, 1966).

meaningful to speak of time as flowing. What is striking is that this flow is *equable* (*"aequabiliter fluit"*). Equability is a comparative idea. It makes no sense to say that absolute time flows equably unless time somehow, by its very nature, sustains comparison with itself.

To be sure, the equability of absolute time can be treated as an ideal limit. It is implied from our capacity to distinguish more from less equable actual sensible motions in the traditional search conducted in astronomy for convenient and accurate clocks. Newton himself presents it in that light later in his Scholium (IV), where he says that absolute time "is deduced (*colligitur*)" from inequable motions "through the astronomical equation." But there the issue is the measurement of time, and the recognition that no perfectly equable apparent motion exists that can serve directly as an accurate astronomical clock, such as the daily wheeling of the heaven of the stars was formerly thought to provide. But the formulation we are considering concerns not the measurement of time but its nature "in itself," with respect to which it is called "duration." On this level, time is involved not in the motions of sensible things, but in their being, as it is subject to motion.

> The duration or perseverance of the existence of things remains the same [i.e. flows equably], whether the motions are swift or slow, or none at all; and therefore this duration ought to be distinguished from what are only sensible measures thereof; and from which we deduce it, by means of the astronomical equation.[8]

For Newton the equability of absolute time can neither be measured, nor its meaning exhausted by its ideal necessity in empirical physics. Instead it expresses his intuition of the *identity* of time, time in relation to itself. I expect that Newton regards the notion of an equable flowing to be primitive and simple. And yet equality remains a compound idea. Even when it becomes reflexive in the extreme case of radical identity (A = A), the subject of the relation is necessarily taken twice.

In what fashion could time be understood to be taken twice in the simple Newtonian intuition of its equable flow? This is where Park's Rate for time can be suggestive. First, "one second per second" needs to be taken as a sample of an entire family of rates: one year per year, one month per month, one day per day, and so on. Of course when we say "one second per second" we already insure that

[8] Scholium IV to Definitions.

the formulae with more expansive units are correct; but not those below it in the hierarchy. On the level of milliseconds or nanoseconds, time might flow in pulses, or in complex cycles of surges and ebbs. So let us understand Park's Rate to imply Park's Rate Perfected, a flow of "one attosecond (10^{-18}) per attosecond"—and indeed whatever further granulations toward the infinitesimal are relevant for physical application. This allows our attention to shift from the question of units to the heart of the matter, the 'factoring' of time by the 'per'. Here a natural misunderstanding needs to be avoided.

Someone might object to the claim that 'equably' specifies a self-relation that is *distinctive* to the phenomenon of time. Surely what Park's Rate calls for is no different for extent of time than what the comparable principle requires for the metric flatness or pervasive "similarity"[9] of space. "One second per second" plays on the simple fact that any two selected intervals of unit duration in equable time will measure the same motions in the same numbers. If there are special practical problems in the case of time with supplying constant units, and if no actual motions are recurrently the same in the simple, convenient way of the Greek οὐρανός, these are empirical happenstance and do not affect the symmetry with space. Equability of time, like similarity of space, says that a unit here and a unit there, throughout the expanse, amounts to the same measure. No strange self-relation is implied in this, and nothing special with regard to time over space.

Such an argument takes the self-relation of time implied in the 'per' to be of *time* with *time*. It allows us to take any *two* times before it has told us how to take *one* of any such thing. But the twofoldness we are exploring belongs to the *identity* of time, and articulates the intuitive simplicity of time's primitive *flowing*.

By taking the form of an expression of velocity, Park's Rate seems at first to fall into the crude confusion between the unique timelike flux and ordinary motion. Velocity = units of distance per units of time: $v = d/t$ (supposing simple rectilinear motion). But on a second hearing, the "second per second" in the formulation evokes not velocity but acceleration, the rate of change in velocity. Acceleration = units of velocity per unit of time: $a = v/t$. But then acceleration = (unit of distance per unit of time) per unit of time, or acceleration = unit of distance per unit of 'time squared': $a = d/t^2$.

[9] Scholium II to Definitions.

In Newtonian mechanics, the difference between simple velocity and rest does not give access to the inertial mass of bodies, to which attaches their "duration or preservation of existence" in absolute time (First Law). Mass shows both its quality and quantity only in relation to acceleration; its quality is to resist acceleration, which exposes the source of acceleration to be 'force' (Second Law); its quantity is measured in units defined by the basic formula $F = ma$, force = mass times acceleration. But acceleration was defined in relation to time 'squared', the second per second of Park's Rate, meaning not time divided by time, but time 'times' time. As the matrix of duration, time must be 'taken twice', or made a factor with itself.

Or is it *three* times, time times time? What exactly is time 'squared'? We have a radical problem here. Algebraic squares can of course be correlated with geometrical ones. There is a philosophical tradition, intermittent but quite ancient, in which time is represented as a *plane figure*—not a square, but a figure that has a second dimension in the same sense. In interpreting this figure, it routinely proves difficult to avoid giving meaning to a *third* dimension, that in which the two-dimensional figure is 'seen'. By contrast to this, the appropriate interpretation must make the two-dimensional field its *own disclosure space*—a term to which I will return at the end of the chapter.

The Flux of Consciousness

The equable flow of absolute time was important for Newton for reasons beyond its implicit necessity as an ideal limit in the measurement of motions. Even his contemporaries took exception to the apparent dependence of absolute time (and absolute space) on a metaphysically postulated divine substance whose mode of being was 'soul' or 'mind'. Newton took note of this inference in the *Scholium to the System of the World* in the second and third editions of the *Principia*, and he expressly refused it:

> There are given successive parts in duration, coexistent parts in space, but neither the one nor the other in the person of a man, or his thinking principle; and much less can they be found in the thinking substance of God.[10]

[10] *Scholium to the System of the World*; Ed. Cajori, vol. 2, p. 545.

Empirical philosophers of Newton's generation were extremely sensitive to the introduction of any notion of 'mind-dependency' in the constitution of physical phenomena like duration. They were right to be on their guard. By the end of the nineteenth century, the river-like flow of time was ascribed almost universally to the 'flux' or 'stream' of *consciousness*, and no longer directly to the motions of the physical world. Physical time was being mastered by field theories, geometrized, and denied any special privilege as a dimension independent of the three dimensions of spatial volume. Psychical time had become the focus of increasingly far-reaching philosophical study. Flowing or succession of ideas (Locke and Hume) had come to seem the identifying characteristic of the 'mental' as such, of pure consciousness. With Husserl the flux of consciousness became the subject of assertions that were transcendental and absolute on the same scale as Newton's, but wholly abstemious as concerns physics.

What was it in Newton's intuitions about the divine substance that suggested to his readers that he thought of it as 'mental'? Both Berkeley, who complained that Newton made God a "world-soul," and Leibniz, who took Newton to require "occult" factors impermissible in a thorough-going physics, reacted to a first edition devoid of any reference to God or spirit. Newton's own rejoinder (if we understand the Scholium in this way),[11] spells out the worrisome claims.

> [God] is not eternity and infinity, but eternal and infinite; he is not duration or space, but he endures and is present. He endures forever, and is everywhere present; and by existing always and everywhere, *he constitutes duration and space.*[12]

As subsequent relativity physics has discovered, what is here physically extraneous in Newton's intuitions about the divine is his notion of a meaningful 'Everywhere Always Now', an enduring identical presence that fills space at every time and exhausts time in every space.

> Since every particle of space is *always*, and every indivisible moment of duration *everywhere*, certainly the Maker and Lord of all things *cannot* be *never* and *nowhere.*[13]

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[11] As argued by Cajori, vol. 2, Appendix, note 52, p. 668; Berkeley and Leibniz as there cited.

[12] In the place cited.

[13] The next sentence.

Quite apart from problems like how such a presence would manifest itself, or whether Newton supposes he has an argument for the existence of a divine being, mental or otherwise, relativity theory shows that he ascribes indefensible properties to simultaneity and inappropriately distinguishes space, time, and mass.

Newton's exposition in the *Principia* employs Euclidian geometry, whose dependence on a particular set of intuitions derived from visual or optical space is well known.

Geometrical construction in visual space requires that we suspend the ancient conundrum about which way the 'ray' of appearance passes between 'aspect of the physical' (εἶδος) and 'species in perception' (φάντασμα). Between Parmenides and Plato there transpired a lively physics that raised for the first time what we can recognize as epistemological problems *from the point of view of human percipients*. At issue then as now was how the 'mind' is sustained by the actual organisms that human beings are. The phenomenological problem of constitution in perceptual fields and the physiological problem of how perception is actually conducted by living organisms are at bottom the same. 'Light', by which the old discussion meant sheer 'appearing' (as Aristotle saw: "light is the color of transparency"),[14] came to be considered by some as radiating from the physical form, somehow impinging upon or acting in the soul, and by others as a ray emerging from the seer's soul and playing over the seen. We recognize immediately that the ray of the seer is an intentional one, a *Blick* rather than a *Strahl*. But the old physics kept making it a physical light, and soul the source of a quite physical kind of brightness.

Post-modern physics has its own version of this amphibole, generated by the discovery of the finite velocity of light. However covertly, we draw arrows between things and minds today because we represent light conceptually as a substance traversing physical space, and information as an attribute of light. The new physics treats simultaneity itself as a local phenomenon, which does not propagate through space-time any faster than light; or rather, just as fast.

From this point of view, Euclidian geometry, and with it the optics to which Newton still deferred, incorrectly postulate an *infinite* velocity

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[14] φῶς δέ ἐστιν ἡ τούτου ἐνέργεια τοῦ διαφανοῦς ᾗ διαφανές. . . . τὸ δὴ φῶς οἷον χρῶμά ἐστι τού διαφανοῦς . . . "Light is the activity of this transparent [medium] as transparent. . . . Light is, in a sense, the color of transparency." *De Anima* II, 7: 418a9–12.

of light. But this is a most unnatural way of expressing the old intuition, one which achieved a geometrical construction of visual space in a properly 'transcendental' way—by suppressing the question of the *direction* of appearing in favor of a *representation of appearances as such*. On this intuition, simultaneity simply reaches all the parts of a spatial form (taken as mass or as volume) at once, and all in the same way. In this way the 'flowing' plurality of simultaneities which is time is wholly transcendental with regard to space; it is an entirely non-spacelike condition.

Newton expressly renounced any inference from his absolute time and space to the metaphysics of mind or "thinking." Space and time are "given" in themselves, and neither in the "thinking substance of God" nor in the "thinking of a man," for which the divine substance is the principle. His thinking had impact in ontology itself in so far as he left time lying around loose, transcendentally 'outside' of space and ready for the Kantian usurpation in which it became the form of 'inner sense'.

For Kant space, too, is a transcendental condition of experience, the form of what he calls 'outer sense', and so in a certain way 'mental'. But time has always had a special priority in the appearance of the mental as such, or the 'phenomenon' of consciousness, and Kant is very much in this tradition.[15] What is unique in Husserl's thesis that consciousness *is* time-consciousness was already detectable in Locke and Hume, for whom the 'succession of ideas' was a primitive transparency, a givenness of time as absolute as Newton's.

By making this absolute the givenness of *consciousness*, however, new students of flux had placed themselves in a position to notice new things about the "manner" of this givenness, as Hume expresses it. Before long they would say something that had been said already,

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[15] A striking early illustration of the asymmetrical role played by time and space in the life of the mind, with time being the 'higher' factor and somehow connatural with 'mind', can be found in Augustine:

> And this truth, changeable though I am, I so far drink in, as far as I see in it nothing changeable:
> (i) neither in place and time, as is the case with bodies;
> (ii) nor in time alone, and in a certain sense place, as with the thoughts of our own spirits;
> (iii) nor in time alone, and not even in any semblance of place, as with some of the reasonings of our own minds.

De Trinitate, Book 4, Preface, 1, trans. A. West Haddan. This text comes from the first half of the work, and reflects a Platonized Pythagoreanism like that of Book 6 of the early dialogue *On Music*.

oddly enough, by pre-medieval philosophy but long forgotten: that the flux of time-consciousness has a *double* continuity.

The Transparency of the Flux

Let us rehearse a phenomenological description of the manner in which the flux of consciousness is given—not yet in terms of motions *of consciousness itself*, but as a certain determination *of natural motions* as they are presented in experience. What we may discover to be conspicuously 'mind-dependent' shows itself initially as a feature of motions 'in themselves'. There is, as experience tells us, a certain stability in the presentation of natural motions, with respect to which some seem slow, some fast, *absolutely*.

The passage of the sun across the sky seems slow, too slow to be perceived as a motion. Except occasionally at sunrise or sunset, we can get no dynamical feeling for this movement, no real perception of the turning of the sky. No straining of attention, no meditative dilation of our powers can change this fact. Even the dynamic sense of the earth's turning that is possible when the sun's disk is crossing the horizon is marginal. In another sense of 'horizon', there is clearly an horizon for slowness of motion past which we cannot directly sense but can only infer the presence of motion. The motions of plants, for example, with few exceptions are a case in point.

The situation is similar with respect to fast motions. The beating of a hummingbird's wings is too fast for us to resolve into its respective phases, and we see only a blur filling a space. Many insect motions are of this sort, such as the backward leap of the escaping housefly. Again, the limitation is notable for its stability. No voluntary intensification of attention, no number of cups of coffee can allow us to 'see into' the phases of a motion that is too fast.

Technical maneuvers can illuminate the situation. Time-lapse and time-dilation photography show us that natural motions can be presented in time-frames other than our own. Time-lapse photography of plants is especially familiar and compelling. It shows us not just that plants are *active* in their own time-frame, but that they patently *behave* in their own fashion. In principle, we are led to recognize, other psychisms are possible—'alien intelligences' let us say—whose window of palpable motions from too fast to too slow may be different from our own.

For one such psychism the motions of the sky might be fast enough to perceive directly, those of glaciers still too slow, those of most human activity now too fast. The differences, however, would pertain only to two interior *scalings of experience*, ours and the alien's, and not to physical motions analyzed in purely physical terms, i.e., by measurements. In formulae confirmable by measurement, velocities and accelerations would be expressed in terms of a continuous variable *t*, and the choice of *unit* in which to measure *t* would be arbitrary and a mere matter of convenience. After rectification of units, for example, we would expect our alien's formulae for the orbits of bodies in our solar system to be identical with our own.

But *with respect to what* can the selection of units of time be said to be convenient? How can we describe a feature of our consciousness which doesn't show itself as a motion, and yet is manifest only in motions, in the way that they are horizoned as fast and slow?

By the time we come to Aristotle (chapter 3) it will be natural to provide a formal definition of *time-frames*, to speak of them as *scaled* (inclusive of and included by one another in hierarchical order), and to demonstrate the roles of framing and scaling in the constitution of *units* for the measurement of time. However, it will become progressively less natural or helpful to continue to speak of a 'rate' of consciousness. As regards what actually *appears* in the phenomena of experienced physical motion, it is not in the least clear what we are referring to when we speak of consciousness flowing 'faster or slower'.

Yet the discussion in which Husserl was involved allowed for such talk. Locke and Hume were committed to the thesis that time is not itself an impression or a sensation in physical experience, but instead only a "manner" of the givenness of the succession of ideas *in the mind* ("in consciousness" as Husserl would say). As we shall see, both Locke and Hume are quite unguarded about describing this manner of givenness as itself a motion, to which speed—faster or slower—may be ascribed. Locke confronts the problem of radical units, of minimal intervals or "distances" between successive ideas, more directly than Hume, but he sees nothing particularly timelike in this problem. And neither of them fully acknowledges the *double* continuity they ascribe to succession when they use such images as a "train," a "stream," or a "flux."

Aristotle rooted his identification of time not in the nature of flux but in a feature I call *spanning*. This he took to be prerequisite for the phenomenal time-functions of framing and scaling. Spanning

received considerable development in Neoplatonism, but in the context of a Pythagorean mathematics whose intuitions were not easily replicated in the later mathematics of the continuum. With Locke and Hume, the topic dwindled to naive talk of simple givenness "in succession." And yet Locke clearly sketches, and Hume expressly makes, the same phenomenological observation about the limits in our experience—the observation about slowness and fastness—that leads to the discussion of time-frames. But how do they want the illustration to work, given their commitment to a 'speed' of ideas?

Time-Framing in Locke and Hume

In his *Essay Concerning Human Understanding*, Locke argues that the ideas we form in relation to time, namely, succession and duration, do not arise from sensation but from reflection only.

> That we have our notion of succession and duration from this original, viz. from reflection on the train of ideas, which we find to appear one after another in our own minds, seems plain to me, in that we have no perception of duration but by considering the train of ideas that take their turns in our understandings.[16]

As an "idea of reflection," time could be said to appear only as the mind itself appears, namely, as the "train of ideas." Having considered perceived durations and successions from this point of view, Locke finds himself in a position of advantage for explaining why very slow and very swift motions are not perceived. He reflects on the case of a man on a ship becalmed at sea, who perceives no motion in "sun, or sea, or ship," though he gaze on them "a whole hour together."[17] In this case, the sensible parts of motions are presented at such a "remove" from one another that our corresponding ideas appear only "a good while after one another."

> And so not causing a constant train of new ideas to follow one another immediately in our minds, we have no perception of motion; which

[16] Locke, *An Essay Concerning Human Understanding*, collated and annotated by A. C. Fraser (New York: Dover publications, 1959); Book 2, Chapter 14, paragraph 4; vol. 1, p. 239.

[17] *Ibid.*, paragraph 6.

> consisting in a constant succession, we cannot perceive that succession without a constant succession of varying ideas arising from it.[18]

This exposition involves an interesting shift between the description of the separation between the parts of the motion as a "remove" and that between the corresponding ideas as a "while." But in his discussion of the case of motions too fast to perceive, an even more provocative and apparently inadvertent categorial mix-up takes place. I italicize the set of terms in question:

> On the contrary, things that move so swift as not to affect the senses distinctly with several distinguishable *distances* of their motion, and so cause not any *train* of ideas in the mind, are not also perceived. For anything that moves round in a circle, in *less times* than our ideas are wont to succeed one another in our minds, is not perceived to move; but seems to be a perfect entire circle of that matter or colour, and not a part of a circle in motion.[19]

Here the moments of motion are not only discriminated by *distances* (which then become a *train* in our minds), but a third kind of plurality is also mentioned, namely that of *times*. Somehow, both in physical motions, which are sensed, and in psychical successions, which appear only to the reflection of the mind, "times" can be counted (there are "less" or more of them). Hence there is no barrier against ascribing to the *psychical* succession or "train of ideas" the same qualities that we apply to *physical* motions, namely fastness and slowness.

> Hence I leave it to others to judge, whether it be not probable that our ideas do, whilst we are awake, succeed one another in our minds at certain distances; not much unlike the images in the inside of a lantern, turned round by the heat of a candle [an early "magic lantern" or cinemascope]. This appearance of theirs in train, though perhaps it may be sometimes faster and sometimes slower, yet, I guess, varies not much in a waking man: *there seem to be certain bounds to the quickness and slowness of the succession of those ideas one to another in our minds*, beyond which they can neither delay nor hasten.[20]

Locke here takes the appearance of any one idea to be instantaneous (as he later expressly stipulates), and we might want to ask

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[18] *Ibid.*, paragraph 7.
[19] *Ibid.*, paragraph 8.
[20] *Ibid.*, paragraph 9; p. 243.

him about the *appearing* of the "distances" between them. But our concern here is with the fact that, by inserting between *ideas* what he had prior to this paragraph reserved only for the parts of motions ("distances"), Locke has allowed himself to speak of their "appearance in train" in the terms reserved for motions (as "faster and slower," having "quickness and slowness" in their succession).

With our contemporary knowledge of the nature of cinematic illusion, we would quickly distinguish (as he does not) between the speed at which frames are projected and the speeds presented in the illusion. We recognize intuitively that the frame-rate must be *stable* if the motions in the illusion are to preserve their own varying speeds. The projection frame-rate must be high enough so that the time lapse between frames is well within the visual specious present created by the retinal persistence of vision, in order that the motions in the illusion seem to be smooth. But the stability of the frame-rate is the more important requirement here. Only if it is constant can the illusion be faithful to the original motions. I call this the *transparency* of the illusion. Following Locke's metaphor, it points to the problem of the *transparency* of time-consciousness. On this problem, Hume's thinking is more radical than Locke's.

In the *Treatise of Human Nature* Hume amplifies Locke's claim that time is an idea of reflection, not of sensation. Hume emphasizes that as an *abstract* idea, time is derived "from the succession of our perceptions of every kind, ideas as well as impressions, and impressions of reflection as well as of sensation."[21] Because it is an abstract idea, time is to be distinguished from any representation "in fancy" that gives it any "determinate quantity and quality." In so many words, Hume is claiming that time itself is *no phenomenon at all.*

> As 'tis from the disposition of visible and tangible objects we receive the idea of space, so from the succession of ideas and impressions we form the idea of time, nor is it possible for time alone ever to make its appearance, or to be taken notice of by the mind.[22]

Instead of time, what appears is simply the succession of ideas and impressions. In my formulation, time is wholly transparent. Hume immediately goes on to show that it is nevertheless not undiscoverable.

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[21] David Hume, *A Treatise of Human Nature*, edited by L. A. Selby-Bigge (Oxford: Clarendon Press, 1888ff.); Book 1, Part 2, Section 3, pp. 34–5.

[22] *Ibid.*, p. 35.

> A man in a sound sleep, or strongly occupy'd with one thought, is insensible of time; and according as his perceptions succeed each other with greater or less rapidity, the same duration appears longer or shorter to his imagination. It has been remarked by a great philosopher, that our perceptions have certain bounds in this particular, which are fixed by the original nature and constitution of the mind, and beyond which no influence of external objects on the senses is ever able to hasten or retard our thought. If you wheel about a burning coal with rapidity, it will present to the senses an image of a circle of fire; nor will there seem to be any interval of time betwixt its revolutions; merely because 'tis impossible for our perceptions to succeed each other with the same rapidity, that motion may be communicated to external objects.[23]

Presenting Locke's illustration a bit more graphically, Hume here draws attention to certain discoverable "bounds" which are "fixed by the original nature and constitution of the mind." Like Locke, he expresses that feature of the mind which is so bounded as something like a "rapidity" of our thought, an apparently endogenous factor with a rate that no external influence can "hasten or retard." But Hume is very careful not to allow the mind itself to intrude between our "notice" of the elements in succession (impressions or ideas) and their own "appearing." In the passage above we see that the phenomena to which "rapidity" is ascribed are "perceptions," in the plurality of whose successive presentation is given not the mind directly, but the perceived physical thing, here in the circular blur of its 'too fast' motion.

As we learned for ourselves reflecting on the time-framing of consciousness and its scale horizons of too fast and too slow, the 'physical' aspect of appearances to which these horizons pertain (Hume's "bounds in this particular") is more like an interval or span than a motion with a given speed; it is only by extension, or perhaps in analogous terms, that we can speak of consciousness itself as having a rate. Hume however allows himself to bridge this gap and to speak of our thought itself as subject to hastening and retardation. We might therefore look for him to identify time with the 'flux of time-consciousness' in the manner of much later writers. He is however consistently sensitive to the fact that this is only a representation "in fancy" and not properly the way in which time makes its appear-

[23] *Ibid.*

ance. *Transparent* to what appears in it, timelikeness is identified by Hume only as a "manner" in appearances and capable of abstraction from them, and not as an appearance itself. To make this point Hume shifts the illustration of perceived motion from the whirling coal to the experience which becomes such a regular test case for Brentano and Husserl, namely the succession of tones in a melody.

> The idea of time is not deriv'd from a particular impression mixe'd up with others, and plainly distinguishable from them; but *arises altogether from the manner*, in which impressions appear to the mind, without making one of the number. Five notes play'd on a flute give us the impression and idea of time; tho' time be not a sixth impression, which presents itself to the hearing or any other of the senses. Nor is it a sixth impression, which the mind by reflection finds in itself.[24]

What might be the connection between the experience of a *melody* and the timelikeness of the "manner of appearing" *of the mind itself*? Hume resists speaking in terms of an appearing of the mind, and holds that, even for reflection, time-consciousness is not a way in which the mind makes an "impression" on itself; instead there remains merely a manner of givenness. Nevertheless, by sensing it *as moving*, as a flux, Hume takes a major step along the path that Husserl later tries to follow, toward a 'description' of consciousness *in its pure transparency*.

The Dimensions of Transparency

Time makes no impression upon the mind because it *is* the phenomenon of the mind itself. The timelike flux of the mind is a phenomenon only in so far as it is a certain transparency. This means that mind is not some set of phenomena superadded to the phenomena of physical and psychical apperception, but simply those phenomena themselves "in a manner of givenness."

In modern philosophy, the notion of a 'flux' has become the manner of givenness we call 'consciousness' precisely because it seemed so transparent. To focus as Hume does on the 'succession of our perceptions' is to focus on our perceptions—and nothing else. Far

[24] *Ibid.*, p. 36, my italics.

from adding anything to the sheer givenness of perceptions, succession is the only description of mind that survives Hume's radical ontological minimalism. In a famous statement against the metaphysicians on self-identity, Hume introduces the term 'flux' himself, affirming of human persons:

> That they are nothing but a bundle or collection of different perceptions, which succeed each other with an inconceivable rapidity, and are in a perpetual flux and movement.[25]

As the foregoing has shown, the phenomena that led Locke and Hume to their preliminary engagement with what Edmund Husserl calls "the flux of time-consciousness" were still Newton's natural motions. They were no 'motions of the soul' of the kind that appear in Augustinian interiority or in Proustian composition, but experienced velocities of ponderable objects of perception. At one point in his discussion of how motions can be too fast for the succession of our ideas, Locke fires an imaginary cannon through his study, taking off a limb "or some other fleshy part" of his experiencing body.[26] We may profit from this dramatic illustration if we look past the phenomenalism of the definition of the "instant" to which he concludes, and let the example serve as a graphic reminder of the central role of *physical perception* in the reflections that led to the first identification of the flux of time-consciousness.

Both Locke and Hume stipulate that internal perceptions are just as much subject to this flux as are external ones. But it is *only in relation to the external* that they confront the phenomenon of time-framing. This allows them to address the notion of flux not simply as succession but as a manner of succession, Hume's "inconceivable rapidity."

Much discussion of Hume on time leads to his treatment of the problem of personal identity, and therefore into the "theater" of the mind.[27] There he discovers the self to be an illusion fabricated from the power of memory—the power to put the mind in relation to itself and to cause effects within itself. What is interesting about Hume's discussion is not the problem of personal identity, but his

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[25] *Ibid.*, Book 1, Part 4, Section 6, p. 252.
[26] In the work cited, Book 2, Chapter 14, paragraph 10, p. 243.
[27] In the place cited, p. 253.

odd notion that his position on it makes him a "sceptic," since in fact all his arguments depend on deference to the sheer givenness of succession which is only matched in our time by Husserl's postulation of an *absolute* consciousness. In other words, the very same observations about time-consciousness that make Hume a sceptic make Husserl an absolutist. What for Hume are the "fictions," the images "in fancy" of a time and a self-identity with quality of their own, are for Husserl the self-constituting self-appearance of disclosure space itself. What for Hume is a kind of 'nothing', the primordial flux of time-consciousness, is for Husserl the first of 'somethings', *pre*-phenomenal, *pre*-immanent, and absolute.

In our own argument we must stay close to the notion of the flux, attending only to the manner of givenness of the succession, remembering what we learned about this from the horizoning of physical motions as fast and slow. But we must turn now to the "five notes played on a flute," which Hume says give us the "idea of time." This is still a physical experience, and a melody is still a motion. But it is one much more closely associated with the motions of the mind.

Exploration of melody as especially timelike finally puts us in conversation with Husserl, who took up the illustration from Brentano and made it fundamental to his studies of "inner time-consciousness." What is distinctive in Husserl is his conviction that *in order to be transparent* to such timelike objects, the primordial flux must exhibit a *double continuity*. This he represents in a family of two-dimensional diagrams. His way of talking about this, describing it "longitudinally" and in "cross-section," is thought to be innovative if not eccentric. But certain of Hume's observations already imply the two-dimensional representational space of the Husserl diagrams.

Describing how the pure diversity of ideas can take on a "union in the imagination" through the relations of resemblance, contiguity, and causation, Hume writes:

> it follows that our notions of personal identity proceed entirely from the smooth and uninterrupted progress of the thought along a train of connected ideas, according to the principles above-explain'd.[28]

Here we have one continuity, that of the "smooth and uninterrupted progress," but also a second, because this progress is "along a train

[28] *Ibid.*, p. 260.

of connected ideas." But 'When' did this "train" get "connected"? It must 'already' be there for us to represent progress along it; yet Hume certainly wants us to believe that it is constituted only in the process of the progression. The "connections" are not those which go together to make up the perceived object, whether it is enduring or in continuous motion, but those which sustain the *illusion of the identity* of the perceiving mind. Does Hume allow himself a representation within the disclosure space of that illusion, *before* he allows for the purportedly absolute smooth progress?

We vacillate between two possibilities: (i) first the train, then the progress; or (ii) first the progress, then the train. *In what 'time'* do we represent these 'firsts' and 'thens'? Even if we answer as Hume would no doubt want, and say that the progress and the train arise 'at the same time', is the 'time' of this coincidence the same as the 'time' of the absolute progression?

As we will consider in detail when we introduce Iamblichus (p. 22 below), a pre-modern strategy in psychology and logic distinguished formally between intellectual and sensible time; it controlled the use of terms suggesting timelike order in domains where purely logical relationships were at issue. A peculiar argument in Aristotle bears on our question of the double continuity of the time-flux. It seems to require such a distinction.

The Now, he says, is both the identity of time and its difference. As identity it is one; as difference it is twofold: The Now is *either* the last moment of what has been, *or* the first of what is to come, but it cannot be thought in both these functions 'at once'. In effect, there isn't time for us to think it now one way, now the other, at least not in the same Now.[29]

One reaction to this charming argument is to sense a category mistake, a confusion between a timeless logical difference and the timelike differences in a real flux. Another possibility, raised to a high level of mathematical clarity in late Platonic commentary on Aristotle, is to thematize intellectual time and describe its modes of integration with sensible time in phenomenological terms.

The explicit treatment of time as two-dimensional as it is worked out in Neoplatonism has shaped this chapter and, in essence, this entire project. Husserl's well known claim that time is two-dimensional,

[29] *Physics* IV, 11: 220a5–15.

and illustrations thereof with two-dimensional diagrams, allows us to juxtapose his contemporary phenomenological approach with the treatment of time in the speculative logic of Plotinus. We are then brought back into conversation with Aristotle, and finally to the foundations of speculative logic itself in Parmenides and Heraclitus.

Two-Dimensional Time in Husserl

Despite his vastly different starting point, Husserl's phenomenology came up against the 'psychological' problem discussed above in regard to Locke and Hume. Psychologism in logic was an important adversary for Husserl because he shared its underlying ambition, which was to gain access with *one* method of analysis (intentional analysis) to *both* levels of constitution, the natural-empirical and the essential-ideal.

His method takes as its starting point pure intuition, eventually in the sense of a direct 'seeing'—*of*, and made possible *by*, 'absolute consciousness'. As the goal of all reflective 'reduction', pure consciousness is an entirely self-constituting, self-sufficient, and (in an absolute sense) self-evident disclosedness. As the guarantor of a "principle of all principles," it is executor of a "Dator Intuition" by whose authority

> whatever presents itself in intuition in primordial form (as it were in its bodily reality), is simply to be accepted as it gives itself out to be, though only within the limits in which it then presents itself.[30]

Much criticism of Husserl's intuitionism mistakenly assumes that the consciousness which founds Dator Intuition is the simple immediacy of natural reflection. But Husserl carefully defines the psychic states of empirical subjects as *constituted* objects and hence as appearances *for* and not appearances *of* pure or absolute consciousness. He is not satisfied with the direct recourse to the *ego cogito* that Descartes attempted, because it does not distinguish in a methodical way between the empirical and the transcendental *ego*. Descartes is the source of the modern assumption that for 'consciousness' there is

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[30] Edmund Husserl, *Ideas* 1, section 24; trans. W. R. Boyce Gibson (New York: Collier Books, 1962), p. 83. Latin *dator* means a 'giver'.

something like an ostensive demonstration, a simple noticing. By contrast, the 'immanence' in which phenomenological intuition takes place must be gained by a highly directed and (in formal terms) unnatural reflection. The self-sufficiency of pure consciousness cannot ever be grasped directly, but is only a goal to be reached toward by means of increasingly refined strategies of 'reduction' and 'suspension' (*epochê*). As Husserl himself later came to see, these steps have more in common with the counter-intuitive rigors of Humean *skepsis* than with the bland immediacy of Cartesian certainty.

It was his studies in the double continuity of the flux of time-consciousness that first made it possible for Husserl to *thematize* the pure transcendental transparency his method had always implicitly required. Recent work on the expanded collection of studies "On the Phenomenology of Inner Time-Consciousness" to which Husserl devoted himself from 1893 to 1917[31] has shown that it was in this connection specifically that Husserl introduced both of the themes that distinguish the phenomenology of *Ideas* from that of the *Logical Investigations*:

(i) the new precision in distinguishing transcendent from immanent objects and the correlative methodological step of reduction;
(ii) the distinction within immanence between the constitu*ted* and the constitu*ting* consciousness.

How does the double continuity in the absolute flux serve to describe precisely its transparency? Husserl has said that "these are highly

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[31] Edmund Husserl, *Zur Phänomenologie des Inneren Zeitbewußtseins* (1893–1917), ed. Rudolf Boehm, Husserliana, Vol. 10 (The Hague: Martinus Nijhoff, 1966).

An important early study is John Brough, "The Emergence of an Absolute Consciousness in Husserl's Early Writings on Time-Consciousness," *Man and World* 5 (1972), 298–326. This was adapted by Robert Sokolowski, *Husserlian Meditations* (Northwestern University Press, 1974), Chapter 6, "The Inside of Time"; see also, Philip Merlan, "Time Consciousness in Husserl and Heidegger," *Philosophy and Phenomenological Research* 8, 1947, pp. 23–53; also J. N. Findlay, "Husserl's Analysis of the Inner Time-Consciousness," *The Monist* 59 (1975), pp. 3–20.

The Boehm Husserliana edition represents a critical edition (supplemented by additional materials) of the 1928 *Vorlesungen zur Phänomenologie des Inneren Zeitbewusstseins* (see note 38 below). It is from this that the English translation by James S. Churchill was made, *The Phenomenology of Internal Time-Consciousness* (Bloomington: Indiana University Press, 1964).

All subsequent references will be to the critical Husserliana edition, abbreviated ZB. Corresponding passages in the English translation will be indicated as TC, but translations will be my own.

important matters (*Sachen*), perhaps the most important in all of phenomenology."[32] In approaching them we must deflect at once a misunderstanding that can arise from the very title Husserl applies to this complex of *Sachen*: "*Zeit-Bewußtsein*," time-consciousness.

Since Husserl describes the continuities in the flux of 'time-consciousness' in two 'dimensions', it is natural to suppose that one dimension must be Time, the other Consciousness. Assuming that the two-dimensionality is schematic, one direction must track time in its sequence of Now-points, and the other consciousness in its ordering of primal impressions, retentions, and protentions.

Any such construction of the situation is, however, refuted by the texts. Husserl expressly states, of "the unity of the flux itself," that it is a "*one*-dimensional, quasi-timelike order."[33] Where does the twofoldness suggested in the diagrams come from?

Recent commentary has been so bedazzled by Husserl's striking assertion that there are "in the one, unique flux of consciousness *two* inseparably united intentionalities, woven together, requiring each other like two sides of one and the same thing,"[34] that it has completely passed over the equally challenging and quite different assertion that timelike order itself "is a *two*-dimensional infinite sequence."[35] In the unity of the one unique flux we discover *a pair of twofolds*: the double intentionality of consciousness *and* the two-dimensionality of time.

The double continuity represented in the diagram can be taken, on the one hand, to show the two intentionalities of consciousness; on the other hand, it reveals the two-dimensional givenness of timelike objects. It does not, however, display both of them together. In a sense they *are* always together. The diagrams show that with respect to which time-consciousness and timelike objects 'match', in that they are *both twofold*. They allow us to place the one upon the other, but do not map their intersection.

In order to comprehend the double twofold of Husserlian Time and Consciousness within the unique and one-dimensional (but only "quasi-timelike") absoluteness of the Flux, we must develop an entirely

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[32] ZB Nr. 50, p. 334.

[33] Section 39, ZB, p. 82; TC, p. 108, my emphasis. Here and throughout I translate *zeitlich* as 'timelike' rather than 'temporal', in order to reserve 'temporal' and 'temporality' for the Latinisms *temporal* and *Temporalität*, and for the special problematic of temporality in Heidegger.

[34] *Ibid.*, ZB, p. 83; TC, p. 109.

[35] Section 2, ZB p. 10, TC, p. 29.

phenomenological view of this Flux as pure disclosure space. Disclosure space is a technical term for what I have heretofore called transparency, and in the final section of this chapter when we move from Husserl to Iamblichus I will supply for it a rigorous definition. But in preparation for the Husserl study, one implication of this idea must be formulated. To say that the absolute flux of time-consciousness is disclosure space means first that all appearance is 'in time', and all appearance is 'in consciousness'. More radically, it means that no appearances *of time* can be identified except 'in consciousness', and no appearances *of consciousness* can be identified except 'in time'.

In the discussion that follows, we will consider Husserl's diagram first as a representation of the *two-dimensionality of time* and hence from a 'physical' point of view. Our entire approach to the double continuity of flux has so far been physical. We aim not to *exclude* consciousness, but precisely to put ourselves in a position to *exhibit* it in the transparency that is claimed for it by Husserl.

Only in the subsequent conversation with Iamblichus will we consider the 'matching' problem in Husserl.

The Figure of Double Continuity

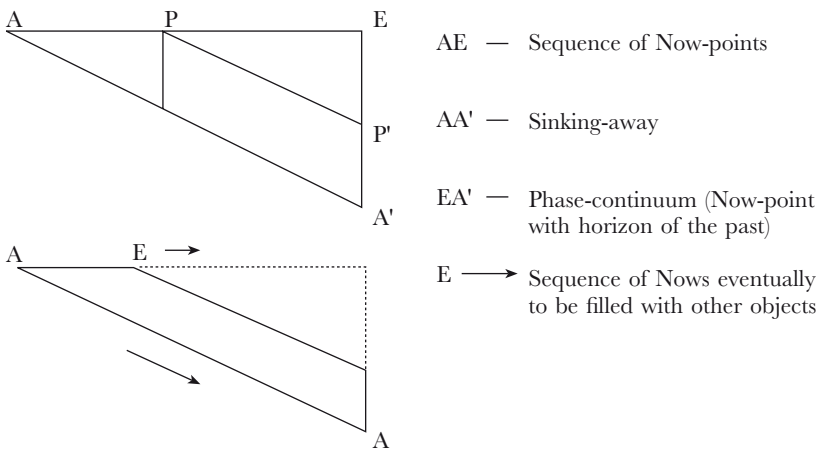
In the years when he was preoccupied with time-consciousness, Husserl drew a number of different sorts of two-dimensional diagrams. They do not constitute a large part of his expositions. He did not spend sections or even pages discussing them (often to our consternation), and it would be wrong to assume that his theme of double continuity was an artifact of the diagrams. To the contrary, it was the "manner of givenness" of such timelike objects as melodies that provoked him to make these representations. As auditory phenomena melodies might seem ill-suited to being visualized as plane figures. Yet the kind of geometrical overview of the time-distribution of auditory phases that Husserl generated here held a real fascination for him. He finally settled on a figure which incorporates *two* diagrams, and in whose dynamics, *as Husserl saw them*, something satisfying was represented about the double continuity of time-consciousness.

If we are careful not to confuse the diagrams with the phenomena being analyzed, there is a great deal to be learned from attempting to determine exactly how Husserl's celebrated Figure of Double Continuity *works*. In what follows, we will lay out the background of

each of its two elements separately, and with attention to chronology.

The definitive version of the Figure was published in 1966 by Rudolf Boehm in the Husserliana edition of the Lectures.[36] It represents a corrected reading of the manuscripts that had been incorporated into the materials Heidegger published in 1928.[37] The origin of the mistranscription remains unclear. Heidegger shows no signs of having tried to coordinate his labelling of the Figure with the tantalizingly terse description of its workings that accompanies it in Section 10. James Churchill, whose English translation of Heidegger's 1928 edition appeared in 1964, did, however, try to read the Figure and the description together, and clearly realized there were anomalies. He resolved them, more or less, by mistranslating the description—replacing "fixed sequence of ordinates" *(stetige Reihe der Ordinaten)* with "solid horizontal line."[38]

Ordinates of course are verticals, and it was precisely the function of the verticals as representations of "running-off-modes" *(Ablaufsmodi)* which was confused in the 1928 mislabelling of the Figure. Boehm's corrected labelling gives us access to Husserl's own version in the lectures of 1905. It will therefore be cited hereafter as the 1905 Figure, or simply as the Figure of Double Continuity:



[36] ZB, p. 28.

[37] Boehm's corrections stem from a version of the Figure found in a 1911 manuscript record of the 1905 lectures. This he claims provides its original form and labelling. See ZB Nr. 53, p. 365, and below. *Edmund Husserls Vorlesungen zur Phänomenologie des Inneren Zeitbewußtseins,* ed. Martin Heidegger, *Jahrbuch für Philosophie und Phänomenologishe Forschung* 9, 1928.

[38] TC, p. 50.

In the Figure, the top drawing is a completed chart or map, without dotted lines or dynamical indications of any kind. It is labelled in a notation related to, but not identical with, what we shall call *tabulature*. The bottom drawing has dynamical indications, and is not similar to the upper one in either form or labelling. It is a kind of *vector* presentation (in fact a peculiar tensor) which functions as what we shall call a *propagation rule*.

The Table and the Vector Drawing arise in separate contexts. We shall first consider each independently.

The origins of the Table lie in Husserl's initial reflections on the givenness of melody. The first thing he tried to represent about it was the shaded concurrence in which the constituent notes must be perceived if something like a *melody* (and neither a chord nor a pure sequence of tones meaninglessly higher and lower than one another) were perceived. This was 1904 and Husserl was still focused on perception *(Wahrnehmung)*. His first notation for this concurrence *(Zugleich)* was to write the notes of a given melody, for example, one with the four notes A, B, C, D, in this fashion:

He called this the "train" *(Kette)* of notes.[39]

In his description of the properties of this entrainment, he found it necessary to distinguish  at B from  in the next phase  . Before long he simply added another index to his first notation, and printed out:

1. A
2. A' B TABLE[40]
3. A" B' C
4. A"' B" C' D

To explain the Table, we follow Husserl's example and conduct a phenomenological reflection on the actual perception of a melody.

A melody is both a familiar and, as Hume had noted, an especially timelike object of perception. Its form incorporates time, which

[39] ZB Nr. 1, p. 150.

[40] ZB Nr. 24, p. 199 (not labeled by Husserl; by "Table" I will refer both to this specific presentation, and to all those of this form).

is to say more than that its elements are distributed sequentially through time. The elements of melody are not tones but notes. Notes have pitch relative to one another not because they are arbitrarily higher or lower in the pure tone-continuum, but by sounding within the selected fixed set of tonal intervals that make up musical scales. Scale intervals are selected for *harmonic* reasons. They regularly include the famed 'Pythagorean' intervals, the consonances whose frequencies turn out to have simple arithmetical ratios (the reciprocals of the ratios of string length). Among the notes chosen for the most familiar eight-note Western scales, there are Pythagorean intervals between the first and the eighth or octave, *do – do'* (ratio 1 to 2), the fifth, *do – sol* (ratio 2 to 3), and the fourth, *do – fa* (ratio 3 to 4). The Pythagorean major third, *do – mi* (ratio 4 to 5) is usually the first interval to be altered in practical scale constructions, on the way toward 'tempered' twelve-tone tunings. The latter allow for flexible, convenient modulation between different scale-systems or keys, at the cost of placing their notes in a logarithmic continuum that mostly abandons the quest for integer ratios ('rational' tunings). Still, whenever possible, fourths, fifths, and octaves are kept in Pythagorean tune, because for them the corresponding perceived harmony is so strong that even small errors in tuning are unpleasant.

This rudimentary reflection on harmonics (which in fact Husserl never discusses in spite of the fact that any number of the observations he makes about melody presuppose it) may help us to appreciate just what is involved in affirming the fact that given a series of notes a *melody* is *perceived*. At issue here is why a melody is such a striking illustration of what Husserl finally calls *retention*.

Melodies are not just sequences but shapes in a space, a harmonic space. The space in which a melody moves—now completing the intervals of a chord, now dislodging an already resolved sense of key and scale in a new modulation, now interrupting, developing, inverting, or displacing a previous melodic form—*requires that the notes sound somehow 'together'* so that their *harmonic intervals* or scale-distances from one another can be registered. Yet, precisely because we have a melody and not a chord, the 'togetherness' of the notes must somehow *span* the disparity of their sequential occurrence.

What we first called concurrence is this spanned togetherness. Conviction about its reality comes from the fact that we *actually hear the melody*. Melody is *perceived*; it is not a construct of reflection, and it is perceived in the singularity of its own aural presenation, not in reproduction by imagination or memory.

Husserl's initial train-notation does represent the relatedness of several notes of a melody as they maintain their concurrence. However, as soon as we consider the span-character of this concurrence as concomitant with the notes of the melody, there is a new phenomenon to describe. The concurrence itself, in whatever relational wholes it has built up at any momentary phase, itself also changes along with the notes. To write A B C D is not strong enough, because this represents a completed melody shorn of precisely its buildup in succession.

Consider how this takes place. First we hear a simple tone, A. Tone A lapses, and then tone B is heard—but heard in relation to A, which is therefore in some sense still heard. Tone A is not heard as sounding Now, however, since B is actually in the process of being produced Now. Instead A continues in a kind of 'shading' *(Abschattung)* which is also a kind of 'awayness' or 'shoved-back-ness' *(Zurückgeschobenheit)* from the now of B. We can say that the status of A while B is sounding is one of diminished 'intensity', but this is seriously misleading if pressed too far: The retention of A during B is not like an after-echo or resonance—it is not the aural analogue of 'persistence of vision' in which, when we close our eyes, a fading retinal after-image continues to be perceived as an immediately present vision. Tone A is 'just-past', and Husserl's first notational step is to add an index and denote A's status while B is Now as A'; the full situation while B is appearing is A' B. Similarly, when C comes along B falls back into A's position and becomes B', while A falls back still further and is retained as A". By numbering the stages in accordance with each new note, we reach the tabulation set out above.

This Table is not yet the diagram of time, the Figure of Double Continuity. It is no Figure, no drawing *(Zeichnung)* at all. Though in one sense two-dimensional (a list with superimposed indexicality), it does not express the *field*-character of retention on which Husserl insists in his repeated references to a "continuum of continua."

Retention is at once a spanning *and* a holding-apart; it opens into not just a distance but an expanse with a depth. The earliest *drawing* we have from Husserl, roughly contemporary with the Table (1904), represents something altogether different. Let us reproduce the whole context in which the early drawing occurs.

The first version of what would evolve into the vector drawing is found in a passage where Husserl is taking inventory of several

different kinds of succession *(Auseinanderfolge)* that can be discriminated in the perception of something timelike. He lists 4 kinds of succession, or rather 3 and one special related case:

1) The succession of the tones A B . . . in the sense of the succession of time-phases within each tone, A. Also the succession of the beats (*Takte*, musical tempi) in the melody.
2) The succession
   a) of sensations A B C . . . (or, in A, of a part)
   b) of perceptions of A, of B . . ., of the tones or also of the beats. —
3) The succession of momentary phases of the perception of the series A B . . .

The momentary phases are ideal limits, taken concretely they are strips that have a certain 'thickness'.

These are timelike series *(Folgen)* that we can all perceive. The last one [3] we perceive in a continuous flux, in so far as we reflect on the flux of perception. Certainly in order to be able to assess, compare, and discriminate, we must look back upon the continuum, or 'recur' (*züruckkehren*) to the previous parts. To this belong 'repetition' and identification. This leads to the following:

4) The order of temporal signs *(Temporalzeichen)* within a momentary phase: the order in the simultaneous unity of one phase.
   This of course presupposes a repeated presentation of the same phase under conditions of a stably enduring *(beständiger)* retention and identification.[41]

This is a very mixed list, not at all sorted out in ways that might become important within a year. (1) is a pure transcendency, the constituted object in its objective time-phases. (2) is the actual phenomenon of this object in its immanence, divided (in accordance with Husserl's early schematic theory) into 'material' contents (sensations) which are animated by apprehension-characters (perceptions) to produce the transcendent reference. If we overlook (3) for the moment, (4) has special interest because it is the first occurrence in the manuscripts on time-consciousness of what was to become the canonical term "retention," which replaced the tentative use of "repetition" in (3). The plurality within each "momentary phase" (*Momentenphase*, what will later be called "running-off-mode," *Ablaufsmodus*, or "cross-section," *Querschnitt*), does not involve a true succession,

[41] ZB Nr. 26, pp. 210–11.

though it is an *order* in some way indicative of time *(Temporalzeichen)*. What he here describes as an order within a retentional phase he will later speak of as a 'layering' of retentional 'shadings' *(Abschattungen)* standing away against the 'horizon of the past'.

But what shall we say about (3)? What is its associated drawing supposed to represent? It shows, we are told, the succession of moment-phases in the perceived flux, which "taken concretely" are "strips" with a certain "thickness." The only elements whose succession the diagram is suited to showing are first the triangle in the corner, then the first trapezoidal band, then the next band, and so on.

This seems very strange. The diagram is not labelled, and nothing in the discussion suggests whether the bands should be thought to propagate or unfurl from the horizontal line down to the vertical, or in the reverse direction. To the contrary, they seem to spill over from one another diagonally away from the corner. Yet this is the drawing that gives us *the flux itself*, Husserl tells us, first in the sense that we *perceive* the succession of strips *in* the flux, but second in the sense that, for reflection, this is *the flux of perception itself*. How are we to understand it? How, moreover, are we to understand the sudden shift from "we perceive in a continuous flux" to "we reflect on the flux of perception"?

We go wrong straightaway if we try to label this first of Husserl's drawings of the flux by adapting the indexical notation of the first Table. This is what Merleau-Ponty has done. He ascribes to Husserl a Figure which is altogether different in both description and 'workings' from the 1905 Figure.[42] The problem is that the Table represents every succession in Husserl's 1904 list *except* the one of paramount interest, number (3), the succession of the flux itself.

For this, Husserl always wanted a representation of 'double continuity', a 'continuum of continua'. He therefore needed a diagram whose 'movements' simply could not be specified by tabulation or by plane figures 'read' as tabulation.

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[42] M. Merleau-Ponty, *Phenomenology of Perception*, trans. Colin Smith (London: Routledge & Kegan Paul, 1962), p. 417. This remains true no matter what corrections we introduce into the 1928 printed version. For Husserl's own tentative effort to assign tabular notation to the strip drawing, see ZB Nr. 31, p. 230; also the more complex version in the text-critical notes, p. 412. Neither of these is like Merleau-Ponty's, though he cites the published lectures.

The Table and the Drawing are, in essence, joined in the two elements of the Figure introduced in 1928, in section 10, "The Continua of the Phenomena of Running-off: the Diagram of Time." *On what basis is this done?*

It is surprising how little unanimity there is among phenomenologists about how Husserl's "diagram of Time" *works*. Convene a group around a blackboard and try it out. In one such colloquium, partisans of swerves and of rotations were discovered (some introducing rotations through 90° in the plane of the figure, others rotations in an 'imaginary' plane perpendicular to the page). In general, interpretations of this diagram have been so conflicting and so idiosyncratic that it is obvious *the diagram itself* cannot guarantee that Husserl's problematic will be correctly registered.

But again, this is as it should be. The phenomenon to be described is not the diagram but a melody. It is the timelike object, and only if we recognize in reflection a double continuity in the experience of melody will we know what to look for in the Figure of Double Continuity.

We play an elementary melody. Consider hearing *do – la – fa*. Sing it. First there is a lowest note, the *do*. Then a moderately ambitious leap to a higher note, *la*, a musical sixth, almost an octave, then down to *fa*, inserting itself harmonically 'in between' *do* and *la*. The melody seems to find rest and finish. So completed, it basks in itself a little while as it fades.

Any such tune always includes a 'productive' Now *through* which the melodic series, and, of course, each note in turn, 'falls back' into the retentional field as it sounds. The originality or 'firstness' of this Now is often seriously misunderstood. The short melody we are studying does not *begin* in the Now except during the beginning of the sounding of its first note *do*. Thereafter, it *continues to begin where it begins*, in the primal *do*. When the final *fa* occurs, it still accommodates itself harmonically to *do*, to which it stands in a pure Pythagorean interval, a fourth. From the nearby *la* it has come down a third, but this is a much weaker consonance than the fourth with *do,* and it is with respect to *do* that the resolving *fa* positions itself. Melody *begins from* and even at the end of its development still harmonically *builds on* its *initial* parts.

Timelike objects are not turned inside out in the retentional field! They are not reversed. As a single tone still sounding falls back into retention from the impressional immediacy of the Now, it continues

to reach *forward toward* the Now; in any Now, it is retained as reaching *as far as* Now and, in this sense only, as sounding 'still Now'. The Now-phase of its presentation is its *latest* and finally its *last* phase, but it continues to begin in *its* beginning. The series of notes which make up the melody preserves the same directionality. While it is being retained, the melody expresses itself in a sequence which keeps the following order: *do, la, fa.* (A, B, C; 1, 2, 3).[43]

In the same way that the flowing of a perceived melody is not reversed, it is also not *stopped*. Even after it has been built up to completion, the *whole sequence* of tone-phases that was traced out 'in order' by the productive Now continues *in retention* to be a 'traced-out-in-order' whole, continuing to 'last' as long as it lasted during Now-origination. Except that the whole of this *lasting* is also continuously modified; it 'slides back along itself', so to speak, and in this way maintains its own self-same interval of elapsing while giving way to the new continuum of the tone which contains the current Now. In the succession of its givenness, any timelike object is continually the same, and then in the very continuity of that sameness, continually different in 'shoved-back-ness' from the Now.

If we therefore turn, as Husserl thinks possible, from the succession in the melody perceived to the succession in the perception of the melody, (in this way drawing attention to the flux itself), we do not get *another* succession. In our text from 1904, Husserl treats this conversion of attention in a 'looking back' or 'turning back' at first as a 'repetition' (slipping from *züruck* to *wieder*). The same text shows

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[43] Distinguishing rigorously between the direction of the succession of the parts of a time-object and the cross-sectional 'thickness' of any momentary phase of retention makes it easy to understand why the diagram of time represents only the retentional field—and why so little is said about protention in the Lectures. Thickness is an interval in the graded space that shades off from primal impression through various degrees of retentional shoved-back-ness. The order of these grades is neither timelike, nor even "quasi-timelike" like the order of momentary phases in the running-off of the flux. In principle, this order may be considered retentionally *or* protentionally, as moving away from primal impression or toward it. *Both* retentional *and* protentional 'directions' through the phase-continuum *terminate in a primal impression.* More exactly, protention is anticipatory retention; the protentional field is simply the retentional field extended ahead of the current Now-phase. To be sure, a protended primal impression differs *materially* from that of the Now-phase, but not *formally*. The material definiteness of the Now itself is easily overestimated, usually through covert reintroduction of the transcendent distinction between Now-content as 'perceived' and retained content as 'imagined' to which Husserl is so opposed.

that when 'repetition' became the implication, he corrected to 'retention' very early on.[44]

The *Zürückkehren* or turning back of attention that the flux makes possible is not a *re*-iteration of its plural moments, but an *iteration* required for their primal identifiability. In order for reflection to fasten on the "order of temporal signs" within each of its moment-phases, Husserl presupposes "a repeated presentification of the same phase." But because this repetition takes place "under a stably enduring retention and identification," it is more a matter of continuation than of replication.

Repetition as retention means that the *differences* with respect to which a particular perceptual moment can be met with 'again' (*wiedergeholt*) while continuing to be part of the *same* phase are *constitutive* of the timelikeness of its givenness. This timelikeness has a double aspect; the parts of the flux need not be reduplicated in order to be perceived.

In retention, held back and away from Now in a retentive moment that has a certain "thickness," melody happens frontwards, in the original onceness of its appearance. Perception cannot be emptied into a Now-phase of the flux. To the contrary, in a famous declaration Husserl asserts that

> If we call perception the *act in which all 'origination'* lies, which *constitutes originally*, then primary *remembrance* [= retention] *is perception*. For only in primary remembrance do we *see* something past, only in it does pastness constitute itself, and that not in a representative but in a presentative way.[45]

Consider again the unlabelled first version of a drawing that attempts to illustrate the thickness or strip-character of the moment-phases of the perception. One immediate effect of the representation is to underscore the insight that *in the flux too* there are only 'as many' phases as there are *in the perceived object*. The drawing shows *three strips* in succession, corresponding let us say to *three notes* of a melody. It does not deal with *six* notes, as it were, three 'in the object' and

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[44] See Boehm's note 1 to ZB, p. 210. The actual use of *Retention* as a regular technical term did not set in until about 1908. In the interim Husserl used *Erinnerung*, often qualified as *primäre* to enforce its difference from reproductive memory. It should be noted that the German word *Erinnerung* is less in need of such protection than English 'recollection' or 'remembrance', both of which imply secondary or repeated acts with the prefix 're-'.

[45] Section 17, ZB, p. 41; TC, p. 64.

three 'in retention'. As Husserl says in his discussion of double intentionality (see p. 40f below), the flux of consciousness does not require a second flux in order to be a phenomenon.

Nor does time require a second time in order to appear timelike! For the order of time itself is two-dimensional. Husserl's remarks on the double intentionality of consciousness have been well and widely studied, but his earlier claim that by "self-evident and a priori law" the order of time is "an infinite two-dimensional sequence" has not to my knowledge received interpretation. Perhaps readers take it for a misprint. More likely they align this two-dimensionality of time too quickly with double intentionality, and miss the astonishing originality of the remark, which runs counter to intuitions long cultivated in analytical geometry (though not unknown, as we have seen, in physical mechanics). Whether applied to time or to consciousness, the double continuity of the Figure of the Flux is a mark of *identity*, an essential attribute, and not a construction. We cannot possibly describe the workings of the Figure in regard to consciousness without first showing how it identifies the timelikeness of time.

Husserl's assertion comes at the end of the "General Introduction" to the 1905 lectures as published in 1928, in a discussion of the difference between the phenomenological and any possible psychological-empirical question of the "origin of time" (section 2). The phenomenological origin of time, he says, is to be found in certain "primitive formations of time-consciousness (*primitiven Gestaltungen des Zeitbewußtseins*)." These are not themselves in objective time, psychical or physical, but so constituted that in them something objectively timelike becomes a phenomenon. The actual lived experiences of empirical subjects may well, like all events in the natural world, have "their place, their efficacy, their empirical being and origin" in a time which is objectively determinable, "but that does not concern us, of that we know nothing."

> What interests us instead is that in these lived experiences 'objective timelike' (*objectiv zeitliche*) data are *intended* (*gemeint*). There belongs to the domain of phenomenology precisely this description, that the acts under consideration *intend* this or that which is 'objective'. More precisely, what belongs to phenomenology is the exhibition of the a priori truths which belong to the distinct constitutive moments of objectivity. It is the *a priori of time* that we are seeking to clarify when we investigate time-consciousness, exposing its essential constitution and setting forth whatever apprehension-contents and act-characters belong specifically to time—to which the a priori time-laws essentially belong. Naturally

> I mean by this laws of the following self-evident kind: that the fixed timelike order is a two-dimensional infinite sequence, that two distinct times can never be concurrent, that their relationship is a non-simultaneous one, that transitivity obtains, that to each time an earlier and a later belongs, and so forth.[46]

The passage places the "a priori of time" among "a priori truths which belong to the distinct constitutive moments of objectivity." This certainly says that the a priori of time belongs to consciousness, and in fact it attaches the a priori time-laws explicitly to the schematic intentional analysis of that period which distinguished between "apprehension contents" and "act-characters" in consciousness. And yet the particular time-laws here formulated are stated as aspects *of the constituted*, not of the constituting intentionality. Their "self-evidence" seems to derive from the natural attitude's intuitions about objective time—with the exception of the "two-dimensional sequence."

We would expect to read "an infinite one-dimensional sequence." It is not even clear what 'two-dimensional sequence (*Reihe*)' means. For help with this, we can turn to the Figure itself, reading it as a representation of *timelike objects*, in their *own* manner of givenness in timelike flux.

With the expression "The Figure of Double Continuity" we refer to the *two* drawings Husserl gives us in Section 10 of the published lectures, taken together into one illustration. I have redrawn the Figure, and cite first Husserl's tantalizingly brief description of its workings as a diagram.

> In our Figure the steady sequence of ordinates illustrates the running-off-modes of the enduring object. They grow from A [a point] on, until [they reach] a definite interval, which has the last Now as end-point. Then arises the sequence of running-off-modes that contain no more Now (of this duration). The duration is no longer actual, but past and sinking steadily deeper into pastness.[47]

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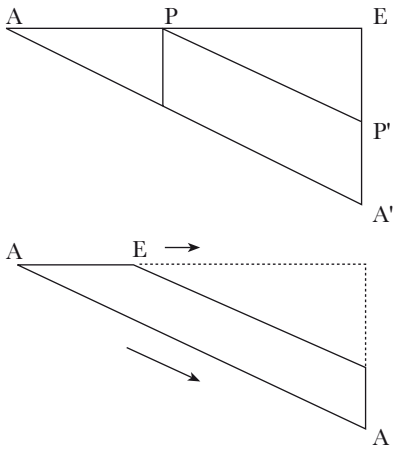
[46] Section 2, ZB, p. 10; TC, pp. 28–9. Churchill's translation goes seriously astray by attributing the "exhibition of the a priori truths which belong to the distinct constitutive moments of objectivity" to intentional acts, per se. Instead, it is the defining task of phenomenology.

[47] Section 10, ZB, p. 28; TC, pp. 49–50.



AE — Sequence of Now-points

AA' — Sinking-away

EA' — Phase-continuum (Now-point with horizon of the past)

E ⟶ Sequence of Nows eventually to be filled with other objects

The lower drawing, which provides the dynamical indications for the Figure, makes clear that we are to see trapezoidal *bands* swept out by the *diagonal sinking-away of a particular vertical interval.* So, in the upper drawing, *A'P'* should be seen as having combed *AP* into the band *APP'A'*. This band or strip represents the phenomenon, in the retentional field, of the duration of the perceived timelike object *AP, while E is Now.* The enduring object consists of the *entire continuity of 'ordinates'*, the whole band in its two-dimensional extension behind and below.

The band is made up of ordinates or verticals which pack themselves together side by side, and at the same time slide along one another, so to speak, carrying it down and away. The union of both features presents the timelikeness of duration—both a filled interval, and a sequence of modifications of that filled interval that affect it in its entirety. Duration preserves this double continuity even while no point of its interval is any longer Now, and instead the empty duration *PEP'* is opening up, behind and below *E.* If we try to adapt Husserl's metaphor of 'seeing' to the space represented in the Figure, then seen from *E*, from the Now of a given "primary remembrance" (*Erinnerung*, hence the *E*-series) in which an enduring object is perceived as completed and sinking away, the *end* of the duration is the *surface PP'* ("P" for *Punkt*) and the beginning is *AA'* ("A" for *Anfang*).

Notice that the notation of the top drawing, under the control of the dynamics imposed by the lower one, is *not* a superimposition of

the tabular pattern in which *A′B* is followed by *A″B′C*. In that pattern, the point beneath the object's endpoint *P* where the ordinate which crosses the diagonal from *A* should be labelled *A′*, and the final ordinate from *E* should meet that diagonal at *A″*. Instead we have *AP* and *A′P′*, both pointing toward *E*. This is because, in the given *Erinnerung*, the whole duration can be seen and *seen Now in both dimensions*. In the bottom drawing the difference from tabular or indexical notation is still more striking: the *Anfangs*-line is simply labelled *AA*!

How should the two drawings that make up the Figure be connected? I argue they should be regarded as one *moving* Figure under two aspects. In the upper drawing and its annotations, the Figure of Double Continuity is presented as a *duration graph*. In the lower, it is given the form of a *propagation rule*.

To make the distinction clear, consider how one might go about putting the Figure into motion, bringing time into the picture. The temptation is to extend or 'produce' the lines in the upper drawing as though they move in the directions suggested by the lower one. But the upper drawing *has no arrows!* It cannot be read as containing equally appropriate models for the three sequential situations, (i) Now is *A*; (ii) Now is *P*; (iii) Now is *E*. If this were the pattern, one would extend the Figure by continuing *AE* past *E* to, say, *R* (as though 'aperture' were being spelled); but the upper drawing shows the double continuity of the completed object *AP for a 'single' Erinnerung E*. If we want to graph the retentional field for another *Erinnerung*, we must *make another drawing*, like another frame in a cinematic animation. I call this kind of development *propagation*, and for it we need a *propagation rule*.

The lower drawing gives us that rule just as soon as we see that its arrows indicate not directions for the further production of the *lines AE* and *AA*, but instead a 'vector analysis' of the single direction in which the *plane figure*, the trapezoidal strip, would be seen to develop if a series of drawings of the upper format were projected as frames of an *animated movie*.

As the slice *A′P′* of the retained timelike object *AP* grows first into its complete "definite interval" then falls back further in the phase-continuum *EA′* for each new *Erinnerungs*-frame, it is also carried *diagonally* down and to the right in the planar direction of "sinking-away." In this way it sweeps out a lengthening strip "with a certain thickness."

This is the description for an object whose completing moment *P* has appeared. If, on the other hand, the side of the trapezoidal strip toward the corner *E* is not the end-surface *PP′* of some particular object *APP′A′*, then the pure *Erinnerungs*-field *AEA* converges toward a triangle. It becomes that triangle only if *Erinnerung* in any Now can catch up with itself in that Now. But reflection on the flux always to some degree steps back from Now, and knows it more by implication than by contact.

A natural (but quite counter-phenomenal) preconception assumes that the Now-phase of some eventuating timelike object is 'prior' to, and somehow clearer than, the moment-phases of the object in the retentional field. To the contrary, the moment of maximum clarity and resolution of the object is always some distance behind the Now. Think of what is involved in following the lyrics of some unfamiliar recorded song, for example, where the voice is mixed in among accompanying instruments so that the words are not immediately discernable as they occur. Straining to hear each word as it occurs simply makes matters worse. One must instead let attention fall back from the Now across the phrases and sentences (the timelike *objects*) brought together in retention, and let *them* build *toward* the Now.

Timelike objects do not originate in the Now; the Now originates in the running-off of timelike objects. For this reason the lower drawing shows an *Erinnerungs*-surface which can be propagated toward the limit-point indicated by the dotted lines, but is not entirely converged into it.

Husserl is sometimes more and sometimes less careful about insisting on the ideal limit character of the "actual" or "productive" Now. His famous comet image for the Now in relation to the double continuity of the retentional field[48] should be adapted to the dynamics of propagation suggested in the lower drawing of the Figure. The Now can remain the head of the comet's tail streaming behind it, except that like a jet plane beyond sight whose position can be seen from its contrail, blooming some distance behind it, the head should be inferred by convergence and not captured in its pure immediacy.

The fate of the Figure needs a few words. In the account given here of its workings, I have shown how an insight into the phenomenal 'thickness' of the moment-phases of timelike objects led Husserl to give the strip-drawing of 1904 a greater role than the analytic tab-

[48] Section 11, ZB, p. 30; TC, p. 52.

ulature with which he had first experimented. But this does not mean that analytic constructions held no more fascination for him.

He later took pains to convey the special importance of double continuity in the conversion of reflection from the flux of experience to the experience of the flux. In the published Figure, the double continuity was represented not in the fact that a given drawing had abscissas and ordinates, but rather in the fact that the moving plane itself was a 'vector space', directionalized by a planar flowing that is unidirectional yet diagonal. In effect, the River of Time flows diagonally down and to the right across Husserl's pages.

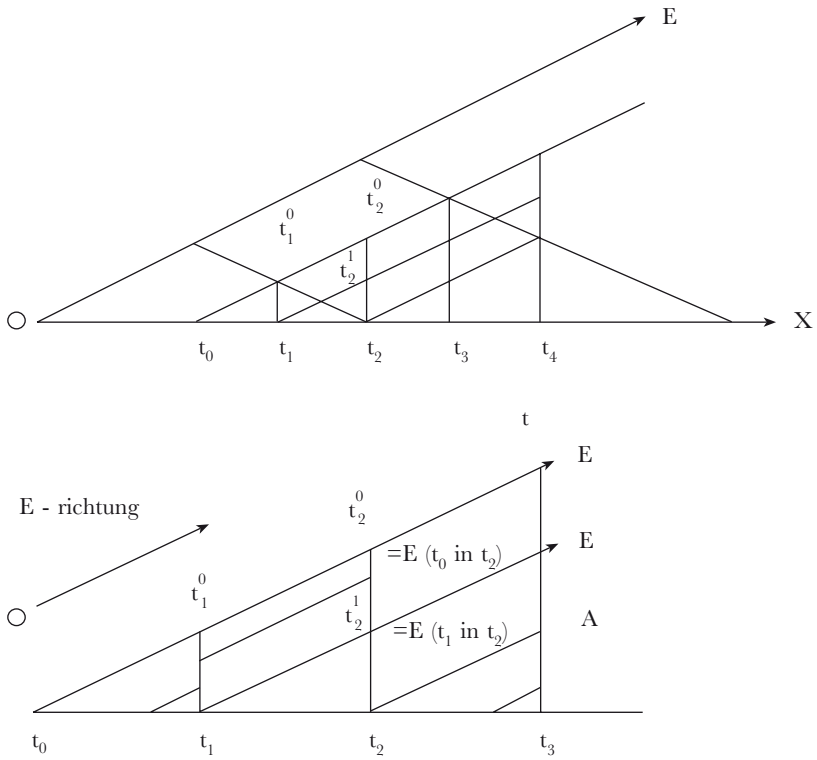
In an effort to make planar motion explicit here, my interpretation has added a third dimension, a new orthogonal in which animation frames pile on top of one another—like the sheets in a notepad in which one has made a simple movie, to be played by flipping through its pages. If forced in a certain way, my account would model the flux itself only in this third dimension, that of the frame rate of projection. But Husserl was insistent that the two continuities in the flux were sufficient, and fought against any tendency to represent the dimensions of the flux by embedding them in another flux.

His analytical bent as a mathematician, combined with this revulsion, in its final motivation ontological, against an infinite series of fluxes, led in 1908 or 1909 to a pair of figures labelled with *double*-indexical notation (top p. 38).[49]

We may spare ourselves the effort of deciphering these diagrams, in which among other things volumetric proportions bear significance, because in fact the published Figure, as corrected by Boehm, is sufficiently helpful for the transition to the fundamental problem of double intentionality. Moreover, it was *after* these efforts to represent double continuity through a double indexical tabulature, in late 1911, that the now-canonical Figure from 1905 was put into the manuscript form from which the published lectures stem.

This 1911 version (the final diagram collected in the Boehm edition) again incorporates a duration graph and a propagation rule. We may have corroborated Boehm's judgment that it is in fact the original form of the Figure, because it fits the interpretation we have been developing even better than the published form. I therefore close this section by simply reproducing it (top p. 39).[50]

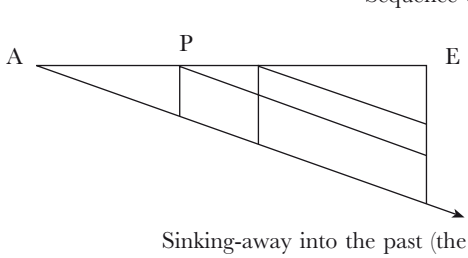
[49] ZB Nr. 50, pp. 330–1.
[50] ZB Nr. 53, p. 365.

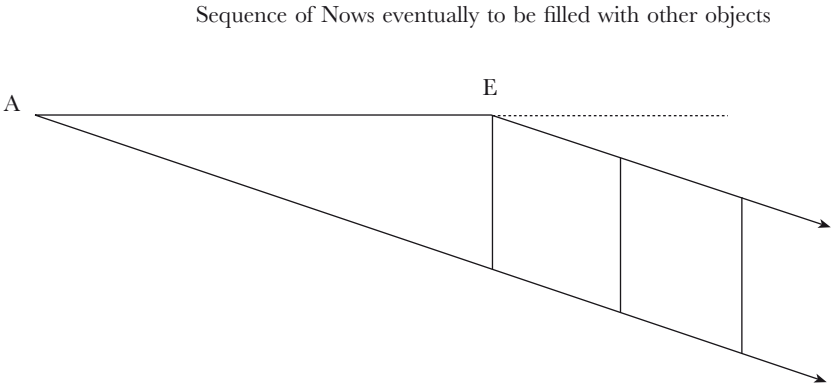


The Double Intentionality of Disclosure Space

Timelikeness is the property of a propagating field, of a figure developing on a moving surface, and nothing like the phenomenon of a line being drawn. The river poetically represents time because of its surface, a liquid mirror which holds reflections on a plane which slides past and is played over by stirrings from below and wind ripples from above. In modern cinema, the river has become a cliché for the passage of time, its surface a stock symbolic visualization of time's enigmatic imaging of things timeless and archetypal. This imaging ranges from astonishingly clear, flat and bright to completely troubled and obscure, depending on whether it is gravity or wind that most prevails at the surface of the flux.

This is figurative talk, perhaps insuffiently diagrammatic to be helpful. But the diagram of time is a figure, too, and we are insisting it has a two-dimensional form because it represents the dynamics





of a double-continuous motion called flux. In a primal flux, time-like objects appear. Along with them, the flux itself can be said to appear, not however as another surface but as the manner of given-ness in the objective appearances that constitutes their being 'in time' (τὸ ἐν χρόνωι εἶναι, Aristotle; ἐγχρονικός, Iamblichus; *innerzeitig*, Heidegger).[51] We have called this mode of indirect appearing-in-the-appearances transparency, since as with glass, one looks through the flux into the time-fields constituted in it, and not directly at the flux itself.

Attention can however fix upon the flux itself as the primary phenomenon of concern. In carrying out such a reflection consciousness

[51] Aristotle, *Physics* IV, 12; Iamblichus as cited by Proclus, *In Timaeus* III, 32: 2; Heidegger, *Being and Time*, sections 80–81.

experiences, as Husserl puts it, its own "double intentionality." Double intentionality means that consciousness automatically intends itself in the intending of objective time. More exactly, it is the nature of the flux to be resolvable into two "sides," time and consciousness. Timelike flux is both the manner of givenness of objects in time and the identifying mark of absolute consciousness. And it is both these things not as two fluxes brought together, but precisely as the one flux, singular and unique.

In my terminology, the flux of time is a *disclosure space*. Husserl's description of such a self-apparent structure is very well known. He begins from the double continuity of the retentional field which we have shown is required for intending time's two-dimensional order.

> The duality in the intentionality of retention gives us a clue to the solution of the difficulty of how it is possible to have knowledge of the unity of the ultimate constituting flux of consciousness.

He goes on to apply this clue by transposing double continuity into double intentionality, that is, transposing the timelike unity of the object given in immanence into the self-unity of consciousness.

> It is the one, unique flux of consciousness in which the immanent timelike unity of the tone is constituted and, together with this, the unity of the flux of consciousness. As startling (if not at first even absurd) as it may seem that the flux of consciousness should constitute its own unity, this is so, nevertheless.

Relative to the figure, this shift (which brings intentionality as such into view for the first time) is not from one line to another, but from one 'side' of the whole two-dimensional Figure (in which it maps object-givenness in retention) to another (in which it is the surface of the absolute flux itself).

> In the one, unique flux of consciousness there are *two* inseparably united intentionalities, woven together, requiring one another like two sides of one and the same thing. By means of the one, immanent time is constituted, an objective time, a genuine time in which there is duration and alteration of what endures; in the other, the quasi-timelike arrangement of the phases of the flux, which always and necessarily has the flowing 'Now'-point, the phase of actuality, and the series of pre-actual and post-actual (not yet actual) phases. This pre-phenomenal, pre-immanent timelikeness is constituted intentionally as the form of time-constituting consciousness and in that consciousness itself. The flux of the immanent time-constituting consciousness not only *is*, but is so remarkably and yet intelligibly composed that in it a self-

> appearance of the flux necessarily subsists, and hence the flux itself must necessarily be comprehensible in the flowing. The self-appearance of the flux does not require a second flux, but as a phenomenon it constitutes itself in itself.[52]

In this description, on the side of the flux—where what is constituted is objective time—the time so constituted qualifies as "genuine" (*echt*) because it is two-dimensional: It contains both *duration*, i.e. timelike spread, and *alteration of what endures*, i.e. the continuous modification of this spread in the series of retentional phases. On the side of the second intentionality, it is precisely this phase-series that is thematized. These two intentionalities subsist in the one unique flux of consciousness, and it is this—the flux—to which "this" refers in the sentence that begins, "This pre-phenomenal, pre-immanent timelikeness . . .", and not to the second alone. The two intentionalities are not *parts* of the flux, Intentionality A and Intentionality B as it were. The flux in its unity (as a double continuity) has intentionality once—and then again.

The two intentionalities are in a disclosure-hierarchy, and belong to a problematic at which Husserl is not very adept. He expects us to be startled by the claim that as conscious, the flux is a self-constituting unity. Such a claim is not unfamiliar to the history of philosophy, as we shall see. But even in the context of Husserl's own thought it is not altogether unexpected. Given the way he has constructed it, two-dimensionality must suffice for the structure of disclosure—the twofold must somehow *comprise* a unity—or else the flux will need a third dimension in which the two are unified, and so on ad infinitum.[53] Much more unexpected and genuinely startling is the reference to "*pre*-phenomenal, *pre*-immanent timelikeness," which is only a "quasi"-timelikeness. What access does pure phenomenology have to the conditions of immanent phenomenality itself? Can the "form of time-constituting consciousness" be constituted intentionally "in that consciousness itself"? And in what direction does the "pre-"operate?

Functionally, disclosure space is transparency for what appears in it. It does not itself appear in the absence of some alteration which affects the transparency. Such an alteration can be produced if it is

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[52] All three citations from Section 39, ZB, pp. 80–83; TC, pp. 106–109. The text of Section 39 is nearly identical with Nr. 54, ZB, pp. 378–381.

[53] ZB Nr. 50, pp. 328–9.

moved 'crosswise' to the field into which it is transparent. Imagine sitting with head held perfectly still looking out through a large picture window into some panoramic view. The glass is the disclosure space, and let it be clean and clear; but not perfectly flat. That is, suppose it has a few subtle distortions, vertical ripples for example (glass is not a solid but an extremely viscous liquid; old fashioned pure silica glass actually runs off the pane over many decades). While one's head is held still neither the distortions can be seen nor the glass. Let the eyes roam over the whole panorama: Unless a particular non-flat area is geometrically distinctive, or one sees straight lines through it—lines whose systematic distortions can be noticed directly—the intervening pane will remain invisible. But if we move our head from side to side, instantly the pane of glass will spring into view, will be registered and seen for itself as a transparent plane.

A similar phenomenon can be seen on a television screen which is subject to minor scanning nonlinearities and so transposes electrostatic distortions into geometrical ones. Unless straight lines happen to cross through many contiguous areas of distortion, as in a tightly woven rectilinear grid, the picture will look flat and normal—so long as the camera holds a fixed direction. But as soon as it begins to pan, so that the picture is moved continuously and in its entirety across the nonlinear screen, the deformed pane of the screen in its distortion will obtrude.

The fluid surface behind the television screen is an electrostatic space, that behind the plate glass window an ordinary optical space. Optical space is distorted in ways that are comparable to electrostatic distortions only on the scale of gravitational fields, and so for practical purposes it is perfectly flat. With the glass, our attention is thrown back upon the 'screen' itself. It is natural that the two-dimensional or 'screen'-character of the perceptual field of vision should be regularly treated as an interposed transparent plane of glass. Again, it represents the disclosure space, the space of the apparent objects. Here it is the stabilized space in which one holds one's head still, not the projection space of the successive retinal fixations. The analogy breaks down at the point where we allow for side-to-side or crosswise movement across the field, because there is no comparable direction of visual attention. We can never move across our own line of sight, as it were ecstatically.

At least we cannot do so spatially. Time-consciousness may, however, be exactly such a motion. In order to make contact with a

very ancient observation about the noticeability of the flux of time-consciousness, I will call the crossing motion which renders a transparency apparent in its field-properties an *ecstasis* (Gk ἔκστασις, from ἐξίστημι, stand aside, used mostly in deponent senses). Absolute flux is a disclosure space crossed by ecstatic motion which does not add content to the flux but grasps it in a unifying way in the form of its wholeness. The flowing of the river's surface is not the content of the reflected images seen in it, and yet it is precisely in the field of those reflections that we see waters flowing.

Heidegger is not the thinker whom I have in mind in introducing a formal notion of ecstasis, although the three ecstases and corresponding horizonal schemata of self-illuminating historical clearedness (*Dasein*) are, as he presents them, a radicalization of Husserlian time-space and of what is "pre-phenomenal" about it. It is unclear whether Heidegger realized it but the association of ecstasis with timelike flowing was a major theme in late Neoplatonism and incipient already in Aristotle, who said that, by contrast with pure intelligible presence, physical motion was an ἐκστατικὸν.[54] Iamblichus the Syrian, a Neopythagorizing Neoplatonist of the generation after Plotinus, asked, "Where has one to conceive the flux (ῥοή) and ecstasis (ἔκστασιν) of time?"[55] In answering this question he reflected on a very ancient version of the Figure of Double Continuity, and by reconstructing briefly the context of that Figure and correlating it with Husserl, we can secure the concept of disclosure space and begin translating transcendental phenomenology into the non-Cartesian terms of pure speculative logic.

Two-Dimensional Time in Iamblichus

The oldest version of the Figure of Time is attributed to the Old Pythagorean Archytas: Time is a "line broken (bent) at a point into an angle."[56]

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[54] *Physics* IV, 13, 222b22; see also 12, 221b3.

[55] *Commentary of the Categories of Aristotle*, as cited by Simplicius, *Phys.* 787, 17–18. Text identified and collected by S. Sambursky and S. Pines, *The Concept of Time in Late Neoplatonism* (Jerusalem: Israeli Academy of Sciences and Humanities, 1971), hereafter cited as Sambursky/Pines, p. 34, lines 29–30.

[56] Iamblichus, as cited in Simplicius, *Categ.* (Sambursky/Pines p. 30, lines 19–20).

The Figure of Double Continuity has been known for its special properties and considered a clue or revealing sign (σημεῖον) of the nature of time since at least the early Fourth Century BCE. The first application of the Figure to time is attributed to the Old Pythagorean Archytas, one of the seminal figures in early Greek mathematics. The original wording in which he described it was probably:

> γραμμᾶς εὐθείας κλασθείας τὸ σαμεῖον
> a straight line which is broken is the sign,
>
> περὶ ὃ ἡ κλάσις ἀρχὰ μὲν γίνεται τᾶς ἑτέρας γραμμᾶς
> on account of the fact that the breaking becomes origin of one line,
>
> πὲρας δὲ τᾶς ἑτέρας
> limit of the other.[57]

Originally this Figure was applied to a problem about the Now. Our best report of Archytas' work on this problem is the largely pseudepigraphic composition from the later Hellenistic 'Pythagorean Revival' on which Iamblichus worked, entitled "All About Everything by Archytas" (*Περὶ τοῦ παντὸς*).[58] Pseudo-Archytas most often formulates the problem of the Now as that of the *continuity of time* in Aristotle's terms, but this is probably not the original complication that the Figure thematized.

Our texts of Iamblichus supply no drawings, but we get help from the fact that its surviving description is archaic. Iamblichus, and perhaps pseudo-Archytas before him, felt constrained to add "a straight

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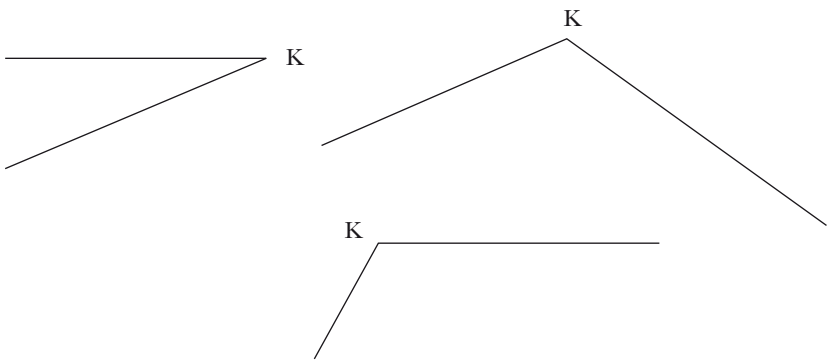
[57] As cited by Simplicius, *Categ.* 352, 34–46 (attributed to Pseudo-Archytas by Sambursky/Pines p. 24, 11–13). Simplicius quotes it again *Phys.* 785, 25–26. The Doric spelling was in his source and may be an affectation (see next note).

[58] In general, it is an unsolvable puzzle how much of pseudo-Archytas *Περὶ τοῦ παντὸς* may be Old Pythagorean or rely on wording that was authentically that of Archytas. My judgment of the substantial authenticity of this Figure rests in part on the use of the archaic, highly figurative, and rare term κλάσις (κλασθείας) in geometrical context; it relies also on the high degree of coherence between Iamblichus' later explanation, reading pseudo-Archytas, of how the Figure works, and the pre-Academic Pythagorean view of time as argued below.

Philological method, rightly preoccupied with attaining a high degree of accuracy before accepting ancient fragments as authentic, sometimes artificially deprives itself of corroboration from philosophical substance. An extremely judicious and productive middle ground has been staked out by Hubert Meyer, *Das Corollarium de Tempore des Simplikios und die Aporien des Aristoteles zur Zeit* (Meisenheim-on-the-Glan: Anton Hain Publ., 1969), especially in his remarks on Archytas and the Pythagorean tradition, p. 30f.

line broken *into an angle* (εἰς γωρίαν)"[59] to ensure we would envision the correct Figure. And it is from Iamblichus' way of understanding what the Now, so presented, shows us about time, that we gain access to its pre-Aristotelian context.

The Figure has two lines. For the moment we have no control over their orientation or degree of acuteness or obtuseness. It could therefore be any of these:



In Greek mathematics, the place of the intersection of two lines may properly be called a point (στίγμα). But here Archytas calls it a "breaking" (κλάσις). This could be taken in an Aristotelian sense to mean an instantaneous interruption that cuts a single line in two (Now as a Dedekind Cut), but Iamblichus knows this is not the Figure, and his applications require that a two-dimensional motion be implied by the drawing. The breaking is not the continuous linear 'varying' of the 'now-point' along one dimension, but rather a motion which sets lines crossing each other in a two-dimensional field.

One line must be seen as being originated, the other as being terminated, *at an angle to one another*, i.e., *each in its own dimension*. One line slides across the other at a point which itself slides along the intersected line. A familiar example is the double sliding intersection of a knife with a sharpening steel. Another is the two mutually varying line segments in a construction for drawing ovals: a string tied at each end to nails, leaving slack which is pulled up into an angle

[59] See note 56.

by the arc-tracing pencil point. In each case, we produce a double continuity in which one or the other (or both) of the lines is seen as carried sideways, while both lines change length in reciprocal ways. A plane field is also being swept out. The figure collapses if the angle is seen like a conveyor belt running up and back over a roller. It then reduces to a single continuity, the equivalent of moving a point along a straight line.

The Figure is a window on the crosswise quasi-timelike flux of ecstatically horizoned or 'shaded' spans of time. As Husserl observes, the particular angle chosen is irrelevant; what is essential is the two-dimensional continuum which the Figure maps out when it is correctly set into motion according to a propagation rule.[60]

What could such a breaking of linearity into two-dimensional flowing have to do with Now? We mentioned earlier the Aristotelian treatment of Now as the continuously differing dividing point which cuts a line in two in such a way that it cannot be thought to be the 'same' as the end of the foregoing segment and also beginning of the subsequent one. The ongoing differentness of the Now can only be clumsily integrated into the Academic analysis of continuity. The latter was strongly shaped by Zeno the Eleatic's paradoxes of motion.[61] It has another heritage: the Old Pythagorean school and, in particular, the historical Archytas. Despite the fascination which Zeno's paradoxes hold for Aristotle, the Stoics, and historians of philosophical logic, they are not deeply relevant to Greek mathematics;[62] in any case they do not bear on the interpretation of the problem about the Now as it is reflected in the Pythagorean figure. That Now is an active power integrating two dimensions. In Iamblichus' account, it is recognizably the common origin of two

[60] See Nr. 50, ZB, p. 328: "*zeichen unter irgendeinem Winkle, der keine symbolische Bedeutung gewinnen soll.*"

[61] The paradoxes bear on the problem of defining instantaneous momentum, in Greek the problem of the 'instant' or the 'sudden' (τὸ εξαίφνης), not the Now (τὸ νῦν). The Academic discussion is reflected in *Parmenides*, Hypothesis III (IIa Cornford), 156c.

[62] Walter Burkert, *Lore and Science in Ancient Pythagoreanism*, trans. Edwin L. Minar, Jr. (Cambridge: Harvard University Press, 1972), p. 456. Burkert embraces the severest philological minimalism as a conscious corrective to a history of vague and uncritical ascriptions to 'Pythagoras' and 'Pythagoreanism', but enriches his own historical assessments from a rigorous grasp of mathematics and natural science. In matters of psychology and ontology, however, particularly when they are carried on in ancient modes, he is often negative and obtuse.

intentionalities, the unifying factor in a disclosure space, and not merely a point traversing a line.

The pre-Academic context is not available to us at a glance. We have direct contact at first only with Iamblichus, and even then only in fragments from Simplicius and Proclus, which are still undergoing preliminary philological study. A few things can, however, be said about Archytas and the Old Pythagorean theory of time. They will help us appreciate what is at stake in Iamblichus' approach to double intentionality, and the perspective on Plotinus which it affords.

Archytas is a figure of genuine importance in the history of mathematics. He may have been the first to put arithmetical number theory into a theoretical form, but his more famous exploits were in geometry. He is best known for having solved the problem of 'doubling the cube', which is equivalent to constructing the proportion $1/\sqrt{2}$. Through Boethius we have an account of a proof by Archytas that "a superparticular proportion cannot be divided into equal parts by a mean proportional." This is our oldest example of an argument in highly finished deductive form in Greek mathematics.[63]

His most radical contribution in geometry was to set figures into motion—to show the cone swept out by a right-angled triangle revolved about one leg, or the arc of a circle traced out by the end of a straight line turned about the other end.[64] In proofs he allowed constructions of this kind much more freely than Euclid later would, and with intuitions prepared by such exercises he laid the groundwork for a late Pythagorean geometrical algebra which was capable of handling general quadratics. It is wholly in character for him to have studied the peculiar motion of the Figure of Double Continuity, since his whole impulse in mathematics was to decipher and formalize the intuitions of figurative thinking.

It is harder to be certain precisely how he brought up the problem of the Now as 'same and not the same'. The later pseudo-Archytas literature has so amplified his discussion of time in response to Aristotle that most of his original formulations have been obscured. But it is very clear that the problem was one of participation, of sameness in difference and difference in sameness, and that the guiding clue to a solution was the harmonic nesting within one another of musical pitches whose *intervals* are governed by number.

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[63] *Ibid.*, p. 442.
[64] *Ibid.*, p. 68.

'Interval' (διάστημα) is not construed as a length or distance (διάστασις) in Pythagorean discourse, as it is in Stoic usage. It always means first musical interval in a hierarchical scale. Pythagorean influence therefore leads to a mathematical physics (an application of Number to Nature) where concern for *proportion* so swamps interest in *measurement* that, in the Greeks, the development of the later was set back permanently.

The term is used in this archaic sense in a Definition of Time attributed to Archytas by later Neoplatonists (likely partially authentic). The Definition has two elements. Time is:

(i) a kind of number of motion, and
(ii) the general interval of the nature of the all.[65]

The first part is vague and probably garbled, under the influence of the Neopythagorean proprietary impulse which aimed to show that some one of their fathers said everything that Plato or Aristotle would ever say.[66] The second part of the Definition is, however, more interesting. Iamblichus interprets it in terms of what it means to attribute 'interval' to a 'nature' (φύσις). Nature is used as a category of manifestation by the Neoplatonists, and understood very dynamically. For them φύσις means 'unfolding', 'emerging', 'appearing' (note the process-suffix *-sis*). For an entity whose being is in becoming, as the Platonists say, nature is the mediating power which makes sensible process expressive of intelligibility, and intelligibility participable by sensible process. Nature has an intermediate role in a hierarchy which has the noetic realm above it and the material below. The Pythagorean understands such mediation as the establishment of proportion or harmony, on the model of a musical scale which apportions intervals into a 'vertical' series, between higher and lower pitches. Pythagorean causality runs vertically, along synchronisms and entrainments, rather than horizontally along the dimension which measures motion. So the 'interval' of a nature gives the entity which produces it placement in the scale of things, a 'being

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[65] Iamblichus *In Categ.*, I, as cited by Simplicius, *Phys.* 786, 13 (Sambursky/Pines p. 32, line 20).

[66] The usual citation attempts to parallel Aristotle's "number of motion" (ἀριθμὸς κινήσεως) by saying "a kind of number of motion" (κινάσιός τις ἀριθμὸς), but versions I would judge better (because more difficult) read "the number of a particular kind of motion" (κινάσιός τινὸς ἀριθμὸς).

in tune' with concomitant intervals. Plants (φύτα), for example, arrange their careers in highly stable ways in relation to such intervals as the day/night cycle, its seasonal variations, the life-cycles of parasites or symbiotes, etc.

Time is the general, the universal (καθόλω) interval of the nature of the All (τῶ παντὸς φύσιος). Here the problem of nature, of φύσις, is connected to another radical problem, that of the totality of physical being, physical cosmology. As a logical and mathematical problem, this was sometimes made a question of the All (τὸ πᾶν, τὰ πάντα), sometimes of the Whole (τὸ ὅλον). But it was also treated phenomenologically, drawing from the ancient representation of totality, the Being One, as κόσμος, Cosmetic Array. The physical application of this image was invariably *astronomy*.

Time as the Sphere of the All

Aristotle is least to be trusted when he tells us that a given argument is beneath contempt. He has a careful way of doing this, studied beyond invective. He rarely misunderstands his opponent in such collisions. To the contrary, he alerts us to important counter-intuitions. One of his complaints in the *Physical Lectures on Time* is particularly instructive.

Among positions criticized in his review of predecessor statements about time is the thesis that time "is the sphere itself." Aristotle has no patience with this at all.

> To those who said time to be the sphere of the whole, it [must have] seemed that everything is *in* time, and *in* the sphere of the whole. This account is too trivial to support inspection of the impossibilities about it.[67]

This was always paraded as the 'Pythagorean' position, and as late as Plotinus it was given dutiful exposition in the introductory aporetic, but never defended. It deserves better.

The sphere in question is the projected sphere of the far sky, the cosmological sky, the final all-inclusive circle of circles, the inside with no outside, the heaven (οὐρανός) of the stars. We have not escaped an analogous representation even in our own cosmology:

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[67] *Physics* IV, 10: 218b 6–9.

the 'sky' of the quasars, of the fireball radiation, finally of the Singularity itself.

Of course, we immediately emphasize this sphere is a representational convenience only, a useful way to map optical observations from the earth's surface. No doubt all who perceive in the optical space of electromagnetic radiation 'see' themselves at the center of a spherical final containment, but this does not mean that the universe is measurably round, or that we, or they, are at its center. Such notions are probably not even well-defined in the physics of measurement.

The sphere of the sky is purely phenomenal, and only partially related to the subjection of our gaze, here on the surface of a revolving planet, to a more-or-less equable angular momentum. Except for this one physical determinant (which may not be accidental to the evolution of living visual systems), the sky depends for its figure entirely on the structure of visual intentionality. It consists of foreground, background, and horizon; these collapse almost completely into horizon in the case of objects at astronomical distances. The spherical volume under (inside) the sky is in fact so thoroughly horizonal in character that it is best described as a disclosure space and not a metric space at all. The sky sphere is thus the 'showing' of an intentionality that is transparent to object intentions. It is therefore not directly apparent as itself, but only as a manner of givenness of those objects.

To be "in the sphere of the whole" is therefore to have intentional being or, as the ancients would say, to be "in the Soul." This was exactly the position of Pythagoras in his "Time is the Soul of the Whole."[68] It is perhaps easier to settle questions of authenticity with mythical Orpheus than in the case of the historical Pythagoras, and certainly the Platonizing Neopythagoreans like Iamblichus who cite this gnome find their own doctrine of the Soul of the All or World Soul in it—which makes it suspect to the philologists. But, if in fact there was an Old Pythagorean equation of the Soul with the Sphere of Heaven as 'showing time', this would go a long way toward explaining Aristotle's baffled hostility toward the equation of time with the Sphere—and help us recover the oldest Greek identification of the timelikeness of time.

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[68] Plutarch, *Platonic Questions*, 1007b.

Our most dependable Old Pythagorean definition of time is that of Archytas introduced above:

> Archytas: Time is the Interval of the Nature of the Whole.

Here "interval of the nature" takes the place of "soul," and not at all unnaturally, *if by 'soul' we mean the disclosure space of physical appearances*, and not human self-consciousness. Then Soul and the Sphere are one, and alike include everything—but on the basis of a principle of inclusion (of 'being in') very different from what Aristotle has in mind.

Aristotle intuits a real sphere in metric space when he looks at the sky. For him the only discernable relationship between the sky sphere and time comes from the role played by astronomical motions in determining units for the measurement of other motions. The stars in περιφορά, or revolution, 'show' time in exactly the same way as does any local motion along a straight course in nearby space. He is aware of another version of the formula of Archytas which was current in the Academy, according to which time is "the interval [or sometimes the *number*, which is a correct substitution in Pythagorean mathematical physics] of the *motion* of the whole."[69] Here the previous dynamical use of φύσις is expressed directly by 'motion'; what is understood is κίνησις in the very general sense of manifest process. This is more to Aristotle's liking; he thinks that this position at least deserves its refutation.

> Yet part, too, of the revolution is a time, but is not a revolution. For what is taken is part of a revolution, but not a revolution. Moreover,

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[69] This inference is argued as follows. I assume the historical Archytas said something close to καθόλου διάστημα τῆς τοῦ παντός (or: τοῦ ὅλου) φὸσεως [leaving out the Doric spelling], "general interval of the nature of the all/whole." As indicated, the first and most natural substitution available would be to supply κίνησις for φύσις, which yields the Old Stoic definition of time as διάστημα τῆς τοῦ κόσμου κινήσεως (Zeno, in Diogenes Laertius VII, 141). But we know that the Stoics understand διάστημα as a measuring unit, and both Plato and Aristotle indicate that a definition of time as an ἀριθμὸς κινήσεως, "number of motion," (*Phys.* IV, 11) or κατ' ἀριθμὸν ἰοῦσαν, "running according to number" (*Timaeus* 37D) was commonplace.

In our passage in *Physics* IV, 10, Aristotle seems to reduce the Old Pythagorean definition to two components. That with which he sympathizes he cites as "τὴν τοῦ ὅλου κίνησιν," "the motion of the whole." The first component, καθόλου διάστημα, which has become "number" in other contexts, he here registers—correctly, I would hold—as τὴν σφαῖραν αὐτήν, "the sphere itself."

> if the heavens were more than one, the motion of any one of them would alike be time, resulting in many times at once.[70]

Against the misunderstanding of their definition implied in this refutation, the Pythagoreans can only exclaim, "Not the *revolution* of the sphere; *the sphere itself* is time!" What Aristotle separates off and treats as a rather silly subvariant of an amateur astronomical thesis is, in fact, the formal intuition behind a *phenomenological* insight about time and the soul in earlier Greek physics. In his own way, he draws from the same intuition himself, in his discussion of the Now and of time and the soul in the *Physical Lectures on Time*. But he has lost access to the figurative force of the sphere, and would have blocked it for us too, if we didn't have recourse to Plotinus and Iamblichus.

Because it is a disclosure space, the Sphere can be manifested only in an ecstasis, a 'crossing motion'. We know from *Timaeus* that the Pythagorean astronomers were fascinated with the great X of the sky, the diagonally intersecting, counter-revolving concentric great circles of the plane of the ecliptic and the celestial equator.[71] But the more radical intuition moves in another dimension altogether, in the ecstasis which completes the sphere of the sky *in the contemplation of the hemisphere* to which our sight is at any time restricted. The accomplishment here is the imaginative achievement of a global holographic time, an 'everywhere now' in the sense of a 'now all about', an insight that still eludes us.[72]

We confront our lack of practised intuitions about spherical time whenever we get confused about which way to reset our clocks when Daylight Saving Time shifts in and out, or when we try to deduce which way to apply time zone changes from the fact that the sun travels East to West. Dateline puzzles are even more revealing in this regard. The electronic media that make the global Now accessible allow us to pose a very nice problem: Assume one works a desk at a news organization with bureaus reporting electronically from around the globe. For *how many hours* would a given calendar day last? For how long could you receive reports from somewhere

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[70] *Physics* IV, 10: 218b 1–5.

[71] *Timaeus* 36C.

[72] This despite the fact that, with the contemporary technical ability to synchronize atomic clocks worldwide to within small differences of phase, we have practical access to a highly resolved global holographic time, a very round Now.

in the world where that was the date of filing? The answer is 48 hours; the mediated day is 4π round. Any number of brute force analyses can confirm this calculation, but it is exceedingly difficult to make the result as intuitively clear as its elegance suggests ought to be possible. In σφαιρική, 'spherics' as it used to be called, we are nearly blind intuitively, a phenomenon which is not unrelated to the fact that few educated moderns actually see the sky in the same space in which they theorize about it.

The ecstatically completed sky sphere which is also the Soul of the Whole includes everything *in a timelike way*, and not merely in so far as it is a spatial container. Greek astronomy is credited with having discovered that the earth is a sphere (as early as Anaximander). To us, this seems to be an intuition that is separate from the projection of the heaven of the stars as spherical. But because it is the ecstatic phenomenon of *time*, not a shape in space, the sphere itself, αὐτὴ ἡ σφαῖρα, is both of these and neither. It becomes the central object in the speculative logic of Parmenides. And though it is there meant to be the logical model of a physical object, it is neither a ball seen from outside, nor a containing firmament seen from within, but an all-encompassing self-referential equality of an intentional kind—a disclosure space.

As we will see in Parmenides (chapter 4), the timelikeness of the sphere lies in its provision of the master Now-interval, the unifying coherence of all process into one intelligible presence. Within the range of the "Now!" pronounced by the goddess, all nature is disclosed as "all at once total, one, coherent" (ὁμοῦ πᾶν ἕν συνεχές).[73] Even after its amalgamation with the later Eleatic problem of the instant and the coordinate transformation of the disclosive coherence of time into its metric continuity (συνέχεια can be translated both ways), the *phenomenon* of the Now retains its original interval-structure, and therefore its dependence on the 'soul'. This is particularly remarkable in Aristotle, who almost entirely excludes the original phenomenology of the sphere from his treatise on time (chapter 3).

Our doorway into this extended reflection on phenomenal time—the one that runs from Anaximander and Heraclitus through Aristotle into Plotinus and to a full theory of disclosure space, of "time and the soul"—is Iamblichus' interpretation of the double intentionality

[73] Fragment B8, 5b–6a (Diels).

of the Now. It relies on Archytas' version of the Figure of Double Continuity. Instead of the direct leap into ancient 'spherics' with which we have been experimenting here (a mode of thinking that since Aristotle has struck us as merely figurative), we can connect with a mathematical representation whose phenomenological implications are familiar to us from Husserl. It is precisely this mathematical sensibility that makes Iamblichus such a rewarding juxtaposition to Husserl. And in this juxtaposition we can find a definition of transcendental phenomenology that is applicable to both sides of Cartesian 'consciousness'.

Phenomenology is the union of speculative logic with physics. We are well aware of the Greek contributions to speculative logic, above all the Platonic theory of participation, but as moderns we are much less willing to take their thought seriously as phenomenological physics. The parallel themes of two-dimensional time in Husserl and Iamblichus, however, make the earlier physics instructive in just this way.

Because he works so thoroughly within the system of Plotinus, we will not detail the thought of Iamblichus in this chapter, but will profit from his powerful and original Neoplatonic elaboration of 'participation' in the next. The text in which he applies Archytas' figure to the Now, however, makes a fitting end to the present discussion:

> The Now which is participated in nature and is not separate from the things which come to be is one thing, the Now which is separate and in itself is another, the latter resting self-same in its own form, the former seen in continuous passage. But since these two are combined together in the principle of the Now which makes time coherent, it is completely clear that this is the reason why Archytas likened the Now of time to the point at which a breaking occurs, to a line broken in such a way that it forms an angle. For just as the point becomes the origin of one line and the bound of another, the Now combines in itself the origin and boundary of all time, not as an accident of some kind but because it holds time together and encompasses in itself the origin of time and produces it out of itself.[74]

For the approach to transcendental logic within which Iamblichus develops this analysis, we must turn to Plotinus.

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[74] Iamblichus, *Categ.*, cited by Simplicius, *Categ.* 355, 11–20 (Samburski/Pines p. 30, lines 14–25).

CHAPTER TWO

TIME AND THE SOUL IN PLOTINUS

Two-dimensional Time in Neoplatonism

In his first constructive chapter about time in the treatise "On Eternity and Time," at a point where he has derived time from eternity by a kind of 'downward' motion within the soul, Plotinus speaks elliptically of two different kinds of time, coordinate with two different modes of psychic life.

> For as she (Soul) presents her activity as other after other, and then again another in succession, she produces the succession along with the activity, and goes forth with another διάνοια after that one, the one that did not previously exist, because διάνοια was not in action, nor is the life now like the one before it. So at once the life is different, and the 'different' involves a different time.[1]

There can be a "different time" because of the "different" involved in the different modes of living to which reference is here made. This would be easy to understand if we could set these times in sequence with one another, 'horizontally', and argue that the production of time in Plotinus is set within a narrative about the origin of soul which has much in common with contemporaneous myths of a decline of soul from a pre-cosmic divine life to its present status as an embodied life subjected to conditions of space, time, and matter. But the two lives of soul relate as eternity and time, within the hierarchical organization of the hypostatic series itself, and it is much harder to account for a corresponding 'vertical' transition between different kinds of time.

The difficulty here is at first schematic, and it lies within the logic of the Neoplatonic hierarchical system. Time is among the defining dimensions of 'this' world, the world of soul. What lies systematically above it is not time but the eternity of mind (νοῦς), which is

[1] *Ennead* III 7 (45), 11: 36–41.

nominally timeless. If the transition between the two lives is subject to narrative exposition, and if it can be set up as a timelike domain of beforehand/afterward differences, would there not then arise a third time, imposed upon the transcendental production itself?

These are real difficulties, reflected as we shall see in systematic complications for which the scholastic Neoplatonism that begins with Porphyry and Iamblichus is well known. But an even greater difficulty is created by my intention in this project to profit from Plotinus in the area of *phenomenology*. My goal is only incidentally the recovery of a lost continent of the history of philosophy, which in any case is already well under way in contemporary Neoplatonic studies, where the basic editing of sources and preliminary philology is mostly done and the properly philosophical work of exposition and engagement has begun. In other words, my aim here is not to learn, from the theme of time, about Plotinus, but to learn from Plotinus about time.

To understand his text I will rely not on erudition in the writings of his school, but the phenomenology of inner time-consciousness. And this requires that new ground be charted, because prevailing interpretations of Plotinus' theory of time emphasize its presentation in mythical form. For this the appropriate phenomenology is not the eidetics of physical immediacy, but the hermeneutics of the moral subject—the "empirics of the will" as Paul Ricoeur has it, or the temporal interpretation of historical existence in Heidegger's sense, as applied to Plotinus by Hans Jonas.[2]

My project here is to identify the *timelike* in the phenomena of physics. The three horizons of historical meaning—future, past, and present—belong to temporal problematic and are not our theme. Unless Plotinus can be read within such limits, the exposition of two-dimensional disclosure space we have developed from Husserl cannot help interpret the doctrine of the 'two times' in the life of the

[2] "The Empirics of the Will" is the second phase of Paul Ricoeur's project *Freedom and Nature*. Phase one, a pure "eidetics of the will," is *The Voluntary and the Involuntary* (Evanston, IL: Northwestern University Press, 1966). A transitional essay by Ricoeur, *Fallible Man* (Chicago: Henry Regnery Co., 1961) introduces the hermeneutical study of the moral subject, which followed as *The Symbolism of Evil* (New York: Harper and Row, 1967). Hans Jonas' interpretation of Plotinus is available in a text study, "Plotin über Ewigkeit und Zeit," in Alois Dempf, ed., *Politische Ordung und Menschliche Existenz* (Munich: Beck, 1962), and in an existential historical essay "The Soul in Gnosticism and Plotinus," Essay 17 of *Philosophical Essays* (Englewood, NJ: Prentice-Hall, 1974).

soul. We must therefore confront the methodological problems created by Plotinus's resort to the mythical format for the transcendental derivation of time.

The use of a myth-form for this is, of course, to some degree characteristic of the classical age. A corresponding treatment of the problem is found in the *Timaeus*. But, in Plato, the story-line centers on the figure of the Father and Maker, the Demiurge who operates on this world with a view to perfecting it in keeping with the paradigmatic world of ideas, while in Plotinus the protagonist is a Soul which itself both enacts and undergoes the transition from eternity into time. The *Timaeus*-myth can be allied with those centered on a divine creator, while the myth in Plotinus seems to belong to those of 'the Fall'. It is only natural that comment on the derivation of time in Plotinus would be shaped by the problem of accounting for this typological shift.

Drawing from his work on the religious spirit of late antiquity,[3] Jonas correctly notes that there is a convergence not merely of typology but of detail between Plotinus's text on the origin of time and various gnostic myths of the defection of the World Soul or of the lower Wisdom (Sophia) from the divine Pleroma. One result of these studies has been an acceleration of momentum in interpreting them on the part of general historians of philosophy. This leads us *away* from the theme of time proper toward the general doctrine of the soul, and hence toward the psychological-religious themes of interiority, the discovery of fault, its redress through contemplative attainment, and religious salvation. The Plotinian theory of time is thus psychologized, 'existentialized', and made a motif in the phenomenology of religion.

As ensuing philosophical generations understood, however, the Neoplatonic distinction between two kinds of time—a higher or intellectual one and a lower or sensible one—is a fundamental test case in pure speculative logic. Specifically, it is applicable to the 'Third Hypostasis', the domain of sensible becoming and embodied experience, that which the peripatetic calls physics. So, when speculative

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[3] *Gnosis and Spätantiker Geist*. Part One, Die Mythologische Gnosis, 3rd corrected and expanded edition, 1964; Part Two, Von der Mythologie zür Mystischen Philosophie: First Half, 1966; Second Half did not appear (Göttingen: Vandenhoeck & Ruprecht).

logic seeks a phenomenology for this distinction, it must look to physics, and to psychology only as in service to physics. The difference is crucial, because while the Neoplatonic phenomenology of time is *transcendental*, in accord with our previous definition (transcendental phenomenology unifies speculative logic with physics), the transcendency at issue is not that of the divine as confronted in religion (by the soul as moral subject), but of conditions of possibility in the Kantian manner or, even more proximately, of "a priori truths which belong to the distinct constitutive moments of objectivity," as we saw Husserl express it, early in his transcendental turn.[4] At stake is not the suppression or exclusion of *theology*, from which the Neoplatonists draw freely at all levels of their logic, but rather the re-animation of an exceptionally instructive and recognizable *phenomenology*, one which opens doors retroactively—all the way back to the origins of Greek philosophy of time in the physics of Anaximander.

When it is subjected to interpretation along the lines of hermeneutical phenomenology, Plotinus's text on eternity and time is all too often queried only in Augustinian/Heideggerian terms. One must also ask Aristotelian and Parmenidean questions, questions about disclosedness not as memory and perception but as the constitutive evidentness of the physical as such (the truth of nature)—questions therefore about Platonic narrative (μύθος) not as story and symbol, but as argument and logical implication.

Iamblichus of Chalcis strongly encourages and contributes to such a reading of Plotinus, and therefore provides the point of contact between ancient and recent phenomenologies. That contact is to be found in the logical similarity his thought reveals between the unified problematic called 'time-and-the-soul' in Neoplatonism and the problematic that Husserl calls time-consciousness.

The logical similarity, or homology, can be tested directly because Iamblichus and Husserl each resort independently to the same Figure of Double Continuity. As Iamblichus understands Plotinus, the higher and lower time, in their very difference, compose a singularity—phenomenal time, the life of Soul. Though single in its subject, it is double-aspected in consequence of the double role of Soul in the transcendental logic. On the one hand Soul contemplates the Logoi in their noetic completeness and immediacy, and, on the other, it

[4] See chapter 1, note 46, p. 33.

administers their disposition into the phase-series of natural processes and voluntary actions—not as though these were separate activities, but both simultaneously and continually. The Figure shows how time supplies the 'at once' of this twofoldness. The two-dimensionality of the Figure in the Neoplatonic account therefore turns out to be that with respect to which Time and the Soul agree—to constitute a disclosure space. Both share the two dimensions—we do not find Soul in one dimension, Time in another. This was precisely the situation we came to in our review of the Husserlian Diagram of Time.

At the ground of Husserl's intuitions about the phenomenally timelike was a very drastic speculative object: an absolute, self-disclosed and self-constituted phenomenon ("*qua* phenomenon, it constitutes itself in itself").[5] As soon as, we see through Iamblichus' eyes correctly into Plotinus's strange story-forms, we discover a precisely analogous thesis. In order to be, in its constant arrival into sensible experience 'downward' from pure intellectual life, the very form of the timelike as such, Soul

> πρῶτον μὲν ἑαυτὲν ἐχρόνωσεν . . .
>
> first of all 'be-timed' herself (made herself timelike).[6]

The verb which I here translate 'be-timed', ἐχρόνωσεν, is an ad hoc invention on the part of Plotinus. It elaborates a preliminary claim that Soul's motive for 'falling out' from eternity into time was a will to *originate* and to *be* "of herself" (ἄρχειν αὐτῆς βουλομένες καὶ εἶναι αὐτῆς)—i.e., to be self-constituted. Iamblichus helps us see that Plotinus's presentation of 'time' as the name for the self-constituting power of 'soul' is more than an existentialist conceit. In the reciprocity with which they share the distinction between the intellectual and the sensible, Time and the Soul make up the disclosure space of *physical* phenomena. They are the field in which Platonic participation is enacted, they are the Everywhere Now of Aristotelian physics.

Working from Iamblichus toward Plotinus, so that through him we can bring Aristotle into view (chapter 3), we turn first to the *schema of participation* which is Iamblichus' distinctive contribution to

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[5] See chapter 1, note 52, p. 41.
[6] III 7, 11: 14.

the systematization of Neoplatonic transcendental logic, and the context in which he cites as a physical metaphor the Semeion of Archytas, the Figure of Double Continuity.

The Schema of Participation

Neoplatonic logic abounds in threesomes. The most important of them is hierarchical in nature. Most famous is the innovation that Plotinus thinks is the essence of Platonism, the projection of One "beyond Mind and Being." From this thesis there follow the systematic implications that the Being of the noetic realm, the Mind, is only a Second One, and that the All One of the sensible realm, the Soul, is a Third. This is the well-known construct of the Three Hypostases.

Less well known is the three-layer *schema of participation* which is used to analyze relationships of derivation and production between adjacent hypostases in the transcendental series. In the form in which it was first given complete articulation (by Iamblichus) the schema of participation discriminated among three states of any given element of the hypostatic series:

i) that factor *unparticipated* (ἀμέθεκτος), 'in itself', absolute;
ii) that factor *participated* (μετεχόμενος), which involves a self-disposition and action by itself, and not merely a reaction to what participates in it;
iii) that factor as *participant* (κατὰ μέθεξιν, ἐν τοῖς μετεχοῦσι, ἐν σχέσει), that is, as enacted by the hypostasis beneath it which is therefore now *its* action, and no longer that of the higher hypostasis.

Since the actual step between hypostatic levels—the moment of production/derivation itself—takes place between steps (ii) and (iii), it was the relationship between these two stages that received the greatest development in post-Plotinian logic. The derivation of time from eternity described in the Third Ennead, together with the analysis of the demiurgic role of the Soul in the Fourth, provided important evidence in Iamblichus' defense of the Plotinian authenticity of the doctrine. In neither place did Iamblichus find explicit terminology for all three of the distinctions his schematism required. Still, because, in the treatise on time the actual mechanics of participation are

being settled for the phenomenal world, prototypes for the last two are plainly at work in the Plotinian text.

Phenomenologically, the most satisfying Neoplatonic contribution to the theory of participation is Plotinus's portrayal of time as the unifying and ordering power that makes intelligible λόγοι participable by sensible processes. Much modern criticism of the Platonic treatment of time begins with the erroneous assumption that the identifying mark of time is that it is negative in nature or deficient in being. Whatever deficiency may characterize time comes not from *time* itself but from the scatteredness of sensible *motion*, which it seeks to perfect. In Timaeus' exposition, time comes along late in the story, *after* not only motion-in-general has been introduced, but also subsequent to the harmonic motions in the Soul whose two dimensions map the heavenly appearances. Time is super-added to both motions, and as a perfecting form—something which makes this moving cosmos a *better* image of its eternal paradigm. It cannot therefore be identified exclusively with the distribution of motions into sheer "ἄλλο καὶ ἄλλο," "other and other"-ness. For this, Plotinus has the unforgettable image, "Now Socrates, now a horse," suggesting perceptions entirely discrete, unified by no intentionality.[7] By contrast, the time-like element in motion is a *unity*, and the kind of unity that belongs to time is above all *order* (τάξις). More specifically, as Iamblichus will shortly tell us, it is a σύνταξις, hence the term 'syntax' in the title of this volume.

Already in Plotinus, unity is a unifying of two dimensions which are discriminable within order; in Iamblichus, this becomes the integration of two kinds of time. Plotinus distinguishes simply between τὸ τάττον (that which actively orders) and ἡ τάξις, the order presented in sequence, ἄλλο καὶ ἄλλο.[8] Each of these takes place in the same Soul; they have the same disclosure space. Iamblichus was struck by the 'self-anticipations', as we might call them, that he thought were required for the Plotinian account. Time as τὸ τάττον, what he called 'generative' time (ὁ γενεσιουργός χρόνος),[9] belongs to Νοῦς but is

[7] V 1, 4: 20.
[8] IV 4, 16.
[9] As cited by Simplicius, *Commentary of the Categories of Aristotle* 352, 15 and 20. Here and elsewhere in this chapter I depend on S. Sambursky and S. Pines, *The Concept of Time in Later Neoplatonism* (Jerusalem: Israeli Academy of Sciences and

already psychical, disposed toward presentation in sensible experience, and is no longer the pure, eternal and utterly self-contained noetic time, time καθ' αὑτόν, 'in itself'. On the other hand, time as τάξις, "the order of practical affairs" (ἡ τῶν πράξεων τάξις), is external and physical, not simply seriality but the execution of purposiveness, a 'life' with its own inward power. Time is somehow both the expectation of itself as the communicative power of order from above, and from below the ground of its own reception. In the development of this last aspect, Iamblichus was both original and strikingly modern.

What sort of translation takes place, what appears in addition to the seriality that we notice in its presentations, when the world of motion and becoming is grasped as being *in time*? Aristotle says that

> 'to be in time' is for both motion itself and its 'to be' to be measured by time; for time measures at once both the motion and the 'to be' of the motion.[10]

This already says that time is not just a metric space but a disclosure space. The fact that it is self-apparent serves as the basis for appearances within it. The underlying premise is not that the 'to be' of motion is 'as long as' its measure in time, but rather that timelikeness *constitutes* the 'to be' of motion. Being is more like time than it is like motion. Time is the participation of motion in being.

To follow Iamblichus' discussion, we need his phenomenology of timelike appearing, and, just as in modern physics, he works from the common name for it, 'flux' (ῥοή). As flux, time is often thought to be itself a kind of movement, but this is not strictly correct within the logic of participation. The 'second moving' is in the *appearing* of *participation itself*, intersecting motion as a rule-giving or ordering power. This point is introduced in a difficult, densely-argued text:

> Time is not moving *per se*, but by the participation in it appearing in the motions and measuring and defining them (as though one were to call the Soul divisible in the bodies, whose cause it instead encompasses).

Humanities, 1971) to have located the texts of Iamblichus in the Berlin *Commentaria in Aristotelem Graeca*. In the notes to Iamblichus citations that follow, I shall first cite passages from *Commentaria*, then locations in Sambursky/Pines, as follows: Sambursky/Pines 26, 19 and 26. Although Sambursky/Pines provide translations as well as the Greek originals, these translations are preliminary. I have adapted them so extensively that the translations used in this chapter are best represented as my own.

[10] *Physics* IV, 12: 221a5–6.

> In this way time is motion-like as possessing the cause of the activity proceeding outside from it and perceived as divisible in the motions and being extended together with them.
>
> Thus in the same way as the motions become timelike (ἔγχρονοι, *innerzeitig*) through participation, time becomes motionlike through being participated by the motions.
>
> With reference to this the physicists believed time to be only what is counted of motion, since they could not perceive its cause.[11]

What moves is not time, but participation in it. This participation 'appears in' the sensible motions, and such appearing confers upon them their timelikeness—sensible τάξις and λόγος. But the appearing of 'participation in time' is also motionlike, and its motion called flux. It is not a second flowing, but a self-anticipation of the first, and as 'participant time' is also called *ecstatic*:

> Where has one to conceive the flux and ἔκστασις of time?
> The answer, is, in the things participating in time.[12]

Seen from below, from motion in its material externality, timelikeness is ecstatic. This term enters discourse about time in coordination with the emergence of the characteristic phenomenological sense of the verb from which it derives, namely, 'to exist'. Εκστασις derives from ἐξίστημι (ἐκ-ἵστημι), meaning 'stand out', 'stand away', 'stand across'; it is reproduced in Latin as *existere* from *ex-sistere* and then, through both Latin scholastic and German philosophical usage, in English 'exist'. Ex-sistence names the condition of what has being in physical time, and so Iamblichus subscribes with enthusiasm to Aristotle's description of motion, in regard to its timelikeness, as an ἐκστατικόν.[13] His own attention focuses on the ecstasis itself—not motion, but that exposure of motion to the higher time which makes both the appearance of motion, and of the time in which it appears, physically possible.

The implication of this is that Iamblichus takes the familiar definition of time as "some kind of number of motion" to imply that a numbering *power* is involved, some "monad of motions." This power, whose act is the appearing of physical participation in time, is also

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[11] Proclus, *Timaeus* III 31, 31–32; Sambursky/Pines 46, 2–11.
[12] Simplicius, *Physics* 787, 17–18; Sambursky/Pines 34, 29–31.
[13] *Physics* IV, 13: 222b22. See also IV 12, 221b2, "motion disperses subsistence (ἐξίστησιν τὸ ὑπάρχον)."

the power of the "first *psychical* change," the world-ordering "projections of thought":

> The motion referred to here [in the definition] is not one of the many (for then the others would be in want of time),
>
> nor is it the communion of the many (for such a communion would not be one),
>
> but it is the motion which is one in its being, pre-existing (προὐπαρχούσης) all the others as though a monad of motions.
>
> This is the first psychical change (ἡ ψυχικὴ πρότη μεταβολή) unfolding (ἐκφυομένη) according to the projection of the logoi (κατὰ τὴν προβολὴν τῶν λόγων); it is justly primary and the cause of all motions.
>
> The number of this motion does not originate as something secondary or extraneous, as Aristotle believes, but ranks higher than it in the order of causes and drives it forward according to suitable measure. For being an essence it makes this essence-like activity to progress, as though bringing to birth the self-moving projections of the essence-like thoughts of the soul.[14]

Time is therefore the power governing two different acts—acts which necessarily coincide. One is the self-movement of the soul, the other the movement of its 'projections'. This latter, "essence-like" (οὐσιώδη) activity is described by Plotinus as

> drawing being to itself in doing one thing after another and moving in a circle in a sort of aspiration to substance.[15]

The circle of projection is of course the turning sky, the Sphere of the All in its angular motion. The very same Sphere, sensed not in projection but in its inverse, namely, gravity, gives us the circle as the figure for Soul's self-moving contemplation of Νοῦς:

> For the soul of this kind is a noble thing,
> like a circle fitting itself round its center,
> the first expansion after the center, an unextended extension.[16]

Plotinus resorts to the circle-figure for the formal coincidence of the psychical and the physical in one 'power of appearing' because he depends on Pythagorean astronomical intuitions about 'number-power'. Since he is concerned with the logic of participation, Iamblichus addresses not the *power* but the *appearing*, the ἐκφυομένη which is both psychical change and physical motion.

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[14] Simpl., *Phys.* 786, 14–23; Sambursky/Pines 32, 21–31.
[15] III 7, 4: 31.
[16] IV 4, 16.

Sheer association of the condition of the possibility of physical time with soul and number is of course already present in Aristotle, in the much-discussed assertion in the *Physics*:

> If nothing other than soul and the mind of soul were naturally suited to numbering, then time would be impossible, there being no soul (ψυχῆς μὴ οὔσης).[17]

But it is a different matter, and more challenging, to actually describe this co-conditioning in the manner of its appearance. Iamblichus wants to be explicit about the phenomenology of the complicity of time and the soul. His tool for this is the celebrated notion of the Now.

'Now-ness' is what time and the soul both share. For each of them, Iamblichus claims that Now is twofold. It is both 'the same' and 'not the same'. It is limit and edge, and in this way continually self-differentiated; it is also form and medium, and hence always the same. Given that it is one out of these two, Now is how time 'holds together' (σὺν-ἔχει)—in Latin, 'co-heres'.

> Time is coherent; it holds together.
>
> But it is not through a constant becoming and perishing of the limit that it holds together; for the limit is at rest in its own proper form, in order to be indeed coherent and always to have cohered.
>
> It is in another context that the Now is seen as becoming other and other according to number, and, even there, as having already acquired position (θέσιν) and so having a syntax (σύνταξιν) with regard to the things that become.
>
> Hence, if one takes the Now as part of time, one grasps it as a being co-emergent (συμφυὲς) with motion.
>
> But if this [coherent time] might not appear to be time, as some have said about it, it will be a separate principle of time, remaining the same in form.
>
> And if it is said that what is past in time no longer has being, and what is coming does not have being yet, it should be observed that this is stated with regard to the Nows that proceed outward and are carried on together with motion and are co-altered along with this carrying. But that which is contained in the Now and defined in it and is never ex-sistent (μηδέποτε ἐξιστάμενα) from its proper principle, this persists always in the Now.[18]

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[17] *Physics* IV, 14: 223a25–27.

[18] Simpl., *Categ.* 355, 29–356, 1; Sambursky/Pines 30,30–32,10.

Now is a 'limit' that changes with the other and other of motion yet rests in a single form. As it is distributed into the phases of numbersome process, it has *syntax* and not sheer multiplicity. As "proceeding outward" with motion, the syntactical Now is ecstatic. In other passages, Iamblichus calls the Now-distributing ex-sistent time 'an-hypostatic'; this contrasts with the now-conserving time, 'indivisible' or 'partless' (ἀμερές). Positioned Now in the syntax of time, this partless union is an already-accomplished 'pre-existence'. For some, he admits, "this might not appear to be time," since procession of Nows in flux and ecstasis seems to be required for timelikeness, whereas "persisting in the Now" in stable self-sameness sounds like a description of eternity, which is sometimes said to be timeless.

To this a Platonist can always reply that eternity is not timelessness but *paradigmatic* timelikeness, so that it would be no surprise if we were to find some participation of its unity in its image. But eternity belongs to Νοῦς, and with his 'partless time' Iamblichus is formally constructing the higher *psychical* time, a *phenomenal* time, not second- but third-hypostatic. He marks this terminologically: the pure "abiding in one" (μένειν ἐν ἕνι) of the eternal Νοῦς becomes the "persisting" (διαμένειν) in the Now of psychical dianoia. Hence his full answer to the challenge that a partless time is not timelike requires a demonstration that διάνοια, though mind-like in its unity, is syntactical in nature and hence expressive in physical motion.

The power of the higher time allows it to translate Νοῦς into διάνοια. Time is therefore a principle of communication. It communicates order (τάξις), which it transposes from an interior self-opening in which it is the 'interval' for all natures, into the exterior arrangement of actions in physical process.

> For the generative time, being, like a timelike monad, the number of self-moving movement, is the interval (διάστημά) of the natural λόγοι; not however according to bulk nor with regard to outward movement simply, but it is the interval according to the pre-existing order of movement, in which the earlier and later are arranged beforehand and provide order to actions and movements.
>
> For one cannot infer the earlier and later of practical affairs without the pre-existence of time in itself, to which the order of actions is referred.[19]

[19] Simpl., *Categ.* 352, 13–20; Sambursky/Pines 26, 18–27.

Purposive 'pre-arrangement' *appears in* the earlier/later differences of natural actions. It is accomplished by a time which is at once an essence-like activity of self-disposal (τάξις), and also an existence-like power within positioned otherness, a σύνταξις. Plainly the crux of it is the 'at once', the unifying power of the twofold Now.

> But so far the argument has interpreted these definitions of time as two, whereas it is necessary to bring them together into one.
>
> For thus the whole nature of time will be seen.[20]

In order to accomplish this bringing together of two times in one Now, Iamblichus invokes the Figure of Double Continuity.

As the Semeion of Archytas, the Figure was already in view in the text cited earlier. It linked existence with the syntax of time in the phrase "the Nows that proceed outward." We established, with Husserl, that the 'point' (σημεῖον) of that Figure is the apex of an angle, in a drawing that should be seen to propagate with a double continuity, producing a two-dimensional continuum of continua. In Iamblichus, the Figure exhibits the ecstasis involved in the pre-arranging of arrangement, by means of rays that "proceed outward" from a point where a "moving touching" takes place. In a text where the Figure is most expressly under consideration in the form of a diagram—easily drawn on the ground—he writes:

> The Now which is participated in nature and is not separate from the things which come to be is one thing, the Now which is separate and in itself is another, the latter resting self-same in its own form, the former seen in continuous passage.
>
> But since these two are combined together in the principle of the Now which makes time coherent, it is completely clear that this is the reason why Archytas likened the Now of time to the point at which a breaking occurs, to a line broken in such a way that it forms an angle.
>
> For just as the point becomes the origin of one line and the bound of another, the Now combines in itself both the origin and the boundary of all time, not as an accident of some kind but because it holds time together and encompasses in itself the origin of time and produces it out of itself.[21]
>
> For the things becoming cannot motionlessly receive the indivisible essence, and as again and again a different part of them touches that essence, their affection is falsely attributed to it.

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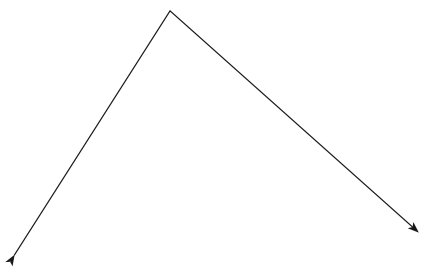
[20] Simpl., *Categ.* 352, 11–13; Sambursky/Pines 26, 16–18.
[21] Simpl., *Categ.* 355, 11–20; Sambursky/Pines 30, 14–25.

> Thus the always-becoming-other of the differentness which is according to number is evidence of the mutability of the participating things, but the form remains the same and indicates the identity of the partless Now.[22]

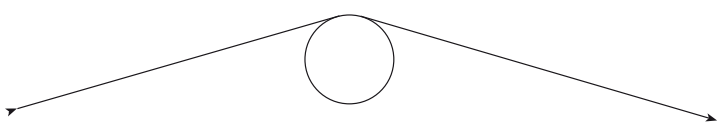
How should we draw the Figure implied here? How should our diagram indicate the motion of "again and again a different part" (ἀλλοτε δε ἄλλοις μέρεσι) "touching" the apex of the angle? The distinctions we practised in interpreting Husserl's diagrams can serve us here as well. But, in Iamblichus' version of the drawing, the propagation rule enters into any given individual frame of a cinematic series in a slightly different fashion than it does in Husserl. I have therefore developed the naked Figure, the simple broken line that Archytas first drew, into a more complex drawing (first published by Sambursky and Pines), in which the analogy to the Husserl version can be seen.

Here is how we print what would traditionally be drawn as needed:



Line broken at a point

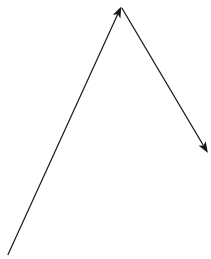
The κλάσις or breaking in the line comes in the act of drawing it. One must decelerate and come to a stop at the κλάσις, in order to begin in the new direction. The Figure is not a limit case of:



Line smoothly redirected

[22] Simpl., *Categ.* 354, 21–26; Sambursky/Pines 28, 26–31.

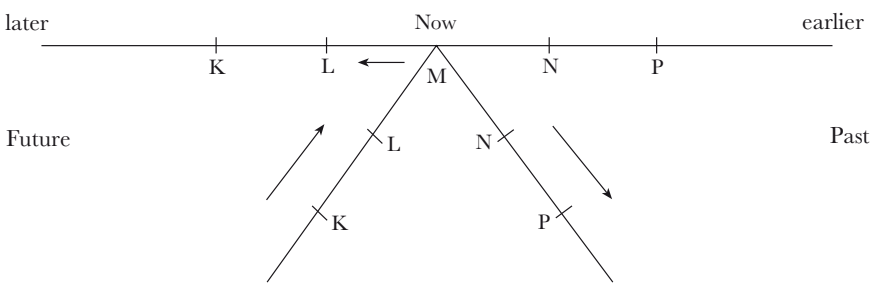
Redirection without change of velocity 'at an instant' would require an instantaneously infinite acceleration; perfect breaking requires perfect braking, passage of velocity through zero. Since this is not possible, what we really have is two rays,



Origin and limit

as amply confirmed by the oldest description, "for the κλάσις becomes of the one [ray] the origin, of the other the bound/limit (πέρας as against τέλος, end)."

The apex of this drawing can be considered under three aspects. It is the origin of a departing ray, the limit of an arriving one, and also—now in the upward direction which belongs to the *plane* on which the two rays make a two-dimensional figure—the point of surmounting, the 'highest' point, the point of the "touching." As regards this, Iamblichus has emphasized, *order* is communicated from one dimension of time (persistence in intelligible purposiveness) to another (distribution into phases of sensible motion). In order to indicate this point-by-point coordination of two orders, Sambursky and Pines expand the point-like collectedness of the intellectual order into a second, unbroken horizontal line, and then allow it to make contact (while in motion) with the broken line. In their notation, the figure is:



The time of the sensible world flows along the sides of the angle like a conveyor belt, touching the static time of the intellectual world only at the vertex, at the point of its flowing Now. Only this changing Now, therefore, is in immediate contact with reality. But the vertex also glides and passes along this static time from the earlier to the later in such a way that, consecutively, a different Now coincides with a different point of static time. Thus we experience the co-existing points of intellectual time in succession.[23]

In the dynamical notation here provided, the arrows along the rays give a sense of the protentional and retentional ecstases respectively, the horizontal one gives the propagation rule. Not only because it incorporates both protentional and retentional fields at once, but because it neither indexes nor thematizes, for example, the ever-widening distances N to N, P to P, the diagram of Sambursky and Pines is not directly comparable to those we studied in Husserl. To carry out the transformations required is not our objective here. The matter under study is not the special aptitudes displayed by differing formats of the diagram, but rather the implication its general form has for the transcendental-phenomenological identification of time-consciousness. In both its rudimentary and developed forms, and with its double continuity, the Figure suggests the two-dimensionality of Time and the Soul as disclosure space.

In their description, Sambursky and Pines mislead us by saying that only Now "is in immediate contact with reality." This can make it seem that the 'presence-of-mind' in which the soul opens itself out into timelike order is confined, without ecstasis, to a point. The phenomenological problem underlying the Figure is the translation of order from λόγος to φύσις, from pure τάξις to σύνταξις, and this translation requires soul, in its order-giving power, to *open* time and then reach *across* it, to extend intellectual presence into *interval*. In his summary of Iamblichus' interpretation of Plotinian time, Simplicius states the premise of the requisite phenomenology explicitly: Not just Now but also the "time in between two limits" must be portrayed as a present phenomenon.

> He regards time as an essence, one which measures becoming; first of all the becoming of the soul, and then on that basis the becoming of what proceeds from it. And there finally time is co-elemental (σύστοιχος)

[23] Sambursky/Pines, Introduction, p. 15.

> with motion and is an-hypostatic, since it has its being in becoming. He wants not only the Now to stand into the present (ἐνεστηκέναι), but also the time in between two limits (χρόνον μεταξὺ δύο περάτων).[24]

Sambursky's phrase, to be "in immediate contact with reality," says exactly what is involved in ἐνεστηκέναι, except that it applies not just to the Now but to syntactical time-spans as well. We could translate the root verb, ἐνίστημι, ἐν-ἵστημι, as 'in-sist', over against ἐξίστημι, from ἐκ-ἵστημι, 'ek-sist'. 'Insistence' names the phenomenal character shared by both essence (οὐσία) and becoming (γίνεσθαι). If we call this 'presence', it is no longer identical with 'being Now'. For presence is just as much a feature of the time-metaxy, the 'in between' in its timelikeness and not in suspension thereof, as it is of the singular Now.

As disclosure space, time is the 'metaxy'[25] in which being has its becoming and becoming its being. To this mediating power Iamblichus has attached the term σύνταξις. Used for its formal counterpoint to τάξις, the term has also had a 'grammatical' sense since at least the period of the Old Stoic Chrysippus, who wrote a treatise "On the Syntax of the Sayables" (Περὶ τῆς σύνταξεως τῶν λεγόμενων).[26] But the question was never in any simple sense a purely grammatical one, if by it we mean the rule-abiding 'joining together' of words in sentences. For Chrysippus the question of the sayable is always part of the question of the true, and so syntactics really means formal apophantics, or phenomenology. The term is compatible with Stoic logic, connecting more with category theory and with physical perceptualism than with rhetoric or preparatory language study for reading classics.

In this sense, Neoplatonists regularly engage in *speculative syntax*, by which I mean not a theme directly flagged by that title, but a characteristic of compositional experimentation whose rigor is routinely underestimated by modern readers. Iamblichus, a more mathematically-oriented writer than Plotinus, is also more diagrammatic and expressly thematic in his use of technical devices. Plotinus, to whom

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[24] Simpl., *Phys.* 793, 19–23; Sambursky/Pines 40, 18–23.

[25] I allude to the systematic role Eric Voegelin has given the term, in *Anamnesis*, trans. and ed. Gerhart Niemeyer (Notre Dame, IN: University of Notre Dame Press, 1978).

[26] In the second series of treatises in logic, according to the catalog of Diogenes Laertius, VII, 192.

we now must turn, is more exploratory. His experiments in syntax are sometimes on the level of strangely formalized sentence patterns, but, in the treatise on time, they turn out to be something akin to a narrative. Using the tools of allegory, personification, and methodical control of the aspect-horizons of verbs to open up a 'tensed' disclosure space, he regards the phenomenology of physical time as an invitation to story-telling, to myth-making.

By approaching Plotinus through the diagrammatic parallels that exist between Husserl and Iamblichus, we can correctly understand the *direction* of the time-engendering movement of the Soul the context of which his famous myth provides. Against the prevailing interpretation that this movement is *horizontal*, i.e., along the phases of sensible process,[27] I argue that it is *vertical*, but in *double continuity*. This thesis takes us to the Plotinian text itself.

The Silence of Time in Plotinus

From the start of his treatise *On Eternity and Time* Plotinus makes clear that the thematic complex so entitled is in fact a single topic. One element of it is paradigm, the other an image, so it is possible to engage the topic from either perspective.

> And first we should enquire about eternity, what sort of thing those who make it different from time consider it to be, for when we know that which holds the position of paradigm, it will perhaps become clear how it is with its image, which the philosophers say time is. But if someone, before contemplating eternity (τὸν αἰῶνα θεάσασθαι), should form-a-picture-in-his-mind of what time is (τὸν χρόνον ὥς ἐστι φανταθείη), it would be possible for him, too, to go from this world to the other by recollection and contemplate that of which time is a likeness, if time really has a likeness to eternity.[28]

In the order of his own exposition Plotinus proceeds from eternity to time, because in the transcendental logic, this is the order of

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[27] Jonas, "Plotin über Ewigkeit und Zeit" (ref. note 3 above); W. Beierwaltes, *Plotin über Ewigkeit und Zeit* (Frankfurt on the Main: Klostermann, 1967); and James Callahan, *Four Views of Time in Ancient Philosophy* (Cambridge: Harvard University Press, 1948).

[28] III 7, 1: 17–25.

derivation. But, as he makes clear in the transitional seventh chapter, the direction of *phenomenological* insight is from time to eternity.

> What it means to be in time and what it means to be in eternity may become known to us *when we have first discovered time* (εὑρεθέντος πρότερον τοῦ χρόνου)[29]

By this point both the logical structure of eternity (chapters 2–4) and its nature (chapters 5–6) have been fully developed, but "what it means to be 'in' eternity" (πῶς ἐν αἰῶνι ἔστιν εἶναι) remains as undetermined as to be 'in' time. For both of these, surprisingly, the account of time is the heuristic—*time itself reaches from eternity to time.* Though it has "come down" from eternity, it has not done so "altogether":

> So, then, we must go down from eternity to the enquiry into time, and to time; for there our way led us upwards, but now we must come down in our discourse, not altogether, but in the way in which time came down.[30]

The way in which the discovery of the timelike throws light on eternity is not by referral upwards, so to speak, but through exposure of the 'eternal downwards', the descending movement of the soul in which time originates.

What may seem a redundancy, generated by what we might take to be a carelessly figurative way of speaking, here is in fact the distinctive Plotinian observation about time. We are to descend from eternity to time in the same way that time descended from eternity to time. This says that, in essence, time is a downward arrival *into itself.* How can the timelike be ahead of itself so as to be its own τέλος? How is it behind itself so as to be its own ἄρχη? How can we understand the direction of this ahead-and-behind to be *vertical* in the transcendental series when time is what gives *horizontal* ἄρχη and πέρας to sensible process? These are the questions answered in the constructive chapter on the origin of time to which we now must turn.

The translation here presented has been adapted from that of A. H. Armstrong with an emphasis on literalness—which has been

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[29] III 7, 7: 6–8, Armstrong's translation corrected (he ignores πρότερον), emphasis added.

[30] III 7, 7: 8–11.

increased, perhaps at the cost of fluency. Its format also differs from his in two ways. First, to clarify the movement of Plotinus' thought, I have introduced paragraphs, breaking the text into sense-blocks. Second, profiting from Plotinus's exploitation of mythical technique at key moments, I 'personify' the concepts that figure in the drama, capitalizing their names and referring to them with personal pronouns. This gives access to the extra insights that gender can provide in making clear the antecedents of pronouns—a device that would otherwise be distractingly artificial.

Ennead III 7, 11: "How Time First Fell Out"

We must take ourselves back to that disposition, which we said existed in eternity, to that quiet life, altogether total, already boundless, altogether without declination, resting in one and toward one.

Time did not yet exist, not at any rate for the beings of that world; we shall produce Time by the Logos and Nature of the afterward.

If, then, these beings were at rest in themselves, one could hardly, perhaps, call on the Muses, who did not then exist, to tell "How Time First Fell Out"; but one might perhaps (even if the Muses did exist then after all) ask the come-to-be Time to tell how he is something showing forth and come-to-be.

He might say something like this about himself: Before, when he had not yet, in fact, produced the 'before' or felt need of the 'afterward', together with eternity and in real being, he was at rest, not being Time (of course). Nevertheless, he was in that being, and was himself, kept quiet in that.

Now there was a busy Nature, wanting to control herself and be on her own, and choosing to seek for more than the present. She moved, and so did he.

And so, moving on to the always 'next' and what is 'afterward' and not the same, but different into different, by making a kind of stretch of our journey, we have constructed Time as an image of eternity.

For because there was a certain Power of the Soul, not at rest, who wanted to be always transferring what she saw there to something else, she did not want the whole to be present to her all together; and as from a resting seed, the Logos,

unfolding himself advances, as he thinks, to muchness, but does away with the muchness by division; instead of keeping his unity in himself, he squanders it outside himself and so goes forward to a weaker extension. In the same way she, making the world of sense in imitation of that other world, moving with a motion which is not that which exists There, but like it, and intending to be an image of it, first of all 'be-timed' herself, instead of eternity making there to be Time, and thereupon handed over to what comes to be a being in service to Time, by making the whole of it be in Time and encompassing all its ways with Time.

34 For since the world of sense moves in Soul—there is no other place of it (this universe) than Soul—it moves also in the time of Soul.

36 For as she presents her activity as other after other, and then again as another in succession, she produces the succession along with the activity, and goes forward with another διάνοια after that one, the one that did not previously exist, because διάνοια was not in action, nor is the life now like the one before it.

41 So at once the life is different and the 'different' involves a different Time.

42 So the διάστασις of life involves Time; and the always-forwardness of life involves Time always; and the passing of life involves Time which has come to pass.

43 So if one should say that Time is the life of Soul in a transitional movement from one way-of-life to another, would this make any sense?

46 Yes, for if eternity is life in stasis, unchanging and identical and already boundless, and Time must exist as an image of eternity (in the same relation as that in which this All stands to that one), then it must be said that there is, instead of the life There, another life having, in a manner of speaking, the same name as this Power of the Soul and that

Instead of	*There is*
the intelligent motion of Soul	the motion of some part
sameness and self-identity	that which does not abide
and abiding	in the same but does one act and another

the a-diastatic and one	an imitation of unity, one in continuity
the already boundless and whole	an always-in-succession without limit
a simple whole	that which is going to be and is always going to be whole

57 For this is the way in which he will imitate that which is already a whole, already all together and boundless, by intending always to be making an increase in its being, for this is how this being will imitate that one.

59 But one must not conceive Time as outside Soul, any more than eternity There is outside real being. He is not an accompaniment to Soul, nor something that comes after it (any more than eternity There), but something which is seen in her and exists in her and with her, as eternity does There.

The title of the story that provokes the foregoing discussion is "How Time First Fell Out" (ὅπος δὴ πρῶτον ἐξέπεσε χρόνος) (line 9), and this is where, immediately, much contemporary commentary goes wrong. The literary antecedent for Plotinus's playful allusion to the Homeric invocation of the Muses is a passage in *Republic* VIII in which the mock-serious story would be How Faction First Burst In upon a previously merely theoretical city (ὅπος δὴ πρῶτον στάσις ἔμπεσε).[31] Plato, in turn, copies a Homeric line, *Iliad* XVI, 113, and uses its verb, ἔμπεσε—the verb ἔμπιπτω being very dramatic and colorful. It means 'fall in upon', 'burst in', 'break into', 'rush in violently'. Its root is equally graphic: πίπτω means 'fall', 'fall down', 'fall upon violently', or even 'attack'. Plotinus' substitution of ἔκπιπτω would simply be a reversal of ἔμπιπτω: instead of 'falling in', a dramatic 'falling out', 'being exiled', 'collapsing'. The ruling image for the origin of time would therefore be precisely the existential 'downfall' of the gnostic myths—a self-destructive outrush from eternity, strewing intelligibility into the pure externality of sensible other-and-other.

No doubt Plotinus hears this in his phrase, and plays as much upon it as upon the Homeric epic. A similar rhetorical note is sounded again in this same chapter (lines 24 and 26), where the

[31] 545E, as noted by Armstrong at that place.

Logos is portrayed as "doing away with" (ἀφανίζων) its muchness (τὸ πολὺ) and "squandering" (δαπανῶν) its unity. But we can conclusively establish that the image of the 'fall-out of time' leads phenomenologically in another direction altogether. Proof of this involves the solution to a second major problem in our text, the still unsettled question who 'we' are in several key places, and why 'we' are factored into the derivation in the first place.

In line 6, for example, it would not at first seem remarkable to say that "we shall produce time" since this might simply be the editorial we, anticipating an argument to be given. Moreover, since we, the writer and his readers, are presumably souls and the entire argument comes to a climax in the ventured definition that "time is the life of Soul . . .," it would seem natural to carry out the 'production' by means of reflection on our own being. The very terms in which we are introduced at the start of the chapter seem to anticipate as much: It is 'we, ourselves' (ἡμᾶς αὐτούς) who must be taken back again to the boundless unity of eternity in order for the derivation to occur. This would mean that to "produce Time by the Logos and Nature of the afterward" is both an argument and an experience. It is also a thought-experiment familiar in phenomenology. But line 19's claim that "we have constructed Time" (τὸν χρόνον εἰργάσμεθα) is perplexing for a deeper reason than the sudden substitution he makes for the busy Nature, the subject of the narrative in that paragraph. As a consort to endopsychic 'Power', she is presumably an interior factor in ourselves. But by line 19 another substitution has been made: 'we', the 'busy Nature', and 'the Power of the Soul' have *all* stepped in *in place of Time*, who was originally invited to talk and expected to be heard from. Time is *silent*, and we are heard speaking instead, referring to him in the third person throughout.

Why does Plotinus not allow Time to speak? Could its silence be thematic? The device of having one of his personified concepts speak in the first person is far from unknown in Plotinus, as we are about to illustrate. Time's failure to answer his introduction in line 11 is therefore genuinely perplexing. The problem is rooted in the amount of attention Plotinus pays to the substantive question of whether an originating factor in the transcendental series must 'speak' in order to carry out its productive activity, or can instead execute its purpose in silent spontaneity. Both aspects of the problem of silence come together in a closely related passage from *Ennead* III 8 (30), *On Nature and Contemplation and the One*.

In chapter 4 of that treatise, sensible Nature, which has been shown to make things by contemplation despite the materiality of her effects, is asked to explain why she makes them. She replies, speaking 'in person':

> You ought not to ask, but to understand in silence, you, too, just as I am silent and not in the habit of talking. Understand what, then? That what comes into being is what I see in my silence, an object of contemplation, which comes to be naturally, and that I, originating from this sort of contemplation, have a contemplative nature.[32]

The silence of contemplative production generalizes from an analysis provided in the chronologically immediately preceding great treatise *On Difficulties About the Soul* (*Ennead* IV 3 (27), IV 4 (28), and IV 5 (29)), on how Soul mediates intelligible unity into the τάξις of sensible time. Plotinus there establishes that the mediating activity is a *doing* but not a *saying*.

This argument is as follows. He introduces his thesis that "time has its existence in the activity of soul and derives from it."[33] Since it shows itself most plainly in the turning of the heaven, time derives above all from the activity of the Soul of the All. But this leads to a difficulty. While time is "divided up" (μεριζόμενον), the activity of the Soul of the All is utterly self-same and hence eternal. Can this Soul generate time, but not be in time? And, if it is not in time, what makes it generate it, and not eternity?

In working toward his earliest answer to this conundrum, Plotinus first stipulates that in fact *all* Soul is eternal—not just the Soul of the All but the individual souls as well whose affections and productions are in the other-and-other of sensible motion below the heaven.[34] This yields the following series:

> The souls are eternal, and time is posterior to them, and that which is in time is less than time (for time must encompass what is in time, as, [Aristotle] says, is the case with what is in place and number).[35]

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[32] III 8 [30], 4: 3–8, trans. A. H. Armstrong.

[33] IV 4, 15: 3–4, trans. A. H. Armstrong.

[34] It is an elementary mistake in reading Plotinus to confuse the Soul of the All (ἡ ψυχὴ τοῦ παντός) with all Soul (πάσα ψυχή), soul in general as an hypostasis. The Soul of the All is, like us, an individual soul, whose privilege is simply to have a body in which she can act without declination from eternity. She is therefore able to dispense with memory and expectation and act entirely in the present. Plotinus' stipulations here concern not her alone, but all souls.

[35] IV 4, 15: 17–20, trans. A. H. Armstrong. Reference is to *Physics* IV, 12: 221a12 and 28–30.

Now, since the affections of the souls are in time, and hence below time proper, while the souls themselves are eternal and thus above it, time has come to be represented as 'within' soul in the direct and simple sense that something of soul is on either side of it, that it reaches from soul's eternal and intellectual life to soul's time-ordered and sensible productions. It is here that the problem to which Iamblichus devoted such attention arises: The mediating function of time is a translation of order, of arrangement, from intelligible simplicity to sensible seriality. How can this be understood in any precise terms?

Things in time are the productions and revelations of soul. In what way can the 'one thing after another' of their *order* be in soul? If order is real in the soul with its separateness (τὸ χώρις), how does that not destroy the simultaneity (τὸ ἅμα) which must be equally real for soul to be eternal? And yet, if order is in the soul in simultaneity and togetherness as against sensible succession, then there must be *two* orders:

> and if the ordering principle (τὸ τάττον) is other than the order (ἡ τάξις), it will be of such a kind *as to speak*, in a way.[36]

But it is just this which is unacceptable. The time-order of natural process is an immediate manifestation of power, not the result of any 'giving of orders' (ἐπιστατεῖν) as between one thing with the power to enunciate it and another with a separate power to obey. The ἐπιστατεῖν nust be merged into τάξις itself.

> If that which gives orders (τὸ ἐπιστατοῦν) is the primary arrangement (ἡ πρώτη τάξις), it no longer says, but only makes, this after that (οὐκέτι λέγει, ἀλλὰ ποιεῖ μόνον τόδε μετὰ τόδε). For if its says, it does so with an eye on the arrangement (εἰς τάξιν βλέπων).[37]

In other words, to view, one must stand back, stand clear of the object. But the power to give orders in the case of time-ordering is the ordering itself, as power.

> How then is it the same? Because the arranging principle is not form and matter, but form and power, and Soul is the second active actuality after Νοῦς. But the 'this after that' is in the things, which are powerless to be all simultaneous.[38]

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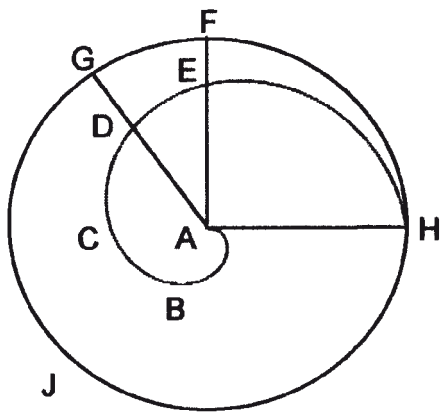
[36] IV 4, 16: 13–14, trans. Armstrong, emphasis added.
[37] IV 4, 16: 13–15.
[38] IV 4, 16: 16–20.

Because of its interior timelikeness, hypostatic Soul harbors a contemplative power, called Nature, which is spontaneously productive and does not command. To our question, "Why do you make?", her answer was "Shhhh . . . understand the power of my silence." Further in III 8, 4, we read:

> My act of contemplation makes what it contemplates, as the geometers draw their figures while they contemplate. But I do not draw, but as I contemplate, the lines which bound bodies come to be *as if they fell out* (ὥσπερ ἐκπίπτουσαι) from my contemplation.[39]

Here we have a second and decisive Plotinian instance of the verb ἔκπιπτω, for it gives us the answer to the problem of its meaning in III 7, 11. The term is used by Plotinus in a *geometrical* sense. It has the passive meaning 'be produced', when said of a ray which is propagated past one terminus to a further one. The specific geometrical image Plotinus has in mind is probably a favorite, namely, a central point radiating in all directions into lines.[40]

Εκπιπτω is not the most common term for describing this aspect of the construction of figures in geometry. Archimedes, for example, uses the term πρόσπιπτω, 'fall against'. Neither of these is as common as the various passive formations from ἐκβάλλω, 'throw out'. But in one passage, Archimedes does use ἔκπιπτω (*Spirals* 14), the figure and argument of which may well have influenced Plotinus.



Figure[41]

[39] III 8, 4: 8–11, trans. Armstrong.
[40] Examples are III 7, 3: 18–20 and VI 5, 5.
[41] *Spirals*, 14, as drawn in the Budé edition, *Archimedes*, ed. Charles Mugler (Paris:

The theorem requires a 'spiral of Archimedes' to be drawn as far as what is called the 'first circle'. The spiral of Archimedes is produced when a mark moves away from an origin at constant speed along a line which in turn rotates at a constant rate. The 'first circle' is the circle whose radius is equal to that of the spiral when its generating line has completed one rotation. Here, ABCDEH is the spiral in its first revolution, A being the origin, AH the line which produced the revolution, and HJGH the first circle. The rest of the construction is described in the text of Archimedes as follows:

> Let there be produced (ποτιπῖπτόντων) from the point A out to the spiral, AE and AD, and then let these be propagated (ἐκπῖπτόντων) out to the circumference of the circle at F and G.[42]

The theorem states that the radii of the spiral AE and AD are in the same ratio as the arcs of the circumference, HJF and HJG, that are intercepted when these spiralling radii 'fall out upon' the circle.

The proof amounts to little more than a restatement of the definition of the spiral. The movements of both the point A which is borne along the line AH and of the point H which describes the circle are "ἰσοταχέως," of uniform speed. Stated this way, the definition already makes the theorem evident, and Archimedes says nothing more.

The evidentiary intuition can only be made more explicit by introducing the factor of time, though Archimedes does not do so beyond one use of the conjunction πάλιν, 'again', in the temporal sense 'while again', i.e. 'while at the same time'.[43] *While* A is moving evenly along AH through the various distances AB, AC, AD etc., the endpoint, H, is describing equally evenly the arcs which they would each intercept if projected. Only in relation to the underlying equability of 'whiling' itself, namely, of time, are the corresponding lengths governed by the same ratios. It makes no sense to say that the two motions themselves have the same rate, but only that each rate is constant. The movement of the defining line AH is a rotation, and its units, degrees per second; the movement of A along AH is linear traversal, measured in units of length per second. It is possible

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Société d'edition "Les Belles Lettres," 1971), Tome 2, p. 35. The notation in the drawing printed here is in Latin letters, but follows the order (and exclusions) of the Greek of this edition.

[42] 35, 2–3, Budé.

[43] 35, 12, Budé.

of course to think of the movement of H around the circumference HJGH as an orbiting, a curved traversal, and to measure its speed along that curve in units comparable to those of A along AH (the former will then be 2π greater than the latter). But here the circle is not first of all a circumference, a curving length, but a sort of surrounding space, an horizon for angular momentum or spin. That is, the firstness of the Archimedian 'first circle' is timelike: it is a *once*—once around. Underlying the proof is the intuition that all motions that are iso-tachic are syn-chronic; the shared λόγος takes power from the latter.

Plotinus is constantly playing with circle-images, especially the two mentioned in section 2 above: (i) the circle which is the horizon for radial outflow, which "fits itself round its center," what I shall call the sky-circle; (ii) the circle of circling about, neither approaching nor departing from some center, which I call the orbit-circle. The former represents the unity of Νοῦς, and allows Plotinus to capitalize on the traditional notion that the eternity of Νοῦς is imaged by the heaven in its encompassing 'all at once everywhere Now'. The other circle is an early figure for Soul in the timelikeness of its activity, as in the traditional portrait of the Soul of the All as the power of the time-engendering numbered movements of the planets and stars.

What may have fascinated Plotinus is that the Archimedian spiral carries one circle into the other. Were one to think of the turning of our gaze as we stand beneath the heavenly rotation as a line propagated radially (in the sense of ἐκπῖπτόντων, 'falling out toward' the heaven), then on theorem 14, it would be the spiral of Archimedes that would bring heaven and earth under one principle of rationality, one λόγος. Both the aspiring vision of the soul and the encompassing horizon of the sky would be united in λόγος with respect to the spiral spin of time.

The 'falling out' of originary Time is a productive power, an instrument for the orchestration of λόγος into τάξις. It is not the storied downfall, but like creating gravity, "a circle fitting itself around a center"; spin is the disclosure space for both orbiting and centering. We will return to the problem of circle-figures in connection with the Sphere of Well-Rounded Truth in Parmenides fragment 8 (ch. 4) and the Circle of Agreement in Heraclitus frag. 103 (ch. 5).

In Plotinus, the astronomical-geometrical discussion of time takes place in chapter 13 of III 7, and only after an intervening discus-

sion of measurement in chapter 12. We will not pursue this further here. Having recognized that time is a power, specifically that of 'coming down' into sensible process in such a way as to articulate intelligible τάξις through sensibility, we are in a position to summarize the specific phenomenological import of 'silence'.

We have outlined the Plotinian equivalent of the *transparency* of time as disclosure space (ch. 1). "First of all the Soul 'be-timed' herself," says our text. Only then did she deliver γένεσις into "service to Time, by making the whole of it be in Time and encompassing all its ways with Time." In this two-step construction, γένεσις or sensible κίνησις manifests the 'in time' as such. It is not 'matter' for the 'form' of the timelike, but is the very 'substance' of time *as a manner of appearance*. Time is in them as what Iamblichus called ἔκστασις, and Plotinus διάστασις (line 42). They in turn are able to participate in time—i.e. to evince unfolded λόγος or syntax—because "Soul first of all be-timed herself," i.e. because of transparency, of that which is a phenomenon not first of itself, but of that which appears in it. We are now in fact able to describe the reciprocity between the descending, transcendentally original timelikeness of Time and the Soul, and the ecstatically participant timelikeness of natural motion, in the unaltered terms of Husserl:

> Pre-phenomenal, pre-immanent timelikeness is constituted intentionally as the form of time-constituting consciousness and in that consciousness itself. The flux of the immanent time-constituting consciousness not only *is*, but is so remarkably and yet intelligibly composed that in it a self-appearance of the flux necessarily subsists, and hence the flux itself must be comprehensible in the flowing. The self-appearance of the flux does not require a second flux, but as a phenomenon it constitutes itself in itself.[44]

If we call the constituted time in Plotinus's sense βίος, a way-of-life, specifically the way-of-life of natural appearances (both of soul and of nature), and the pre-immanent timelikeness another βίος, the way-of-life which is contemplative silence, pure transparency, the form of the psychical as such, then the flux and ecstasis through which the one intersects the other, is the ζωή ψυχῆς, the life of soul, in the Plotinian formulation of the *identity of time*:

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[44] Husserl, ZB Section 39; see chapter 1, note 52, p. 41.

> Time is the life of soul [the 'living present', in identity and difference] in a transitional movement [a constant 'crossing motion'] from one way-of-life to another [from contemplative τάξις to the syntax of time].

We can conclude this chapter with two quick reflections. One will help us make contact with phenomenology as we know it today, in the area of genetic biology. The latter helps us prepare for some reflection on the phenomenology implicit in Aristotle's thought.

In ordinary speaking, we accomplish syntactical unities effortlessly and without reflection. We plainly constantly project a τάξις which arises out of the intelligible context of what we say, and not out of our physical words. Yet, this τάξις is also *not other* than the syntax of our spoken words; it 'comes to itself' in the speaking of them. If the syntactical pattern itself obtrudes, we quickly 'lose our train of thought'. In speaking extempore one can easily spin out a sentence too far and suddenly find oneself groping—for the antecedent, for the subject of the multiple clauses, for the tense and aspect of the urgently needed verb—struggling with the sentence and not with the thought. Plotinus would say that we are no longer speaking with the proper *silence*. The same intrusive 'talking' that blocks the living integration of intellectual and sensible time can be experienced in the tactics of forensics. Here the intelligible τάξις is not on the scale of sentences but of argument and dialectic—the series of contributions and interventions of a seminar discussion, let us say. Everyone has experienced what happens if, instead of restraining ourselves until we are ready to join the discussion, we start rehearsing what we plan to say and trying to keep it steadily in view. When we finally speak, the synthesis of intellectual and sensible time will have broken down: our remarks will be stilted, and very likely off the point.

Plotinus himself was noteworthy for his ability to 'come down' completely into the moving present, yet keep the spontaneity of thought alive. In the *Life*, Porphyry writes,

> In writing . . . he was wholly concerned with the thought. He worked out his train of thought from beginning to end in his own mind, and then, when he wrote it down, since he had set it all in order in his mind, he wrote as continuously as if he was copying from a book. Even if he was talking to someone, engaged in continuous conversation, he kept to his train of thought. He could take his necessary part in the conversation to the full and at the same time keep his mind fixed without a break on what he was considering. When the person

> he had been talking to was gone he did not go over what he had written . . . he went straight on with what came next, keeping the connexion just as if there had been no interval of conversation between. In this way he was present at once to himself and to others. . . .[45]

Porphyry tends to describe Plotinus's great presence of mind as a feat of memory, or else as an 'elevation' and mystical 'abstraction'. On Plotinus's own account, which we may assume was shaped by phenomenological reflection on his own time-consciousness, the quality to be cultivated would be a coming down and an attentiveness—not a busying with memory, but a practice of maintaining silence.

This observation belongs to phenomenological psychology, however, and our concern is time in phenomenological physics. It is only our prejudice that makes it seem instructive as regards Plotinus the phenomenologist. A very different problem, real for us today in natural science, is in fact closer to Plotinus's authentic phenomenology. 'Physics' in the Greek sense includes biology. Notable also is the fact that there is a perfect analogue for the Plotinian problem of the sensible unfolding of intellectual τάξις in contemporary genetic biology.

One sometimes hears popular talk about the τάξις of the DNA molecule as a 'template' for the structure of the engendered individual. This is either school-Platonism or the homunculus theory repeating itself: What the genetic code in fact ordains, in pre-formed all-at-onceness, is the *phase series of ontogenesis*—the complex foldings and differentiations of tissues that finally bring the phenotype into full living form. Embryogenesis is still not well understood on the level of the geometry and topology of the actual tissue-growth process, and the question of how the DNA-τάξις registers and anticipates the strategies and opportunities of this process is still unclear.

For Plotinus, the timelikeness of generative process *is what we mean by* 'soul' when we say that "Nature moves in Soul." He would not try to solve our problem by superadding some incorporeal substance to the biological reality of the genetic code, but would simply say that when and if we succeed in demonstrating how the genetic τάξις 'comes down' into the syntax of developmental forms, we will have made a phenomenon of the psychical as such.

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[45] *The Life of Plotinus* 8, trans. A. H. Armstrong.

The project of this book is to abstract from even this extroversion or 'operationalization' of the premise that time is the life of soul. Our problematic is the *timelike as such*, not as the identifying mark of psychical power, but as a 'manner of givenness' in the phenomena of motion themselves. The move to the radical form of this problem takes us to Aristotle and the *Physical Lectures on Time*.

CHAPTER THREE

EVERYWHERE NOW: PHYSICAL TIME IN ARISTOTLE

Soul and the Surface of Exoteric Time

If we turn out the light of eternity, trying to define time is like feeling around in the dark, groping for a surface or an edge. Considered 'from below', in a purely material physics, time is not a phenomenon. The phenomenal is motion. Motion is the surface, the revealing face of nature (surface as ἐπιφάνεια). Time is the dimension in which the surface of nature is an edge. It is where motion opens out into pure ecstasis, the material nothing in which motion is *spanned*, *framed*, and *scaled*.

Aristotle draws attention to this same feature of physical time when he calls all change an ἐκστατικόν, something "standing away."[1] Earlier, he had pointed out that motion "ἐξίστησιν τὸ ὑπάρκον, disperses subsistance,"[2] using the same verb, ἐξίστημι, in its transitive sense, namely, to displace, disperse, strew out. Motion and change are said to be 'in time', and while things are said to wax as well as wane with time, time is best said to be the cause of perishing.[3]

Time is of course not a 'cause' of perishing, as he is quick to point out. Strictly speaking, this, too, occurs 'in' time. Interpreted solely from the side of material physics and the problem of the continuum, however, time cannot be read in Aristotle as anything other than a negative determination of being.

We have seen how to be 'ecstatic' and to 'exist' no longer function in Iamblichus in merely negative ways, because in the Neoplatonists, what I called the light of eternity continues to shine. For them, this is Soul, a notion which they have drawn principally from Plato's *Timaeus*.

But soul already shines, and it has the same role in Aristotle. He is not groping in the dark. Time, I shall argue in this chapter,

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[1] *Phys*. IV, 13: 222b16 and again at line 22.
[2] *Ibid*., IV, 12: 221b3.
[3] *Ibid*.

cannot be exhibited in a purely material physics for Aristotle, but only with reference to soul.

The passage in the *Physical Lectures on Time*[4] in which soul is most famously the focus of discussion is in chapter 14:

> And if nothing other than soul and the mind of soul were so natured as to number, time would be impossible, there being no soul (ἀδύνατον εἶναι χρόνος ψυχῆς μὴ οὔσης)—unless time is, like motion (if it turns out that motion can be without soul), just a 'this' which is being at the time (ὅ ποτε ὄν).[5]

Defenders of Aristotle, especially empiricists, are anxious to ward off idealist or phenomenalist accounts of this statement.[6] On the other hand, existentialists make time and the soul somehow ontologically co-conditioned.[7] Both approaches prematurely decide the nature of the connection between the two. They proceed without proper consideration of 'number' in the so-called 'definition of time'—as "number of motion with respect to the beforehand/afterward."[8]

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[4] As I entitle *Physics* IV, 10–14 in the translation study from which this chapter draws, Appendix 1.

[5] *Ibid.*, IV, 14: 223a.25–27 Hereafter citations from the treatise on time in the *Physics* will be by chapter number of Book IV only, followed by Bekker page location as given in the Oxford edition by Ross. Translations are the author's (see Appendix 1).

[6] W. D. Ross, *Aristotle's Physics* (Oxford, 1936), addresses this: "The answer is clearly unsatisfactory, for obviously change not only could not be apprehended, but could not exist, in the absence of time; and since the discussion is very brief and Aristotle nowhere recurs to the subject, we need not suppose that he attached much importance to the answer he gives" (p. 68).

David Bostock, "Aristotle's Account of Time," *Phronesis* 25: 2 (1980); 148–169, finds it easier to regard the entire chapter as spurious (p. 156 and p. 169, n. 7). Both make the mistake of assuming that 'numbering' is a species of 'apprehending' (pp. 101–104 below).

[7] In *Being and Time* II 6, section 81, Heidegger appropriates this text to his foundation of now-time in the ecstatic stretching-along of Dasein. This is an interpretation which is also given extensive development and critical supplementation by Jacques Derrida in "*Ousia and Grammé*," trans. E. Casey, included in *Phenomenology in Perspective* (The Hague: Martinus Nijhoff, 1970, F. J. Smith, ed.), (see section vi, "Line and Number," p. 82ff). See also the exposition of Aristotle in Charles Sherover, *The Human Experience of Time* (New York: New York University Press, 1975).

[8] 11: 219b1. Here and throughout I translate πρότερον καὶ ὕστερον as a single concept, an ordering distinction, not a representation of seriality (for which one says ἄλλο καὶ ἄλλο or similar formulations). In a few instances where Aristotle wants to use them to designate a serial relation, he introduces particles or reduplicates an article. With the single article, τὸ πρότερον καὶ ὕστερον means not *a* and *b* in the relationship $a < b$, but the ordering difference itself, the '<'.

'Number'-definition does not *identify* time but rather *presupposes* an identification achieved in quite another context. This is evident from the passage a few lines earlier, "the beforehand/afterward is first of all in place."[9] So, time is the number of motion with respect to place, of local motion, traversal, φορά. The definition therefore reduces to "number of locomotion," with all the weight placed upon 'number'. How does 'number' identify time? What kind of number or plurality is timelike? There are Pythagorean premises that can answer such questions; but as we have several times seen, Aristotle will not take them as his starting point.

In fact we ask too vague a question when we look immediately for the Aristotelian 'definition of time'. What is the Greek term for 'definition'? In the course of his *Physical Lectures on Time*, Aristotle gives us three distinct formulations: (1) To be the 'number of motion' is the λόγος of time, its formula or formulation; (2) To apprehend time in this role we must first know its φύσις, its manner of appearance in the phenomena of motion; the nature of time is that with respect to which we discern the faster and slower in motions.[10] (3) But this is only a first and easy intuition, and both the exoteric nature of time and its esoteric logic depend on its definition in the most foundational sense, its ὁρισμός or phenomenological identification. The ὁρισμός of time: Time is what is "then and there" noticed about motion "when the soul says the Nows two, the beforehand, the afterward."[11]

The identification of the timelike requires both the soul and some action ambiguously expressed as 'saying Now in two' (a rendering which brings out the odd transitivity of the 'says', εἴπῃ: καὶ δύο εἴπῃ ἡ ψυχὴ τὰ νῦν). Does this amount to making an inner utterance, saying two nows in quick succession ("Now, Now")? If so, it would treat the saying as a kind of 'marking' of time—and make the soul a clock. From a clock we can 'tell' time, but actually we can only illustrate—and not truly identify—the timelike itself. The 'saying the Now in two' is the phenomenon I call *spanning*; it is to be treated in the next section. Because spanning is not a process of measuring, but rather the opening of a disclosure space, it leads to a numbersomeness

[9] 11: 219a16.
[10] Implied in 10: 218b16.
[11] 11: 219a27–28.

which is not serial in nature, but located within a scale of intervals. *Scaling* is my term for the phenomenon with which I associate the 'time-numbers' (pp. 96–101). There we restore the Pythagorean astronomical context of which Aristotle is so wary. Time-spans yield time-numbers because they are stabilized as intervals or 'framed' and *framing* is the stable, horizon-giving equability we introduced through Newton, Locke and Hume in chapter 1. This gives us the formal answer to the question with which this project began. Time is not motion, but something about motion. *What* exactly about motion is it? *Time is the spanning, framing, and scaling of motion.*

For Aristotle, framing is the easiest feature to notice about time. He is able to express it, and with it the nature of time, entirely on the basis of the "exoteric reasonings" available in *Physics* IV, 10. These return in IV, 14 in connection with the special suitability of the motion of the heaven of the stars not just for the purpose of measuring but for that of imaging time. The heaven is literally the surface of exoteric time, in what, for Aristotle, corresponds to *die vulgäre Zeitbegriff*. The 'figure' involved is enormously complex, and in some ways Aristotle does not understand it well. Still, he is able to use it to call attention in a preliminary way to what it is about time that needs explaining. What everyone observes about the heavenly wheeling is its equability and the primacy of its interval for determining the numbers of time. Above all else, it configures an 'everywhere Now', an all-embracing final horizon with respect to which all motions can be transfixed by the single equable flux, the "present change" which is "one."[12]

For the Greeks, the Now is brought down from the heaven, not projected from the viewpoint of the earthbound observer. When 'soul' is made the 'place' of the Now, it is more a gravitational space, or field, than the optical space where intentional rays meet rays of light. As time, the sky is felt more than it is seen.

The consequence of this pre-reflective sense of the Now and time for the interpretation of Aristotle is clear: Simultaneity must be explored as a disclosure space before it is collapsed into the logical construction called the 'instant'. All discussions of Aristotle which seek to 'build time up' from single instants go wrong from the start.

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[12] This formidably elusive statement (see note 25) is explored pp. 96–101 below.

As I will show (pp. 101–104), the instant is never given, in such a way that it belongs to time, except as *edge of an interval*.

The Spanning of Motion

The frame-stability of time is its surface, what it shows to the soul. As the ἐπιφάνεια of natural motion, the act of framing time is inexplicable without reference to a soul. Yet, it is not a feature of soul. What soul provides is the *spanning*, the ecstatic disclosure space Plotinus calls διάστασις and Augustine translates *distentio*. Spanning brings the flux into appearance, as it is stabilized by nature and not by the soul. Spanned in their timelike flux, motions are made comparable as intervals; these in turn are orchestrated in the phenomenon of scaling, which yields the numbers of time. Once the numbersomeness of motion has been constituted by the frame-scaling of intervals, this λόγος of time can be developed in the direction of the abstract problem of measure. It can also be related to the logical problem of the continuum and the analysis of momentum 'at an instant'.

What kind of 'edges' do spanned time-intervals have? Certainly, it is wrong to think of them as cutouts, as a time-line partitioned into adjoining lengths touching end to end. At very least, we are talking about *sliding* intervals, windows onto a line sliding along a line, not segments cut out of the line by an object foreign to it. But although time-spans do have dimensional length, like sliding intervals do, this is not their primary feature. Rather, they are first given as the opening of the dimension itself within the context of motion.

Timelikeness in motion is nothing like a series of intervals along a line. Instead motions are given in 'flux', as moving in a moving givenness, a crossing motion which combs them out into the double continuity of flux. In the cross-section of this flux (which has the Now as an *horizon*), motions are given in *dwell-spans*. Is there a more effective phenomenological illustration of the dependency of timelikeness on spanning than that provided by the two-dimensional diagrams to which we have resorted heretofore?

Let us put a spring-wound clock beside us, driven by an escapement which makes an identical 'click' sound twice per second. We stipulate that the actual sound produced by the clock is "click click click click click . . ."

It will be heard to go "tick tock, tick tock, tick tock . . ." A simple and familiar illusion has set in—one with unexpected depth.

We notice first how greatly we resist hearing the tick-tock series as a pure sequence of unitary clicks. We can assure ourselves that the clicks are identical because we can shift the syncopation and hear "tock tick, tock tick, tock tick . . .". We can even focus our attention on this illusion, and strain toward the pure, level click-series which we are convinced is the physical fact of the matter. But the pairwise spanning of the tick-tock series will inevitably set in again.

There is something else worth noticing here. Because tick-tock has a span character, we cannot hear the click-series in threes ('tick tack tock'). We can certainly demarcate groups of three, or even count clicks in waltz time if we like, but such a hearing requires a reflection and does not overcome the spontaneity of the tick-tock series.

This suggests something elemental about the time-identifying Now in Aristotle. He is greatly concerned whether Now is *one* or *two*, but at no point does he ever deal with *three* Nows, e.g. the 'Now not yet', the 'Now no longer' and the 'present Now', which Heidegger alleges lead from temporality to 'now-time'.[13] In the Heideggerian sense, 'now-time' is

> a sequence of 'nows' that are constantly 'present-at-hand', simultaneously passing away and coming along, . . . a flowing stream of 'nows'.

Aristotle does not even have such a concept. In the text of the *Physical Lectures on Time*, the word 'now' is only used in the plural (τὰ νῦν) five times. In the first instance, he excludes representation of it as a plurality of now-parts: "time does not seem to be put together out of 'nows'."[14] Τὰ νῦν are once named in the context of a logically potential infinity, mentioned only to be excluded as impossible,[15] elsewhere they are cited as referring to indefinitely many, but only referred to generically, not with regard to their plurality.[16] In the two remaining passages, τὰ νῦν means two Nows only. In one case, they differ as being and nonbeing[17] (or, as he says elsewhere, they

[13] *Being and Time* II 6, section 81.
[14] 10: 218b8.
[15] 10: 218b21.
[16] 14: 223a7.
[17] 10: 218a15–22.

do not 'synapse'),[18] and hence configure the nonbeing of time. In the other case, the two Nows which embrace a μεταξύ—an 'in between'—thus constitute the identifiability of time in its being.

The Now in Aristotle is first and last "Now!"—*this* Now, the immediate phenomenon of time in the presence of motion. It is both unitary and twofold—indeed twofold in a double sense.

In one sense, Now is twofold in the sense that it is either the latest moment of time which has passed or the earliest of time to come. The following notation may help to illustrate this:

'. . .)', and '(. . .'

All efforts to grasp the Now as one in this twofold—as the '. . .)(. . .'—reduce the Now to the equivalent of a point and amount to a "stopping" (ἵστασθαι) in which it is no longer timelike. Tying the twofold of '. . .)' and '(. . .' together into the '. . .)(. . .' does *not* secure the continuity of time, according to Aristotle. It even obliterates that differentness which is timelike, according to which the past does not leave off 'at the same time' as the future begins, but both take place in a Now which is 'ever different'. It is important to see that Aristotle's resistance to representing the unity or selfsameness of Now as the ')(' is not due to any ignorance on his part of the mathematical instant, since he well understands the geometry of the point, and the analogy that time bears to a line broken at a point. His objection comes from an insistence that, in the strictest possible way, 'there isn't time' to think Now as both '. . .)' and '(. . .',[19] the reason for which is that timelikeness itself is marked by a Now which unifies a twofold that is a species of sameness, not of difference.

In this second (but primary) twofold, Now is the lower and upper bound of a *spanned interval*, or in my notation '(. . .)'. This is the continuity of time, for it binds the '. . .)' and the '(. . .' into the unity of '(. . .)'. Here the last of the past is *later* than the first of the future, the latter *earlier* than the former. In any given tick-tock pattern, the tick begins the afterward, tock ends the beforehand, not because they are in a seriality separated by timelike *difference*, but because they

[18] The timelike mode of joining which preserves continuity, 11: 218b25.

[19] "When one takes it like this, using the one as two, it is necessary to stop/stand still (ἵστασθαι)—if the same point is to be beginning and end. But through the being moved of what is carried along the Now is ever different." 11: 220a12–14.

constitute the bounds of a span opened between them as timelike *sameness*, as the *identity* of time.

Aristotle uses the soul to produce the Now in this twofold. This provides the ὁρισμός of time.

> We identify (define, embrace in view, ὁρίζομεν) time when,
> given some 'other and other', we entertain both them
> and something in between different from them;
> for when we apprehend the extremes as different from the middle,
> and the soul says the Nows two, the one beforehand, the other afterward,
> then and this we affirm to be time (τότε καὶ τοῦτό φαμεν εἶναι χρόνον).
> For what is defined/horizoned by the Now seems to be time (τὸ γὰρ ὁριζόμενον τῷ νῦν χρόνος εἶναι δοκεῖ).[20]

It is clear from this text that the "Nows said in two"—in virtue of the "something in between" (μεταξύ τι)—constitute a *unity*, what he will later call a "monad of number"[21] despite his proposition that "the smallest number, simply and absolutely (ἁπλῶς), is two."[22] The phenomenon invoked by the 'saying of the soul' is addressed by the *singular* demonstratives "then and this." The Now is a timelike twofold because it is opened, through an 'in betweenness' apprehended by soul, into a span. The sheer other-and-other of the click-series is given in timelikeness only as the tick-tock in which psychical spanning takes them in pairs.

'Saying the Nows two' in this sense can be illustrated from the Greek word for Now, νῦν. Νῦν is spelled *nu, upsilon, nu. Nu* is a 'continuative' consonant; it can be repeated without interruption of sound, laying out a kind of flux of potential Nows: *nunununununu*. . . . But to 'say Now', to mark out Now as a phenomenon of time, it does not suffice to pronounce only *one* of the Ns. We must pronounce *two* of them in such a way as to include the Y between them as well.

Objection to such an interpretation of the time-identifying Now is possible only if one has decided, on some other ground than the phenomenological identification of the timelike, that the Now is the instant and that time is an external difference between Nows. But the identification of time involves an *interior* differentness which is a sameness, an identity *in* difference, a saying which is a spanning. Simply to say the word Now in Greek is a paradigm for such span-

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[20] 11: 219a25–29.
[21] 11: 220a4.
[22] 12: 220a27.

ning: N Y N. 'Now' is time-revealing as Nῦν/μεταξΥ/νῦN, as the formal givenness of interval.

Modern insistence that Now must be a dimensionless instant is based in a failure to acknowledge the premise that "the beforehand/afterward is first of all in place." As stated above, it is not the beforehand/afterward which gives the λόγος of time in the formulation "time is the number of motion with respect to the beforehand/afterward," but the *numbering*. Motion 'according to the beforehand/afterward' is along a trajectory, places given position and order within a given magnitude.

> The beforehand/afterward is first of all in place;
> therein, however, in respect to position; and since the beforehand/afterward is in magnitude, it is necessary that it be in motion, too, it [motion] having analogy to them [position and magnitude].
> But then in time too is the beforehand/afterward, through the ever-corresponding of the one [of time and motion] to the other.
> But the beforehand/afterward *is* in motion;
> what is being at the time [ὅ ποτε ὄν] is motion;
> the 'to be' [τὸ εἶναι] of time is different and is not motion.[23]

The ordering difference (beforehand/afterward) is phenomenal in motion as something spacelike, not timelike. In the ordered positions of the trajectory, motion is only the 'substrate' (the usual translation of the difficult Aristotelian technical expression ὅ ποτε ὄν) for the 'to be' of time. The λόγος of this 'to be' is number, specifically as *count*; it is plurality, not measure of magnitude. Still, "that by which the beforehand/afterward is something countable is the Now."[24] If the way in which it is made countable by the Now when "the soul says the Nows two, the one beforehand, the other afterward," is that we then 'count' *two* Nows, then only logical absurdity can result. For in that kind of plurality, Nows are distinguishable without limit, and finally in uncountable infinity (the continuum hypothesis). But when "the soul says the Nows two," we are actually counting the *one* of time—interval itself, one dwell-span.

This is, however, still insufficiently rigorous. When the soul, dwelling ecstatically vis-à-vis motion, 'says Now', motion is apprehended as an *availability* for interval-scaling which is already timelike, but not

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[23] 11: 219a15–23.
[24] 11: 219b26.

yet numbersome, in the absence of scaling. Because it is not a segmenting of a magnitude, spanning is itself nothing countable, any more than the equability of framing can be said to have a 'rate'. To constitute the numbers of time, we need something more, and for that another phenomenological reflection is necessary.

The Scaling of Spans

Why are there twelve divisions on a clock face? Twelve is one of the numbers of time. Others are 60, and 360. All are the numbers of divisions of a circle, but circles, like other continua, can be divided into any number of equal parts. Why not thirteen hours on the clock face? Why not five, why not 41?

It is extremely difficult to develop an attitude toward time that would allow for thirteen hours in a day, not because the turning of the sky or the ticking of our clock might occur at other rates, but because we are completely free to put different markings on the clockface. The sense that there 'are' twelve hours in a day does not seem to attach to the markings on the clock, but to the world itself, where natural motions are estimated by comparison with one another. We may often 'wish there were thirteen hours in a day' (or even 25, since the day/night division no longer has ontological resonance for us in terms of waking/sleeping), and we know that what we are asking for would not be satisfied by introducing new, shorter hours.

The hour is among 'natural' measures like the foot and the yard, scaled as it is for its convenience in everyday matters. But the hour is a *timelike* unit of measure, and this means that its convenience is not the same as a standard like a foot or an arm. It is not given as a magnitude or length in the same way. If length were the key to the hour's usefulness, the 55 minute 13 second 'hour' that fits thirteen hours to the day would differ so insignificantly as to be undetectable. But days and nights are made of twelve hours not so that the hour will have some definite *measure*, but so that it will be part of a *nice number*. Twelve has nice quarters and thirds and halves. The other numbers of time are just nicer twelves: 60 has what twelve has and fifths as well, 360 adds sixths.

The hour, and the minutes and seconds within it, are convenient for the *scaling of intervals*, that is, for the *counting of intervals within intervals*. The numbers of time cannot be read from the magnitude-

character of motion, even if there is an analogue of magnitude (the dimension) which is ὅ ποτε ὄν for time (each motion taken singly traverses magnitude). The timelike is, however, motion taken twice, in comparison to itself (spanned) and hence *already in comparison to all other motions*. Spanning uncovers motions in their *intervals* because it discovers in them the *simultaneity* in which their rates are *scaled* with respect to one another, hierarchically arranged, synchronized, and entrained; a hierarchy of *harmony*. As the principle of this scaling, time is the number of motion.

It will seem as peculiar to say that simultaneity scales motions as it did to say that 'saying Now' spans it. Entirely apart from relativistic concerns (whether simultaneity 'propagates' fast enough to reach through all motions on a cosmological scale), simultaneity is regarded as infinitely 'thin', as the null interval—indeed no interval at all. "All simultaneous time is selfsame," says Aristotle.[25] If simultaneity is without dimension, it cannot give intervals their scale. But Aristotle finds the formal perfection of time as number in the Everywhere Now.

> There is the same [time] everywhere at once (ὁ αὐτὸς δὴ πανταχοῦ ἅμα), but not the same beforehand and afterward, because the present change is one (ἡ μεταβολὴ ἡ μὲν παροῦσα μία), the change that has happened and the change coming are different. Time is number, not by which we count but that which is counted.[26]

Time is an Everywhere Now because "the present change is one." What can this possibly mean?

In his commentary on this passage, Thomas Aquinas introduces the notion of a "present primary motion whose number is time primarily and principally."[27] In a later remark he interprets this 'monad of motions' causally: "time is the number of the first motion by which mutability is caused in all things."[28] He cannot mean that time is exclusively the number of some particular motion among those which transpire simultaneously, since Aristotle very expressly

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[25] 11: 219b10.
[26] 12: 220b6–8.
[27] *Commentary on Aristotle's Physics*, trans. R. J. Blackwell, R. J. Spath, and W. E. Thirlkel (New Haven: Yale University Press, 1963), Bk. 4, Lecture 19, paragraph 596.
[28] *Ibid.*, Lecture 20, paragraph 604.

rules that out.[29] The first motion must be one which is present in all motions, a 'present change' enacted universally. I argue that this 'present change' is simultaneity itself as the active or causal factor in scaling. Like spanning and framing, it will have to be traced back to the soul. But because scaling yields the numbers of time and hence its λόγος, it cannot come from soul by its own powers but, as Thomas clearly sees, from soul *and intellect*—the "ψυχὴ καὶ ψυχῆς νοῦς" of chapter 14's famous 'no soul, no time' proposition.

It is noteworthy that Aristotle does not list ἅμα (Latin *simul*) among the temporal adverbs he explicates in chapter 13. Far from identifying it with the Now, he expends what might seem to be needless effort explaining that time and the Now are simultaneous.[30] We have said that as 'said by the soul', the Now identifies/defines/horizons time. How, more exactly, are they brought together, given that simultaneity is the *result* of time's addressibility as Now, and not presupposed by it?

Another phenomenological exercise will help us see into the structure of simultaneity, or what Aristotle calls 'the present change' and Iamblichus the 'first psychical change' or 'monad of motions'. Though we need to apply technology for the exercise, it can still be presented as a thought experiment.

The tick-tock series itself can point the way in part. The illusion is strongly correlated with the interval we stipulated for the clicks, one-half second. Clicks separated by much more than a second will no longer sound in pairs, but neither will those so rapid they blur into a vibration. It seems as though there is something here to be measured, on the basis of which the 'in between' of spanning itself becomes a phenomenon. We must suspend the problem of measure, however, until we have fully unveiled the phenomenon.

Let us construct what I call the Aphasia Machine. We require an audio recording system able to record and play back, either in 'real time', or with a variable time lag. Attach a microphone, and to the output an amplifier for headphones with adjustable volume. Sit before the recorder, set its output switch to monitor the microphone directly, and adjust the volume with which your own voice sounds in the headphones so that it is loud enough to overwhelm the normal vol-

[29] 10: 218b11–14.
[30] 11: 220a1.

ume of the voice, heard through the air and inner vibrations of the head. Now, keeping silence, begin to record.

For delay playback, set an interval of a few tenths of a second. If someone beside you is speaking, and you switch from direct monitoring to delay, you will first detect the lag as a one-time reduplication in the sound train, at the moment when you switched, and thereafter as a failure of 'synch' between lip motions and the corresponding speech articulations, but the clarity and intelligibility of the speaking will be unaffected. But if it is yourself speaking when you switch to delay, your speech will instantly degenerate into aphasia. You will stammer and stutter, be unable to give words form or begin to string them together. It will be no help to read from a text in front of you; the speech act itself is dislocated. Switch back to real time from delay, and practice, taking a run at it so to speak, telling yourself that when you flip the switch to delay there will be a loud noise in your ear but you will simply ignore it. Nothing will help. It is as though there *isn't enough time* to ignore it. The aphasia-producing lag breaks into some interior cycle involving, on the one hand, our 'hearing out' what we are saying and shaping it phonetically and lexically, and, on the other, the muscular acts which produce the physical sound. What one works against does indeed feel like a physical resistance.

The phenomenon is most pronounced when the delay is about one to three tenths of a second. Digital tools allow one to vary it from such an interval to any other, longer or shorter. If it is very short, the superimposed voice represented in the physical sound will simply be registered as a loud reverberation. Varying the delay continuously, one first pans through a range of intervals in which the aphasia sets in, but then, at about three-tenths of a second, passes a threshold after which the delayed voice can indeed be ignored as an irrelevant distraction, though it is at first quite intrusive. At a certain scale of interval, we are *inside of* something. But what? In what way?

Aphasia means out of phase, and the term phase refers to *cycle*. Phase relationships are quantified in angular measure; one might speak for example of one's wake/sleep cycle as having shifted 90° out of phase with one's other metabolic cycles of circadian rhythm after a flight across six time zones. The phenomenological hint I take from the aphasia machine is that the inside of time, the intervals opened by spanning, are in some sense *circular*. Even in the tick-tock

series, where span seemed most akin to length, it was in a 'circular' space that we moved from accenting the series as tick-tock to accenting it as tock-tick.

This illustration is insufficiently general in that it is tied to a set of intervals whose scale is dependent on human physiology. We are interested in the structure of interval and scale in 'physiology' in general, the physics of motion. Still, it is extremely instructive in regard to how we should introduce soul and the psychical when our goal is to understand, with Aristotle, the physical identity of time.

The comparability of motions in terms of intervals is determined by a simultaneity which extends to them all *from within*. To be 'in' time, Aristotle insists at great length, is not to be just 'when' time is, but rather to have one's 'to be' itself determined as timelike.[31] Time is an interior determination of being, in relation to movable being or nature as a whole. His answer to the question in chapter 14 ("On account of what does there seem to be time in everything, both on earth and on the sea and in heaven?"), is that "time and motion are simultaneous with respect to potency and with respect to act."[32] In Aristotle the concepts of potency and act give the structure of entelechy itself, of being. Simultaneity is therefore the 'beingness' that motion has because of time. Taken by itself, "motion disperses subsistence" (ἐξίστησιν τὸ ὑπάρχον).[33] But in the *timelikeness* of this ecstasis, namely simultaneity, motions are scaled in their intervals and thus have number. This means that simultaneity has a span-character, a διάστασις, although this is not its distinguishing mark. It has an *interval*-giving character, because the principle of the co-disclosure of *all* motions in the present in the *one* motion is the 'present change' itself. The earth teems, the sea rolls, the heaven wheels, in an 'all at once' which reaches them from *within*, in the same way that their being is affected by motion.

Hence time is the number of motion, not vice-versa. And yet in the domain of measurement, "we not only measure motion by the time, but time by the motion."[34] How do the numbers of time, the arrangements it produces from its very λόγος, give rise to a dimen-

[31] 12: 221a4–26.
[32] 14: 223a18–21.
[33] 12: 221b3.
[34] 12: 220b15.

sion in which time and motion are reciprocal? A clue can be found in the fact that, in this shift to metric space, it is suddenly *circular* motion that takes priority in the constitution of units.

The Unit of Disclosure Space

Time is ἀριθμός—number as 'count', not measure. For someone who thinks that time is 'made of' nows, and that nows are, in turn, instants, this is a mistake. As W. D. Ross notes,

> The description of time as that in change which is *counted* is unfortunate. For 'counting' suggests denumeration, counting to the end; and Aristotle's language arouses the suggestion that we can count the nows, or else the indivisible periods of time, involved in a change. This, however, would be foreign to Aristotle's whole theory; he is absolutely consistent in maintaining the infinite divisibility of time and of change.[35]

We have seen that Now is not what is counted in motion, but that which ensures that motion is something countable (in timelike numbersomeness). By spanning, framing, and scaling motion, the Now converts the ecstasis of motion into presence, the being of time. This Now is one in the twofold of interval, motion taken 'again', the cycle of simultaneity. In earlier chapters, we came to recognize the 'again' of this twofold as the structure of disclosure space, the intersection of the noetic and the sensible 'in the life of Soul'. Ross closes off all insight into the privileged unity of this Everywhere Now by assigning to Aristotle the modern confusion between the Now and the instantaneous.

> There is no single entity 'the now'. . . . Rather, 'now' is a name for each and all of an infinity of cross-sections or durationless dividing points of time, a name applicable only to one of these at a time, but applicable to all at different times because of a common relation of presentness to a mind.[36]

Though he removes all the disclosure-spanning twofoldness from the Now, it reappears in Ross's own formulation, in the difference between each point-now's being 'a' time 'at a time'. Equally remarkably, the

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[35] Ross, in the work cited., p. 65.
[36] *Ibid.*, pp. 67–8.

double aspect of Now ("each *and* all") of the dividing-points of motion is attributed to a "common relation of presentness to a mind." Is this 'presentness' *also* Now, i. e. at "each *and* all" points of a motion?

With naive rigor, Ross exposes the grounds for Adolf Grünbaum's seemingly inverse claim that Now is wholly mind-dependent and subjective.[37] By insisting that the *number* of motion which is timelike must be its *measure* in a physical dimension, everything about Now which belongs to the *phenomenon of motion* as timelike evaporates into a 'mental' presence which is, physically speaking, no phenomenon at all. In either case, the effort to defend the physical being of time leads ironically to an extreme subjectivism concerning its appearance.

In such interpretations, Aristotle's movement from number to measure is given short shrift. Plainly, the constitution of *units* is the pivotal consideration, and, in the case of timelike unity, *the space in which the unitary is articulated must itself be timelike.* With respect to time, this is the interval-space of scaling, the 'harmonic space' in which intervals are made comparable in such a way as to be *countable within* one another.

> Now since time is a measure of motion and of being moved, it measures the motion by defining/delimiting some particular motion which will measure out the whole (just as also the yard measures length by delimiting a particular magnitude which will measure up the whole).[38]

The 'yard' (the 'cubit' in Greek, ὁ πῆχυς, the reach of both hands outstretched) is *not* here introduced as an arbitrary standard which, having no relation to the length being measured, divides it potentially into the uncountable infinity of the continuum. This yard 'takes the measure' of the whole (ἀναμετρήσει) by fitting itself *into* it in a nice and numbersome way determined *by* the whole. The stretch of the hands is adjustable, and one measures by making whatever small adjustments it takes to get a measure like 'six yards' or 'eleven yards' or even 'three and a half yards', but never 5.77142 . . . yards. In the same way, we measure time by delimiting a motion which will 'measure out' the whole (καταμετρήσει), harmonize with it and so be productive of definite number.

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[37] He means specifically the Now of temporal becoming, which 'moves' in the differences among past, present and future. See "The Status of Temporal Becoming," in Roland Fischer, Ed., *Interdisciplinary Perspectives of Time* (New York: Annals of the N.Y. Academy of Sciences 138: 2, Feb. 1967), pp. 374–395.

Only against this background can we properly understand why Aristotle says,

> If, accordingly, that which is primary is the measure of everything homogeneous with it, then equable circular traversal is most of all the measure of time, because its number is best known. . . . And this is why time seems to be the motion of the sphere, because by this the other motions are measured, and time by this motion. And this is why too the common saying arises, the declaration that human affairs are a circle, along with other things having natural motion and coming to be and perishing.
>
> This is because all these are discriminated by time, and take end and beginning as though according to some period. For also time itself seems to be some kind of circle.[39]

Aristotle here adverts to the Pythagorean-Platonic association of time with the sphere of the heaven, and grants it some propriety. Why is circular traversal 'primary', its number 'best known'? One might stress the fact that it can be *equable* (ὁμαλὴς), for which the heavenly rotation is a well-known paradigm, and see in the universal availability of the heavenly period for measuring 'the other motions' simply an observational convenience. But Aristotle's own stress is on the 'homogeneous' (συγγενῶν), not the equable. Something about the sheer comparability of the heavenly circling to all other motions is timelike, something in the unity of the periodic as opposed to its mere length.

This Aristotle expresses in a sentence which is extremely obscure—to such a degree that translations usually paraphrase it. Ross pronounces the text "indefensible" and refuses to print it. It is widely assumed that the subsequent lines in chapter 14 are interpolated, so it is the final sentence of the treatise, and it reads:

> παρὰ γὰρ τὸ μέτρον
> For aside from the measure,
>
> οὐδὲν ἄλλο παρεμφαίνεται τὸ μετρούμενον
> nothing else appears alongside the measurable,
>
> ἀλλ᾽ ἢ πλείω μέτρα τὸ ὅλον
> but that the whole is a plurality of measures.[40]

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[38] 12: 221a1–4.
[39] 14: 223b19–29.
[40] 14: 224a1–2. Ross prints Trostrik's emendation, τῷ μετρούμενῳ, and would translate "nothing else is observed in the measured."

On the interpretation we have developed here, this says exactly what we would expect, what we require in order to understand the 'homogeneity' of the spherical motion with all other motions. *That the whole is a plurality* (a denumerable many) *of measures* 'appears in and along with' (παρεμφαίνεται) the measure. This means that in the appearing of a *timelike* unit, the *comparability* of its interval to the intervals it measures is also apparent. The movement of the sphere adjusts itself to 'measure up' all other motions in their wholeness. Its divisions are the time-numbers, 12, 60, 360; its inclusions are the simple and 'musical' ones of the Pythagorean harmonic astronomy.

Everything Pythagorean is under the surfaced in Aristotle, above all the context of *Timaeus*—everything except its intuition of the identity of time. And, as we recall, this involved the Soul of the All.

The Soul of Physical Time

The treatise on time in Aristotle has its background in Plato, but not primarily in the *Timaeus*. The astronomical remarks just cited, like the psychological 'transcendental condition' we will consider next, are relegated to an appendix chapter 14. In antiquity it was viewed as incidental. The issues in the core of the treatise are clearly Eleatic, and Pythagorean in the manner of Archytas. They include the mathematics of the continuum and other dialectical problems of a kind whose Platonic τόπος is *Parmenides*, in particular the conundrum of the instantaneous (τὸ ἐξαίφνης) developed in Hypothesis III (IIa Cornford).[41]

My purpose here is to show that Plato puts Aristotle in conversation with Parmenides. The entire trajectory of interpretation along which we moved toward Aristotle has had Parmenides in the background. We will not consider the conversation Plato wrote to be between one Aristoteles and Parmenides per se, but will rather produce our own.

In texts from the Old Physics which survive to us, it is in fact Parmenides who first introduces the Now into speculative logic. This takes place at the moment when the Goddess pronounces the "Now!"

[41] 155E–157B.

which fills out the sphere of the All One. Her statement reveals that its nature is that of the Being One.

> And it never once was and is not going to be, since Now it is altogether total, One, coherent.

As we discover in the next chapter, this life-giving "Now" is Parmenides' name for that communion of Mind and Being which is the truth of nature. When Aristotle says in chapter 11 that "what is defined/delimited/horizoned by the Now seems to be time,"[42] he has looked much more deeply into motion than its surface. Its timelikeness, identified by the Now, is not just its appearance but its *power to appear*. Time is more like being than it is like motion. And this is because of the unexpected role it plays in constituting the phenomenon of being in Parmenides.

Soul and the mind of soul, sensibility and logos, phenomenology in union with speculative logic; these constitute the numbering power of time.

> If nothing other than soul and the mind of soul were so natured as to number, time would be impossible, there being no soul.

Time is not motion, but something about motion; something that motion 'shows to the soul'. It is not the phenomenon, but rather motion is. Time is the phenomenon *of the phenomenal as such.*

As it is revealed to the soul, time is the phenomenon *of being.* But this is here said by the νοῦς, addressing motion under the aspect of *eternity*. Parmenides is the first to supply what, in fact, the Neoplatonists so clearly need for the identification of time, the strangely hybrid noumenal-phenomenon they called eternity.

Aristotle's time, the spanning, framing, and scaling of motion, is the image of this eternity.

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[42] 11: 219a29.

CHAPTER FOUR

PARMENIDES: TIME AS THE NOW

Parmenides Thinks about Time

The best place to look for how Parmenides thinks about time is the passage in which he actually refers to it:

34 The same: to think, and wherefore is the thought-upon
35 For not apart from being, in which it is what has been uttered,
36 will you find thinking, as little as if time is or is going to be
37 other outside of being, since fate has shackled it
38a whole and quiescent to be.[1]

This text is not regularly taken into consideration as concerns the theme of 'time in Parmenides' because the inclusion of the Greek word for time, χρόνος, in line 36 is judged to be impossible. Still, it is is exactly what we expect and need.

These lines are the first half of what I refer to as Signpost 3, the third of four blocks of text that answer to a four line programmatic summary. These follow the opening lines of a 52-line passage that Simplicius cited as a whole and took to be an accurate transcription of the part of the poem of Parmenides familiarly called the *Way of Truth*. Most often cited as Fragment 8, in the listings of the surviving fragments of the poem (H. Diels), it begins:

1 This alone yet, the account of the route,
2 remains, how (it) is. And on this route signposts further (you)

Corresponding to the master metaphor that what is to follow is a way, a route (ὅδος), the word σῆμα (line 2) has the sense of signpost or way-marker. It occurs here in the plural, σήματα, 'signposts'. While

[1] The construction of the passage is part of my translation of the whole of Fragment 8, presented along with the Greek from Simplicius in Appendix 2. It is defended in what follows. Line numbers are those of Fr. 8 (DK). The Greek for groups of lines will not be cited in this chapter, since it can be consulted in the appendix. The structure of the fragment for which I argue is also made apparent there.

it is true that nothing here suggests that there will be just four of them, the contents of each of the next four lines anticipate and match what is established in the four subsequent blocks of texts. I here translate this programmatic passage, with 'signpost numbers' assigned.

3	many indeed: how that being ungenerated and unperishing, (it) is	(Signpost 1)
4	whole, monogeneric as well as untrembling; and not unfinished	(Signpost 2)
5	and never once was, never will be, since now (it) is all at once total:	(Signpost 3)
6a	One coherent	(Signpost 4)

Assuming four signposts and the correspondences just mentioned (to be detailed below), the lines containing the word 'time' begin the argument for Signpost 3. The subject that is promised to be "not unfinished" by the end of Signpost 2 will be exhibited as "all at once total" (ὁμοῦ πᾶν).

The full statement in line 5 unmistakeably invokes time in some fashion, grouping together the three continuative tenses of the verb 'be': the past imperfect, the simple future, and the present. But it is traditionally thought to do so for the purpose of *denying* the reality of time. The programmatic statement for Signpost 3 is in the background of Plato's observation in *Timaeus* (37E–38B) that the three tenses express three species (εἴδη) of time, two of which—the 'was' and 'will be'—are 'motions' that have come to be and are incorrectly attributed to the everlasting essence, since "according to true discourse (κατὰ τὸν ἀληθῆ λόγον)" being should be spoken of only in the present tense. By the time of Plotinus, what for Plato is mainly a negative feature of time in comparison with eternity, becomes an explicitly positive characteristic of eternity itself:

> Necessarily there will be no 'was' about it (οὔτε τὸ ἦν ἕξει περὶ αὐτο), for what is there that was for it and has passed away? Nor any 'will be', for what will be for it? So there remains for it only to be in its being just what it is. That, then, which was not, and will not be, but *is* only (μήτε ἦν, μήτε ἔσται, ἀλλ᾽ ἔστι μόνον), which has being which is static by not changing to the 'will be', nor ever having changed, this is eternity.[2]

[2] III 7, 3, 30–37, trans. Armstrong.

This Plotinian passage lies at the root of a familiar portrayal of eternity as 'timeless', and when it is traced back through *Timaeus* to Parmenides, line 5 in fragment 8 constitutes the discovery of timeless eternity. Hence an occurence of the word 'time' in the body of the argument announced by line 5 would seem most unlikely—and a positive affirmation about it there would be impossible.

The conventional designation of eternity in this tradition as 'timeless' is, however, unsustainable. As we saw in chapter 2, eternity is *paradigmatically timelike*, and the dimension in which it and time relate as paradigm and image is the present, the Now. Hence, as we confirmed (chapter 3) for Aristotle, it is the Now that horizons sensible motions in such a way that what is timelike about them appears. To exclude 'was' and 'will be' from the time-identifying relationship of moveable being to eternity is not to reject time, but to make a choice in which it is completely presupposed.[3] It is to orient oneself to that species or form of time in which it mediates between intelligible true being and sensible motion, "moving [in respect to eternity alone!][4] according to number" (37D).

Even outside the context of study of Parmenides, there is such confusion about the relationship between the three temporal horizons past, future, present, and the binary logic of order (earlier/later) as it is thought to apply to succession and duration (i.e. to time), that exclusion of the past and future is simply presumed to rule out time. But, in fact, these are very different matters. An especially common misapprehension takes past, future, and present to be 'parts' of time (μέρη), where Plato is careful to call them instead 'forms' or aspects (εἴδη). The hour, day, week, year, etc. are parts of time, because in their concurrence they evince plurality and can be counted with respect to one another, so that they are orchestrated by number or count (ἀριθμός). As Aristotle explains, this is the key concept in the formulation of time. Past, future, and present, however, are not parts of time; in particular, they are not the three parts of a 'time-line'—time taken to be a magnitude, susceptible, like any continuous one-dimensional magnitude, to what mathematics calls trichotomy. When

[3] Several writers notice that line 5 presupposes time, and argue that Parmenides wants to exclude not time but change and motion from true being. From this they conclude, erroneously, that he cannot have anticipated the notion of eternity, since it is timeless. On this point my paper "Parmenides and the Need for Eternity," *Monist* 62 (1979), pp. 81–106, can still be consulted.

time is thus represented, of course, it is really only the 'past' and 'future' that comprise the time-line. The present is just a dividing point, at best a limit in respect to the two segments.

That this representation is completely at odds with the lived experience of time and the present has been noted from Augustine to Husserl. Misrepresentation of time in this fashion is, however, especially endemic to Parmenides studies because of the nearly universal assumption that the exclusion of past and future (line 5) pertains to the refutation of coming-to-be and perishing (line 3). The question of whether the subject of the Way of Truth involves time or is timeless is discussed only in relation to lines 6b–21 (Signpost 1).[5]

If the subject of the Way of Truth (whatever it is that is being talked about, which is not directly denominated) *is*, and is Now, then it has been conventional since Melissus to assume that any putative coming-to-be would belong to the past, and perishing to the future, i.e. past and future events of that character, pertaining to the subject, are being excluded (line 5). What results for Melissus—and for those modern authors who reject the traditional view that "Parmenides invented eternity"—is that the subject must be 'infinite' in time. But, aside from how this analysis is argued, to assume that whatever Parmenides may be trying to say about time in line 5 pertains to the topic announced in line 3 both motivates the rejection of the word χρόνος (line 36), and amounts to a failure of discipline in applying the insight that lines 3–6b are programmatic for the movement of thought that follows.

This has to be rectified before we can query the role of time in Signpost 3. A brief and more precise account of what takes place in Signposts 1, 2, and 4 is in order first.

Signpost 1: Being Ungenerated and Unperishing

Lines 6b through 21 constitute a unified block of argument. Whether or not one accepts as rigorous a programmatic introduction as we

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[4] Ch. 1, note 4.

[5] KRS go so far as to guarantee this by beginning their version of the text of the refutation of coming-to-be and perishing with line 5. Later, they complain that how that text in fact establishes or defends the proposition of line 5 "is unclear." P. 296, text, discussion; note 1, pp. 249–250.

are supposing, it is widely agreed that this argument should defend line 3's assertion that whatever it may be that "is" (ὡς . . . ἐστιν), its being is qualified as ἀγένητον ἐὸν καὶ ἀνώλεθρόν, "being ungenerated and unperishing."

The passage begins promisingly enough,

> 6b For what birth (γένναν) would you seek for it?

seeming to take up the first of two points. And it ends with exactly the expected twofold conclusion:

> 21 Thus has generation (γένεσις) been extinguished, and unheard-of perishing (ἄπυστος ὄλεθρος).

Between these statements, however, one looks in vain for any argument which would disprove perishing. There is only an argument against coming-to-be. Why is this?

The expectation that *two* separate arguments are necessary here seems natural only because readings of the argument for Signpost 1 have been contaminated by the very different issues that arise from line 5's rejection of 'was' and 'will be' (Signpost 3).

This happens already and explicitly in Melissus. He begins his summation of the refutation of coming-to-be and perishing with a kind of master proposition about being and time that clearly has line 5 in view, though affirming what it seems to deny:

> It always was whatever it was and it always will be.

Looking first to the past ("always was"), he continues, saying:

> For if it came to be, it is necessary that until it came into being, it was nothing. Now if it was nothing, in no way could anything come to be from nothing.[6]

Thus far, he seems to be summarizing the claim of Signpost 1 of Parmenides. But by itself this argument does not suffice to establish his master proposition. In a closely related text, where he again begins with a proposition that hearkens back to line 5's rejection of 'was' and 'will be' (treated as equivalent to saying that being is unlimited in time), he restates the one argument that we do find in Signpost 1, and then goes on to sketch a second:

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[6] DK B1, text and translation KRS 525, except my "until" for πρὶν, "before".

> Since then, it did not come to be, but is, it always was and always will be, and it has no beginning nor end but is unlimited (ἄπειρόν, 'infinite'). For if it had come to be, (i) it would have a beginning (for it would have begun coming into being at some time) and (ii) an end (for it would have ended coming into being at some time). But since it neither began nor ended, it always was and always will be and it has no beginning nor end; for what is not entire cannot be always.[7]

For purposes of this analysis, the claim that being had no beginning in time is one argument, and that it will have no end in time is another. To those who share his preconceptions about the nature of time, Melissus' sense of what is logically required here seems entirely perspicuous. Something that now exists and will continue to do so throughout an endless future could still perfectly well have had a beginning in the past. Such was the view of the human soul in late Augustine and the Middle Ages. And by the same logic, nothing in the sheer fact that something that now exists has always existed in the past prevents it from perishing at some point in the future. Melissus can be taken to have addressed what Parmenides inexplicably left out of his account, namely, the need for an explicit refutation of perishing.

By transposing the question of the nature and role of the past and future from Signpost 3 to Signpost 1, Melissus is supporting the 'common sense convictions' (ἐξοτερικῶν λόγων) about time to which Aristotle would later defer.[8] Where these are in force, no one knows any longer where to put time in the poem. We simply have to begin with Parmenides all over again.

Fragment 8 recounts the *Way of Truth*, the pathway or route that "alone remains" (μοῦνος . . . λείπεται, line 1) after earlier introductory passages have ruled out two others. At a pivotal moment in its argument, Signpost 1 refers back to those initial reflections:

> 15b The decision about these matters consists in this:
> 16 is, or is not. But it has been decided, as is the Constraint,
> 17 the one to leave unthinkable, unnameable, for it is not a true
> 18 route, the other to (let) happen and authentically be.

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[7] DK B2, KRS 526 (numerals added). That Melissus is reading Parmenides Fr. 8, line 3 through the lens of line 5 is also evident from his use of its final word πᾶν, 'entire'.

[8] Invoked in the first sentence of the treatise on time, *Physics* IV, 10: 217b31. See ch. 3, p. 90.

The reference here is to fragment 2, the opening lines of the *Way of Truth*, immediately following the *Prologue*.

In fragment 2, the unnamed goddess tells the lad who has reached her abode "the only ways of inquiry that 'be' for contemplation" (line 2): the one, "how/that (it) is, and there is not non-being" (line 3), and the other "how/that (it) is not, and non-being is what there has to be" (line 5). In the text we are considering (Signpost 1 of fragment 8), what stands between these alternatives is called a "choice" (κρίσις). It has, however, been made already ("it has been decided," κέκριται), as though the reference were to the earlier passage in the poem. But in fragment 2, no act of choosing actually takes place. The first of the two ways is presented as self-authenticating, transparently true. The other is not even a blind alley. It cannot be discerned or mapped. Like a black hole, no probe or possible signal returns any information. As quickly as it is formulated as a possibility, it completely self-destructs, since it is unthinkable and unspeakable.

In short, the fundamental choice presented at the beginning of the *Way of Truth* is entirely a matter of intuitive conviction, not the fruit of argument and hence not a choice at all. To say that Parmenides develops odd kinds of arguments to "prove the existence of his subject"[9] is already incorrect, no matter how much ingenuity one might expend in an effort to reconstruct them. In fragment 2 it is impossible to justify, strictly speaking, counting two paths with regard to what "is for thinking" (εἰσι νοῆσαι, line 2), namely being in its truth. Being is an inside without an outside, a one-sided fact. It does not distinguish itself from some opposite, supposedly non-being. It is encountered in its self-authenticating nature in a contemplative intuition that may perfectly well be rooted in the traditions of spiritual practice to which Parmenides subscribed.[10] Nevertheless, he was able to explore this intuition in the discourse we have been calling speculative logic. It is on that level that we need to elaborate the Signposts or stages on the path of truth that follow from them.

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[9] E.g., G. E. L. Owen, "Plato and Parmenides on the Timeless Present," *Monist* 50 (1966), p. 318f.

[10] Peter Kingsley has shown this convincingly, *In the Dark Places of Wisdom* (Inverness, California: Golden Sufi Center, 1979), and, with *Reality* (Golden Sufi Center, 2003), made it indispensible to any account of the coherence of the poem as a whole.

The incommensurability of mortal δόξα with the intuition of the truth of being is made glaringly apparent at just this point. The logic that is appropriate to the world of multiplicty and change is that of 'composition of opposites', familiar from the Yin/Yang of the Chinese Tao. The idiom of diplomacy serves us well here: Yin and Yang 'agree to differ'. Each defers to the other. The act of one's ascending is at once that of the other's descending. The cosmological pairs pervasive in archaic Greek physics, e.g., hot and cold, wet and dry, day and night etc., rest on this same logic: In the language of Parmenides, they are "the same and not the same" (fragment 6). However, hot and wet, for example, are *not* the same and not the same; they are, in fact, unrelated. Within the dimension for which it is appropriate, (that of "backward-turning" [παλίντροπός] pathways),[11] composition-of-opposites thinking is "seemly" (δοκίμως).[12] It becomes decidedly unseemly, however, when it is transfered to the situation with regard to being and non-being. It then suggests the proposition, "to be and not to be are the same and not the same" (τὸ πέλειν τε καὶ οὐκ εἶναι ταὐτὸν . . . κοὐ ταὐτόν).[13] But being and non-being are *not* same-and-not-the-same. Being has nothing alongside it; and even that is misstated, because there *is* no nothing, it is impossible to have any nothing to think with or about. Being has no opposite, no other. It does not differentiate itself from anything else. It is an inside without an outside.

Let us return to Signpost 1. Immediately after the reaffirmation of this first principle, the text goes on to summarize the argument against coming-to-be:

> 19 How could being 'happen next'? How at all could it come-to-be?
> 20 For if it came-to-be, it is not, as little as if it is sometime going to be.

Line 19 defines coming-to-be rigorously as to 'happen next' (ἔπειτα πέλειν). The Greek word for 'next', ἔπειτα, is ἐπὶ + εἶτα, 'upon there/then/that'. It asserts juxtaposition, not simply sequence in time. When Melissus addresses the relationship between non-being and being as it concerns coming-to-be, he uses πρὶν, 'before', 'up until',

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[11] Fr. 6, line 9.

[12] Fr. 1, line 32. In context, of course, δοκίμως is adverbial with 'to be', so the etymological play would require something like 'be seem-ish-ly'.

[13] Fr. 6, lines 8–9.

to force the notion of timelike sequence into the context: "For if it came to be, it is necessary that before it came into being it was nothing" (εἰ γὰρ ἐγένετο, ἀναγκαιόν ἐστι πρὶν γενέσθαι εἶναι μηδέν, Fr. 1). But as line 20 makes clear in Parmenides, the term ἔπειτα asserts something stronger than 'after' in a timelike sense.

Line 20 contains two propositions. The first reads "For if it came-to-be, it is not" (εἰ γὰρ ἔγεντ', οὐκ ἔστ'). Superficially considered, this is a non-sequitur. The book beside me came to be, yet it is. If the parallel claim were stated explicitly, the second proposition would read "if it is sometime going to be, it is not" (εἴ ποτέ μέλλει ἔσεσθαι, οὐκ ἔστι). This, too, seems a non-sequitur: The book is going to be at sunrise tomorrow, but that does not speak against its being now. It might seem that these formulations concern the past and the future, and that there must be additional steps or assumptions hidden in them.

The second point here is correct, but the first is not. Past, future, and present only come into play in the programmatic statement of Signpost 3 (line 5), and belong to the context in which Parmenides introduces the being of time, the Now. But neither they, nor time as identifiable in respect to them, play any roles in Signpost 1. The only way in which time figures in Signpost 1 is as the "non-being of time."[14] This is what is sometimes called the 'time-line', the dimension of duration and succession represented by a line, with the ordering distinction afterward/beforehand (ὕστερον ἢ πρόσθεν, line 10)[15] construed as directions along it. To refer to definite moments in such an order Greek uses the adverb ποτέ, 'sometime', 'once', 'at some point (in time)'—the complete opposite of the Now.

The familiar identification of time with the phenomena pertaining to motion that are representable by a line is so complete, and has been for so long, that there are almost no idioms in English for translating ποτέ that do not include the word 'time'. Most misleading is the phrase 'at some point (in time)', since such a point is thought to have simple identity or location on a line. For Parmenides, how-

[14] Manchester, in the work cited, p. 93.

[15] Note that each term is itself comparative. 'Afterward' or 'later' evokes moments in a sequence subsequent to some moment implicitly referred to; 'beforehand' or 'earlier' evokes moments previous. Even the more abstract pair πρότερον καὶ ὕστερον familiar in Aristotle should still be translated with the comparatives, earlier and later. But since the very fact that the order in which they are named is taken to be natural, they are there in the process of declining into the simple binary ordering distinction of before and after.

ever, ποτέ demarcates a moment of (putative) *transition*. With this in mind, we can supply the missing steps that rescue line 20 from stating two non-sequiturs.

Line 20 is the single surviving Parmenidean text that has the form of an 'Eleatic hypothetical'—a passage that begins "For if . . ." (εἰ γὰρ . . .). This form of argument, which states a commonly accepted premise as an hypothesis and then refutes it by deriving a series of inferences from it and concluding to a contradiction, is perhaps the earliest formal strategy for demonstrative logic in Greek philosophy. It is frequently employed by Zeno, and in its own odd way authenticated by Parmenides' practice in Plato. I see no reason not to suppose that it is a practice that Parmenides himself used and taught, and one that his reader is expected to rely on in line 20. Four steps seem to be present in each of the two arguments. The first exercise is worked out here diagrammatically:

Hypothesis:

(1) IF IT CAME TO BE

The defintion of 'come-to-be' from line 19 is then rigorously applied ('happen next', be 'next to' [ἔπειτα]), yielding:

(2) BEING | NON-BEING

But, from lines 12–13a, the only thing that can be permitted to be next to non-being is non-being. Diagram (2) must be corrected to

(3) NON-BEING | NON-BEING

yielding the conclusion

(4) IT IS NOT

Hence the premise of the hypothesis (that [it] came-to-be) leads to a contradiction, and is refuted.

This presentation of the argument has the vaguely dissatisfying quality familiar in 'Eleatic' argumentation—the terse, even artificial formality of the reasoning, and the apparent rigor that is nonetheless somehow not fully convincing, that leaves one with a sense of having been tricked. It does however clarify the relation between the two hypotheses of line 20. Each posits a completed transition, from non-being beforehand, to being afterward. In line 20a, the completed action is expressed by the aorist (the Greek historic tense). In line

20b, the completed transition is expressed by the adverb ποτέ, 'sometime'. It is not therefore *tense*—not the past and the future—but *aspect* that figures in the construction of the argument here.[16] Hence for the argument of line 20b, *nothing in the diagram of the exercise needs to change* except the opening hypothesis. The two are really one and the same argument, with Step (2) seen from 'both sides' so to speak. It clarifies the problem of πρὶν and ἔπειτα, 'up until' and 'thereupon', equally well.

Schematizing the argument in this way also demonstrates why no separate refutation of ceasing to be or perishing is required. The principle invoked in the move from Step (2) to Step (3) is that the only thing that can be next to non-being is non-being; it makes no difference in what order a purported juxtaposition of the two is presented. This is simply an extension of the fundamental insight into the one-sidedness of the fact of being, recounted in the fragments prior to Fragment 8. Earlier we observed that it is not correct to formulate this insight as "being has nothing beside it." *Nothing* has nothing beside it!

This is what I find to be expressed by the exceptionally difficult lines 12–13a:

> 12 And not sometime (οὐδέ ποτ') will the force of Conviction allow that out of non-being
> 13a something eventuates besides itself (γίγνεσθαί τι παρ' αὐτό).

The presence of the verb γίγνεσθαί in the passage is usually assumed to mark it as yet another argument against coming-to-be, which, after all, would supposedly come "out of non-being" (ἐκ μὴ ὄντος), as Melissus expressly infers.[17] If this were so, one might wish that Parmenides had attempted the poetic economy of Lear's quip, "Nothing comes from nothing." But as the passage continues, it appears that something different is being said.

> 13b On account of this, neither generation (γενέσθαι)

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[16] As noted by A. P. D. Mourelatos, *The Route of Parmenides* (New Haven and London: Yale University Press, 1970), p. 102; strictly speaking, μέλλει ἔσεσθαι, "is going to be," is not actually future but the present tense (continuative action) plus the infinitive, and it requires the ποτέ to express completed action. But this is, of course, the way English forms its future tense, for which we have no inflected forms.

[17] "For if it came-to-be, it is necessary, until it came-to-be, that it be nothing" (εἰ γὰρ ἐγήνετο, ἀναγκαῖόν ἐστι πρὶν γενέσθαι εἶναι μηδέν), Fr. 1, my translation.

14 nor perishing (ὄλλυσθαι) would Justice let loose, slackening her restraints,
15a but she holds.

"On account of this"—that is, on account of whatever principle has been put into play in the prior lines—*both* coming-to-be *and* perishing have been defeated.

I would state the principle here as follows: in any relationship of adjacency, juxtaposition, or beside-ness (παρά), if one of the relata is non-being, *both* are. Sequence or order is irrelevant; the principle derives directly from the fundamental insight that being has no other.

Non-being, by contrast, is nothing but other—indeed other and other. Ποτέ, the 'when' of transition, is the 'time' of non-being. It is the nothing that is merely unbridgeable edges, impossible thresholds, starts and stops, self-separation. It is this 'sometime' that through Zeno gives rise to the problem of the instantaneous, τὸ ἐξαίφνης.

The 'sometime' of transition is the time of non-being, and the 'time-line', which displays succession and direction as a well-ordered one-dimensional magnitude, is the non-being of time. It was inevitable that, once this became the common-sense identity of time, time would be treated as a negative determination of being. Because of motion's analogy to time in this sense, Aristotle would write that motion "disperses subsistance" (ἐξίστησιν τὸ ὑπάρκον).[18]

The deepest fallacy that results from studying Signpost 1 for how Parmenides identifies time is that time becomes a container for being. It is taken to be an empty matrix that extends beyond the onset and offset of anything that 'becomes' within it—and that might therefore extend outside the beginning and the end of being itself as a cosmic whole. Even many who are conversant with contemporary physical cosmology permit themselves to imagine the Big Bang as taking place at a $t = 0$ (a moment in a previously empty duration), and hence as an explosion seen from outside in an equally illicitly empty space. But, of course, the initial singularity is an event horizon, and we are inside it. The cosmos is an inside without an outside

However it is to be identified and thought, time is an internal determination of being. But from Parmenides' first argument along the *Way of Truth*, exploiting the single consideration that being has no other, no outside, we learn literally nothing about time.

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[18] *Physics* IV, 12: 221b2. Cf. ch. 3, p. 87.

Signpost 2: Whole; Signpost 4: the Coherent One

Although the references made here to physical cosmology (more exactly, to cosmological geometrodynamics), were, strictly speaking, out of order (they only become pertinent in the context of Signpost 4), they suggest at least a general attitude toward what one might suppose would be the first question to be settled in any account of the *Way of Truth* in Parmenides: What in the world is he talking about? What is the 'it' that is the subject of pervasive assertions that "(it) is"? For my reading, it is certainly not any existent 'thing', nor is it this or that content of experience, whether perceptual or imaginary. So, is it 'everything', considered simply with regard to its existing or being, and with that characteristic taken globally? Yes—except in the context of the *Way of Truth*, such statements are so vague as to be useless. If by everything we mean the all, the entirety or totality, then our focus is on Signpost 3. If we are prescinding from any consideration other than the one-sided fact of being, we are focused on Signpost 1. If we mean the wholeness of what is, then we must look to Signpost 2; or if we would rather say that we think of unity globally, of physical reality as a single coherent system, we must turn to Signpost 4.

No metaphor or concept drawn from any of these contexts can serve as the noun we need for the undeniable benefit to exposition it would be if we could simply name the subject, the anonymous 'it'. The problem is not just that every term that comes to mind has been preempted and given a particular position in the Program already. We must capture the *movement of thought* that carries us along, signpost by signpost. These signposts are not just *multiple*, each with its own specific context and argument, but constitute a *route*, a pathway, a course of development in which each is also a moment.

There *is* a convenient way to designate such a subject. Virtually everyone who writes about Parmenides has been using it all along, namely *truth*. Truth is Mind as much as Being, is ungenerated and unperishing (Signpost 1). It is whole—all of one kind, unshaken, complete (Signpost 2). Truth wasn't once, nor will it be, because it is now total and entire (Signpost 3). And if we want a unified and coherent matrix within which to launch an exploration of the phenomenal world, we must place ourselves within its sphere of influence (Signpost 4).

The very oddity of such discourse is an index of its promise—all the more so given the fact that 'truth' is exactly what we don't at this point fully understand. Saying that 'truth' is the subject seems little better than calling that subject X. But that in itself is a virtue. Far from providing a predetermined set of clues for unpacking the series of arguments in the Parmenidean text, the only way to find out how Parmenides thinks of his subject is by moving along and completing the course.

Though a good deal more will be said about truth as the subject, it is not our task here to analyze the course of Parmenides' thought in full detail. The effort expended on Signpost 1, partial and sketchy as it was, was necessary because it is to those lines almost exclusively that everyone turns for an answer to the question of 'time' in Parmenides. Our goal is to account for Signpost 3, where he actually uses the term. We need only to know enough about Signposts 2 and 4 and the thought progression between them to appreciate Signpost 3's context and contribution.

Signpost 2 presents a special challenge, because its topic line in the Program (line 4) remains embroiled in philological disputes of daunting complexity. In the transcript of the 52 lines that became Fragment 8 (incorporated by Simplicius into his *Commentary on the Physics of Aristotle*),[19] line 4 has been the subject of textual controversies that are still not settled. Before we consider the passage as a whole, a brief digression on this issue is in order.

For his edition of Simplicius, and in early editions of *Die Fragmente der Vorsokratiker*, Diels printed the following as the text of line 4:

4 οὖλον, μουνογενές τε καὶ ἀτρεμές ἠδ' ἀτέλεστον·

which translates as

4 whole, monogeneric[20] and untrembling and incomplete;

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[19] *Simplicii in Aristotelis Physicorum Libros Quattuor Priores Commentaria*, ed. H. Diels. Commentaria in Aristotelem Graeca, vol. 9 (Berlin: G. Reimeri, Publ., 1882), 145:1–146:26.

[20] Starting with the 5th edition of *Die Fragmente der Vorsokratiker* (1934), W. Kranz switched to a variant of the line from Plutarch that begins ἐστι γὰρ οὐλομελές, on the assumption that Simplicius's μουνογενές was problematic after line 3's ἀγένητον. I follow Mourelatos for both the authenticity and the sense of μουνογενές: not 'only-begotten', rarified to something like unique, but "uni-generic, of a single kind, of one family." The Platonic parallel is not μονογενής at *Timaeus* 31B, but the common μονοειδής, 'of a single form'. *Route*, pp. 113–114. An invented English cognate 'monogeneric' seems to convey the sense here.

This line cannot, however, be salvaged without emendation, because of the intractable problems presented by the final, alpha-privative term, ἀ-τέλεστον, 'in-complete'. The τελ-stem suggests finish or completion, and it is impossible that Parmenides could have included 'incomplete' in a list of positive specifications of wholeness when finish and completeness is so often stressed in the argumentation to follow. There is reason to suspect that Melissus, seeing this text, took ἀτέλεστον to mean 'unending', regarding it as a 'positive' characteristic of time, and that he decided to convey this less disruptively with the term ἄπειρόν, or 'infinite'.

In 1979, it seemed to me there was a way to solve the problem of the impossible "and incomplete" at the end of line 4 by reading it as part of the next line,

> 5 and it not sometime was and not will be, since now it is altogether total

The entire clause would therefore have the sense, "and incomplete it never once was and is not going to be, since now it is altogether total." This seems perfectly lucid in itself, and does not requirie an arguably anachronistic 'absolute' use of the imperfect "was" and future "will be." These forms would have a predicate, "incomplete," which they negate, just as the present tense "is" has a predicate, "altogether total," which it affirms as "now." Moreover, this solution would make it unnecessary to introduce any emendations whatsoever to the text of Simplicius's transcript, which I took (and still take) to be of value in itself.[21]

This proposal cannot, however, still be defended, and must be withdrawn. Purely philological reasons are compelling enough,[22] but

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[21] Emendations to the text of this transcript have gotten completely out of hand—much beyond the need to establish a critical text of Simplicius's commentary. The process begins from the existence of variant lines, not just in brief citations from other authors, but from Simplicius himself, in this very book. This latter type of evidence argues the other way, however: In what he presents as a transcript (as opposed to his frequent short citations from memory and school discussion), the fact that Simplicius regularly testifies against himself is authenticating. It establishes the fact that he has another text before him and is not merely drawing from his own memory. The variations acrue, naturally enough, to passages of both difficulty and philosophical importance. Emendation where variants exist quickly leads to altogether new conjectures—often based on nothing more than philosophical prejudice or confusion.

[22] These begin with the fact that in line 5, "οὐδέ . . . οὐδ'" cannot have the required prose sense, since δε is a conjunction. My rendering would require

the philosophical and programmatic implications that affect us here are also decisive.

First of all, it is unmistakable that the alpha-privative word "ἀτελεύτετον" (something incomplete) that will follow in line 32 answers the alpha-privative ἀτέλεστον of line 4, and that, since the former is made into a double negative by the surrounding phrase "οὐκ . . . θέμις εἶναι" (there is not permission), the latter must be part of a double negative, too. Since the negatives that begin line 5 are not available for that purpose, we must embrace the emendation first proposed by Brandis in the nineteenth century: ἠδ' ἀτέλεστον ('and incomplete') becomes οὐδ' ἀτέλεστον ('and not incomplete').[23]

Given the extreme sensitivity of the reciprocity between the way that the text of the Program is construed and how the corresponding blocks of argument are identified, this solution produces a parsing so coherent and stable that its rightness is self-confirming.

Each Signpost has a whole line to itself. For Signpost 2, line 4 asserts that the subject is Whole, and specifies that in three ways:

> 4 Whole: (i) monogeneric, (ii) untrembling, (iii) not without finish or completion.

Immediately following Signpost 1, three quartets of lines treat precisely those three themes and in that order:

(i) *Monogeneric* (indivisible as to kind, uniform, homogeneous, coherent)
> 22 It is not divisible, since it is all alike,
> 23 and not something here more, which might prevent it from cohering,
> 24 or something less, but all is filled up with being.
> 25 So all is coherent, for being concerts with being.

(ii) *Untrembling* (indivisible as to state, isotonic, homeostatic, still)
> 26 Again, quiescent in the bonds of great restraints

οὐτέ . . . οὐτ'. Moreover, to build a double negative clause from the end of one line to the start of the next (4b–5a) requires an all but intolerable enjambement. A necessary or clausal enjambment cannot be present when the prior line could perfectly well end where it does grammatically. Cf. Carolyn Higbie, *Measure and Music: Enjambement and Sentence Structure in the Iliad* (Oxford University Press, 1991). Peter Kingsley is right that the reading "disrupts the rhythm." I am less sure that it would "also make nonsense of the whole argument in 4–6." See his note on this same passage, *Reality*, p. 570.

[23] For discussion, Kingsley on this same passage. Brandis' emendation is not without difficulties of its own: If οὐδ' was the reading of the original line, Melissus will have had to misread the text to support his interpretation.

27 it is without start, without stop, since generation and perishing
28 here have been warded off entirely, and true Conviction has repelled them.
29 The same and in the same abiding by itself it reposes.

(iii) *Not unfinished* (fully constrained, lacking nothing)
30 In this manner it abides here steadfast; for mighty Constraint
31 holds it in the restraints of a bond which enfolds it all about.
32 Wherefore there is no Permission for being to be something unfinished.
33 For it is not wanting of anything; non-being would be in want entirely.[24]

In a fully detailed account of the *Way of Truth*, each of these three aspects of the wholeness of Truth would deserve its own explication. Even for our own topic, 'time' in Parmenides, a brief digression on aspect (ii) cannot be avoided. Its opening line (26) contains the word "ἀκίνητον"—almost always translated as 'unmoving' or 'motionless'. Supposing that what is negated here is motion in the Aristotelian sense, with coming-to-be and perishing amounting to special cases of it, these lines are often thrown together with the arguments of Signpost 1, and incorporated into the controversy over whether having arguments against motion or change is equivalent to having arguments against time. However, the word 'untrembling', the programmatic title for these lines, shows that what is excluded from the wholeness of truth in Signpost 2 is not motion in general, as a species of change, but tremor, disquiet, uncertainty. Hence I translate ἀκίνητον here (and again in line 38) as 'quiescent' and regard both this aspect and the whole of Signpost 2 as an exploration of the quiet and composure of eternity, as preparation for the introduction of the theme of time.[25]

Let me, however, call attention to something I have never seen mentioned or reflected in translation, namely, the striking consistency with which each of these aspects is studied *only "here"*: τῇ (line 24);

[24] My 1979 grammatical and metrical blunders were less serious than the artificial separation imposed by my assignment of "never incomplete" to Signpost 3. It divided this third quartet into two dangling lines at the end of Signpost 2 (30–31), and two equally isolated lines (32–33) at the beginning of Signpost 3, whose topic then immediately changes.

[25] In making 'motionlessness' a state of soul rather than something kinetic, I go further here than I did in 1979. Insofar as there is a 'dynamic' dimension to Signpost 2, I would, however, still illustrate it from the damping of vibration in a viscous fluid, as before. In the work cited, p. 95.

τῆδε (line 28); and αὖθι (line 30). In Signpost 4, however, in addition to many adverbs of direction related to expanse, we have two separate instances of " here and there," τῇ ἠ τῇ (line 45), and "here more and there less," τῇ μᾶλλον τῇ δ' ἧσσον (line 48). 'Here and there' is the difference that marks expanse or extension. Extension is, as Descartes teaches, the primitive logical foundation for sensible being or ponderable body—and the sphere presented in Signpost 4 has both extension and bulk. Some kind of development has taken place along the way from Signpost 2 to Signpost 4, and it appears to be a transition from a "here" that is simply Whole, to a "here and there" that is expansively and palpably One, "analogue to the bulk of a sphere" (σφαίρης ἐναλίγκιον ὄγκῳ).

What is the nature of this transition? It is not simply a shift from unity to plurality; in fact it is nothing at all like that. While there is an order to the modes of unity as they are named in the Program, in the Signposts themselves each is involved with the development of the others. At the end of Signpost 2's explanation that the Whole of Truth is monogeneric, for example, we are twice told that it is "all" (πᾶν, lines 22 and 25), though by title this is assigned to Signpost 3. Also, twice we are told that it is "cohering" (συνέχεσθαι, συνεχές, lines 23 and 25)—the determining character of the One that is programmatic for Signpost 4. In what dimension does the following series unfold?

(1) how being,
(2) whole,
(3) all,
(4) one

Let us first consider more closely what is accomplished in steps 2 and 4.

Wholeness is asserted of that which is in some way multiple. In Signpost 2, the component of plurality is made explicit: "for being concerts with being" (ἐὸν γὰρ ἐόντος πελάζει). This is only the third time in the entire *Way of Truth* that something has been said about 'being', τὸ ἐόν, the gerund that we could also translate 'entity'.[26]

[26] The first is 6:1, the difficult ἐὸν ἔμμεναι. Second, and more clear, is τὸ ἐόν in the final summary argument of Signpost 1, line 19. Finally, here, too, the ἐόν needs to be taken gerundively, even in the absence of the article. That is, in order to be named twice, the act of being must be thought twice.

Heretofore gerunds from the verb 'to be' have most often been negative: non-being (τὸ μὴ ἐόν).[27] Whatever is happening in Signpost 2, it involves unity in plurality and amounts to the first developed position about being as entity.

By contrast to this, apart from the multiplicity that belongs intrinsically to extension, Signpost 4 focuses on unity and coherence—exactly as its title in the Program suggests: "one, coherent" (ἕν συνεχές, 6a).

42 Moreover, since there is a final bond, it has been completed
43 in every direction well-rounded resemblent to the bulk of a sphere
44 from the center equipoised every which way. For that there not be something greater
45 or something smaller here or there is the Requirement.
46 For there is not that which is not which might stop it from reaching
47 into sameness, nor is there that which is, whereby it might be being
48 here more and there less, since all is inviolate.
49 For entirely isotropic with itself, it meets up with the bonds equably.

Having been announced as "completed," "finished," "perfected" (τετελεσμένον), the direct affirmation with which Signpost 4 begins removes any clouds of doubt left by the double negatives of Signpost 2: "not incomplete" in the Program (οὐδ' ἀτέλεστον, line 4) and "not something incomplete" (οὐκ ἀτελεύτετον, line 32) in the argument. The One whose image is the sphere is not a static unit or a monad, but actively coherent, as signalled by a series of expressions such as: "well-rounded" (εὐκύκλου, line 43), "equipoised" (ἰσοταλὲς, line 44), "inviolate" or "unintruded upon" (ἄσυλον, line 48), "entirely isotropic with itself" (οἰ πάντοθεν ἰσον), and embedded "equably" (ὁμῶς, line 49). Whatever is happening in Signpost 4, it, too, involves unity in plurality. What has changed is that now we have moved from being or entity that is purely intelligible, to what we are almost able to call 'an' entity, a single ponderable, extended, and apparently corporeal sphere.

In what dimension can there be said to be movement from the Whole to the Being One? I have said that for Parmenides Truth is

[27] There are three instances of this. Singular and with the article: τὸ μὴ ἐόν (2:7); plural: μὴ ἐόντα (7:1); then singular again, ἐκ μὴ ὄντος (8:12). Concern that Parmenides is bringing up non-being too often (after having said that one can't have any of it) is misplaced. In saying that one can't say it or hear it, the goddess has broken the ice right from the start.

the subject of the Way. Until now, this has been a purely formal reading. Now, however, as we prepare to reflect on time in Signpost 3, we need to bring phenomenology to bear on the subject of truth and the true. Functionally speaking, phenomenology is the way in which Plotinus reads his predecessors Aristotle and Parmenides. One could call the movement through the Signposts a kind of 'transcendental deduction' of phenomenal reality, from (1) a first moment that draws from pure intuition, through (2) a purely noetic or schematic moment, then through a twofold moment that involves first (3) time as the inner form of consciousness and then (4) extension as the outer or physical form. But the considerations that Kant and (early) Husserl called 'transcendental' are actually Cartesian, insofar as they individuate consciousness in the form of the Ego and reimplant it as 'transcendental' ego in the very effort to overcome Descartes. The position and language of Plotinus comports well with that of Parmenides, allowing us to grasp the truth of his poem by asking specifically *phenomenological* questions about the *physics* of time.[28]

Signpost 2 corresponds to the second level in the Neoplatonic system, that of Nous or Intellect as it is usually designated. While it is possible to call the three principal levels of Plotinian discourse different degrees of truth (also of beauty, or goodness, or unity), it is perhaps more accurate to speak of levels of life. The transcendent source of life, the One, is beyond Mind and Being, which, taken together, make up the 'second One' in Plotinus—divine life, as assimilated to the divine intellect in Aristotle. The noetic one is essence proper (οὐσία) just as much as it is divine, eternal mind or consciousness (νοεῖν). Plotinus expands at length on its character as a one that is also many, each the center of the circle of all the others, so that this is the circle whose center is everywhere and whose periphery is

[28] I am aware that the first admonition one hears in critical discourse leading to the establishment of classical texts preserved by Neoplatonism, is that the Neoplatonic reading is likely to be anachronistic. Critical decisions based on rejecting anachronism have been so productive in the past 200 years that they have transformed the whole field of early Greek philosophy. My only answer to this is that I have embraced Plotinus and Iamblichus explicitly and have done so for phenomenological reasons. Neoplatonism adopts for its hermeneutics the Parmenidean principle that Truth is "not sometime." As Plotinus says, beyond reporting and comparing the opinions of the ancients, we must aspire to σύνεσις with the things themselves (III 7, 1: 16). Given the matters treated in the poetry of Parmenides, I believe that we can think about exactly the same things.

nowhere.[29] Its more fundamental plurality is as the dyad, Mind as much as Being—the very intensity of whose unity testifies to its derivation from a One beyond.

Signpost 4 has moved from the inner "here" of the Noetic One to the lower side of the third Plotinian level, the outward "here and there" of 'lower' Soul or sensible Nature, which is often so strongly differentiated from 'higher' Soul as to count as a fourth. In between, we find Signpost 3, which would correspond to Soul alive in itself, enacting both a noetic life (βίος) and an embodied one at once, reaching from the one to the other, carrying out Plotinus's interpretation of the demiurgic function of Soul in *Timaeus*. As we saw in chapter 2, Plotinus tells us that time is the life (ζωή) of soul in a continual motion of transition from the one of these two ways of life to the other. Time moves from eternity into time, eternally. It is in virtue of being alive as time that Soul is the disclosure space for the eternal truth or intelligibility of sensible physical being.

I shall leave to the final chapter on Heraclitus the aspects of the Greek experience of truth that are expressed in the word ἀληθέα (his spelling).[30] But we are now ready to read the text of Signpost 3 in Parmenides' *Way of Truth*, expecting he will use the word time there, and seeking to understand what he says about it.

Signpost 3: Now is All at Once and Entirely Total

As effecting the transition from the noetic to the sensible, Signpost 3 is the preeminent *phenomenological* moment in the *Way of Truth*. It begins by expanding upon the reciprocity between Mind and Being invoked in the introductory passages that precede Fragment 8, and presupposed in Signposts 1 and 2, and it ends with a rehearsal of

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[29] *Enneades* VI, 4–5.

[30] The deriviation of the adjective ἀληθής from λανθάνειν is demonstrable in Heraclitus, but not explicitly at work in Parmenides. It harms nothing to supply it, but it is not relevant to the most interesting place, where the ἀληθής is set into a kind of reverse parallel with the ἔτυμος. In Signpost 1, 'is not' must be abandoned because "it is not a true way," οὐ γὰρ ἀληθὴς ἐστιν ὁδός, 17b–18a; the other is, however, let "to happen and authentically to be," ὥστε πέλειν καὶ ἐτήτυμον εἶναι, 18b. The adjective ἐτήτυμος is a poetic expansion of ἔτυμος, veridical, true, reliable, well informed. ἔτυμος is the 'etymon' of etymology, the true, original, complete sense of a word. Here, the neuter form ἐτήτυμον is an adverb modifying εἶναι.

the features of experience articulated in the names that mortals use, pointing ahead to the extended and ponderable Sphere of Signpost 4, where it will be "finished off" to be handed over for the Doxa. Plotinus has shown that the disclosure space of this transition is Soul, and Time is the Life of Soul. Specifically, as Iamblichus discovered in exploring the two-dimensionality of time, it is the living Now that links intellectual and sensible time, the Now that unifies eternity with its image, moving according to number.

The "Now!" that the goddess pronounces in the program for Signpost 3 (line 5) is the single loudest word in the poem. It sets in motion the discourse, moves it out of the contemplative quiet of noetic eternity, and quite literally brings the whole of things into appearance by resounding throughout the Sphere. The sphere of influence for truth *is* the range in which the goddess's voice can be heard, from its center at the gates of the underworld through all the circles, finally to its echoing against the Sphere itself—the far sky, the sphere of the fireball, the singularity itself as a phenomenon. The model of a sphere is a geometrical representation. It displays many features of the inclusiveness of the Sphere, but does not represent the intuition that to be inside it is to share a within that has no edges, no outside. A representational space is too readily taken to be a simultaneity structure, as we see from Aristotle's "Everywhere Now," and that can preclude any possible phenomenological identification of time.

What is "Now!" is what is ὁμοῦ πᾶν, all at once total.[31] The adverb ὁμοῦ is not ἅμα, 'simultaneously', 'all at once'. It has more the sense of 'all alike', 'entirely', and with πᾶν, 'all', 'the total', the phrase is idiomatic for something like 'altogether total'. But here the Now is so emphatic that we ought to sense the totality as something timelike right away. A translation of the program for Signpost 3 might be:

> 5 οὐδέ ποτ᾽ ἦν οὐδ᾽ ἔσται ἐπεὶ νῦν ἐστιν ὁμοῦ πᾶν
>
> and (it) not sometime was nor will be, since Now (it) is all at once total.

[31] In stopping at the end of line 5, I do not ignore the momentum of idiom that makes an enjambement resume with line 6a. I hear ὁμοῦ πᾶν ἕν and, in fact, ὁμοῦ πᾶν ἕν συνεχές. But these lines must first be heard in themselves, where the first two words of 6a make up the whole Signpost 4 title, and ὁμοῦ πᾶν is the predicate for all three tense forms of the verb 'to be'.

The full force of the line is the affirmative proposition "Now it is all at once total." The fact that the form of the verb 'to be' used here, ἐστιν, is present tense is subordinate to the original 'existential quantifier', Now. The 'is' has a predicate, "all at once total," toward which the whole line converges. The other tenses, the imperfect ἦν and future ἔσται, have the same predicate, but for them it is negated: "(it) never was nor will be all at once total."

It still seems anachronistic to read the imperfect and future tenses of 'to be' absolutely in Parmenides,[32] as though they were denying pastness and futurity themselves—whatever that would mean. The argument doesn't turn around rejecting past and future in favor of the present, but instead around rejecting ποτέ, 'sometime', in favor of νῦν, now: "*Not* 'at some point in time' *since* (ἐπεὶ) Now."

I have said that 'some point in time', location on a time line, is the time of non-being, and that the line itself is the non-being of time. On the other side, Now is the time of being, and the being of time is the "all at once total." "Sometime was" and "sometime will be" do not refer to coming-to-be and perishing respectively, as supposed since Melissus. Confirmed as a single property, not two (Signpost 1), ungenerated/imperishable last figured in Signpost 2. It was excluded there by the claim that truth lies in being without tremor, in quiescence, and subjection to great restraint.

When we arrive at Sigpost 3, we must "come down in our thinking," as Plotinus wrote—"not altogether, but in the way that Time came down."[33] Here we step out from eternity. "Now!" in Parmenides is no longer pure presence-of-mind in the sense of the noetic, contemplative moment in which "it is the same to be conscious as well as to be." That is eternity. The pronounced Now is, instead, the constitutive phenomenon of time, in its moving out from eternity and its projection upon sensible motion, above all upon the motion of the Sphere.

As the timelike in motion, the present is διάστημα or διάστασις, what I call the *spanning* of motion. Hearkening to Aristotle's designation of change as ἐκστατικόν, something "standing away,"[34] Iamblichus

[32] As I argued in 1979, p. 83 and occasionally elsewhere; but at the time erroneously assuming that the predicate that is negated comes at the end of the previous line.

[33] III 7, 7: 8–11. See chapter 2, p. 73.

[34] *Phys*. IV, 13: 222b16 and again at line 22.

called 'having been' and 'going to be' ἔκστασεις.[35] This raises the difficult question of what they mean when Plato and Aristotle each call past and future "motions" and "changes." Plato writes, "they are motions," κινήσεις γάρ ἐστον.[36] He then lets Timaeus trail off into dialectics about "growing older and younger" familiar from *Parmenides*.

Aristotle adds the present to the list, calling all three (present, past, and future) changes. The remark is a sort of island unto itself, one of several important but apparently isolated sentences in the treatise on time that survive from older ways of speaking which Aristotle no longer fully understands.

> The same [time?] is everywhere at once (ὁ αὐτὸς δὴ πανταχοῦ ἅμα), but not the same beforehand and afterward, because the present change is one (ἡ μεταβολὴ ἡ μὲν παροῦσα μία), the change that has happened and the change coming are different.[37]

There is no subject for this sentence other than ὁ αὐτὸς. While, in context, it plainly has ὁ χρόνος as antecedent, I have placed 'time' in brackets, not just because there is no need for it (one thinks of Parmenides "the same and in the same abiding by itself it reposes," line 29) but because it is simply *wrong*. Aristotle's treatise on time introduces a certain sloppiness about which aspects of the phenomena of motion should be called *timelike*. Here, it is not χρόνος but νῦν that is being defined. Now is πανταχοῦ ἅμα, "everywhere same at once."

How is it that the Now is change? What is "the present change"? Reading Parmenides helps us see more clearly how Aristotle has arrived at the notion of a "present change" that is "one."

The first thing we notice about present motions is that they are *many*. What is now present about motion is that *concurrence* in which all the motions that appear to us—from the gnat walking on the lampshade, to the beating of our hearts, to the imperceptible but irreplaceably evident wheeling of the heaven—show themselves

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[35] It is important to note that past and future as 'ecstatic' in Neoplatonism are unrelated to ecstatic temporality as Heidegger conceives it. The unity of the three ecstasies in *Being and Time* is not 'time' or timelike. In so far as there is an orientation to the temporal problematic in Greek philosophy, it is entirely to the present. The very feature of the temporal present that Heidegger calls ecstatic is what the Pythagorean tradition calls διάστημα and Plotinus διάστασις.

[36] *Timaeus* 38.

[37] *Physics* IV, 12: 220b6–8. See chapter 3, pp. 97–98.

comparable as *faster and slower* (as *framed*), in such a way that they can be numbered in a stable way in relation to one another (*scaled*, faster motions counted against slower ones). Now provides a frame-stable disclosure space in which time-scaling or numbering can take place because it is a *spanning* of motion. What 'appears now' is motion; the *timelikeness* of motion is the 'how' of this appearing.[38]

Appearing itself is "the present change," because *appearing itself* is time. Aristotle becomes defensive when confronted with the Parmenidean and Pythagorean identification of time with the Sphere of the Whole:

> To those who said time to be the sphere of the whole, it seemed that everything is in time, and in the sphere of the whole. This interpretation is too trivial to support inspection of the impossibilities about it.

But only a couple of lines later, as he begins his own exposition, he gives the very same thought a formulation of his own: time is everywhere and with everything.

> Now the change and motion of each thing is only in the thing itself which changes, or where the moving and changing thing itself happens to be; but time is alike both everywhere and with all things (ὁ δὲ χρόνος ὁμοίως καὶ πανταχοῦ καὶ παρὰ πᾶσιν).[39]

This nearly approximates the affirmation about 'all and everything' that Parmenides himself makes for Now, "all at once total" (ὁμοῦ πᾶν) (Signpost 3). But, with the word παρά (here translated "with"), he joins Melissus in the fatal mistake of imagining time to be something like a container for change and motion, a kind of empty magnitude like Newton's absolute space and time. Like any preposition, παρά takes on different senses when it is used with different cases (here with the accusative). Its root meaning, however, is always 'beside', 'alongside'. Even in idioms that suggest proximity, it still retains the sense of 'other than'. Time is exactly *not* παρά the phenomena of motion and change; rather, as the life of soul, it is the constituting power that projects them.[40]

This brings us at last to the body of Signpost 3 in the *Way of Truth*. It centers on Parmenides' denial that time is or will be "other

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[38] Here Brentano's seminal observation applies: "the duration of sensation and the sensation of duration are different."

[39] *Physics* IV, 10: 218b13.

[40] See Chapter 2 above, p. 64.

outside of being" (ἄλλο πάρεξ τοῦ ἐόντος). A provisional translation of the passage as a whole is as follows:[41]

34 The same is thinking and wherefore is the thought-upon.
35 For not apart from being, in which it has been uttered,
36 will you find thinking, as little as if Time is or is going to be
37 something other outside of being, since Fate has shackled it
38 whole and quiescent to be. For this the name shall be everything[42]
39 which mortals posit, convinced that it is true:
40 becoming as well as perishing, being as well as not,
41 and alteration through place, and exchange of bright colors.

The passage begins by referring back to the enigmatic proposition that closes out the opening fragment of the *Way of Truth* (Fragment 2), "for it is the same thing to be conscious as well as to be," τὸ γὰρ αὐτὸ νοεῖν ἐστίν τε καὶ εἶναι (Fragment 3).[43] This translation makes many of the problems and ambiguities that have been found in the clause *worse* rather than better, but our purposes lead away from those discussions. We need only notice that Fragment 3 ends the passage by alluding to how it began, with the goddess proposing to exhibit the Way that alone can "be for consciousness" (εἰσι νοῆσαι, Fr. 2, 2). Two such exhibitions are produced. One is self-authenticating, the other self-destructive. Fragment 3 then provides a sort of punch line, traditionally translated, "for Mind and Being are the same."

This is not—*pace* Plotinus—a doctrine being announced, a kind of principle of principles. Despite its enigmatic terseness, it is surprisingly provocative. But it is too ambiguous to do more than awaken expectations—precisely what happens as Signpost 3 begins. Mind and Being are shown to be reciprocally involved in one another, to belong together intrinsically, making up a far more complex unity than suggested in Fragment 3.

34 The same is thinking and wherefore is the thought-upon.
35 For not apart from being, in which it has been uttered,
36a will you find thinking

Like other translators, I find it convenient to write 'thinking' for νοεῖν, but that should really be reserved for διάνοια. I also avail

[41] For the Greek as printed by Diels in 1882, see Appendix 2.

[42] Reading and construing τῷ πάντ' ὄνομ' ἔσται as does Peter Kingsley, *Reality*, 190, and notes to that same passage, 573–576.

[43] Accepting the authenticity of DK B3 as printed, completing line 8 of B2, wrongly rejected in 1979 in the work cited, p. 97, note 37.

myself of the Neoplatonizing convention Mind, especially in the pairing Mind and Being, but that is mere economical shorthand. The full sense of νόησις is active intuitive immediacy, intellectual perception, pure reflective consciousness. Its counterpart in an intentional unity is the νόημα, the object pole of an act of consciousness. Νόησις/νόημα is as formal in Plotinus as it is in Husserl, and it is striking here in Parmenides, since if the νόημα (line 34) were the counterpart of Being in the Fragment 3 pair Mind and Being, it would be more accurate to speak—as Aristotle does in what seems to be a parallel passage in *Metaphysics*—of the νοητόν.[44] This is the 'intelligible object'—being or entity as intelligible. But entity as νοητόν is in the background in line 34, referred to only indirectly by the "wherefore," οὕνεκέν, in the phrase "οὕνεκέν ἐστι νόημα."

Aristotle clearly has Parmenides in view when he makes a short digression on τὸ οὗ ἕνεκα a few lines ahead of the passage just noted (1072b3). He points out that it can be taken as "for the sake of which" (τινι, dative) or "on account of which" (τινος, genitive), preferring the latter. The point applies also here: "there is/exists" (ἐστι) a noematic object not "for the sake of" being, but "on account of" it. Line 34 states

> 34 These are the same: consciousness, and that on account of which there is content of consciousness.

This is a restatement of Fragment 3, but *from the side of* Mind. It must be completed by a reciprocal statement *from the side of* Being. Since the Neoplatonic account of the passage that I am outlining is familiar, lines 35–36a can be expanded in that format:

> 35 For not without Being, in which [Mind] is what has been uttered,
> 36a will you find Mind,

If, from the side of Mind, Being is the 'good' or 'wherefore' that accounts for the intentional unity of consciousness, then from the side of Being, Being is intelligible because intelligibility is precisely what has been declared, uttered, or expressed in it. Neither Mind nor Being alone is selfsame, and neither alone is equivalent to Truth.

The poem expands upon the thought "you shall not find Mind without Being" by adding

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[44] *Met.* XII, 7: 1072b22, ὥστε ταύτον νοῦς καὶ νοητόν.

36b as little as if Time is or is going to be
37 something other outside of Being, since Fate has shackled it
38a whole and quiescent to be.

The movement of thought as I read it here is as follows: we discover Mind from the side of Being, after having just done the reverse. Parmenides' principal claim is negative:

35a for not without (οὐ γὰρ ἄνευ) . . .

Not without Being will you find Mind, because only the intelligibility that presents itself in Being secures it. Mind is "what has been uttered" in Being. It is not immediately clear how this "uttering" or "expressing" should be understood, but at the end of the sentence,[45] the conjunction "since" (ἐπεὶ) introduces an affirmation that is meant to be conclusive for the whole passage:

37b since Fate has shackled it
38a whole and quiescent to be.

In the meantime, however, the "not" of "not without Being" has been followed by another "not" (line 36b, οὐδε), and it, too, negates a separation: "not even . . . other outside of Being." But complications arise, when line 36b begins with οὐδ' εἰ, "not even if. . . ." As a matter of grammar, the whole construction is difficult and disputed. This fact contributed to the near-universal decision not to print the word "time" in 36b. I stand by my reading of the movement of thought as it is reflected in the translation provided here.[46]

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[45] Lines 34–38a should be punctuated as one sentence.

[46] I welcome the agreement of Panagiotis Thanassas, namely, that there is no reason not to print and read οὐδ' εἰ χρόνος ἔστιν ἢ ἔσται for line 36b, *Die erste "zweite Fahrt": Sein des Seienden und Erscheinen der Welt bei Parmenides*, (Munich: Wilhelm Fink, Publ. 1997), 117–132. Our opinions on exactly how to read it, however, diverge. He transposes the whole body of Signpost 3 (lines 34–41) to follow Signpost 4 (280), and thereby abandons any hope, as I see it, of being guided by the Program in construing the unity of the fragment as a whole. Instead of realizing that what there is in Parmenides of eternity helps us identify what he is talking about when he mentions time, Thanassas relegates the whole concept of eternity to theology, ruling it out of the Parmenidean order altogether (122ff.). On his account, this passage shows "die Zeitlichkeit als absolut irrelevant für sein ἐόν" (125). In note 23, 125–126, he responds in detail to my translation of the lines, focusing on the sense "as little as if" that I assign to οὐδ' εἰ . . .—and judging the result "sonderbar." My explanation of the grammar may have been weak in 1979 (101, note 12); the issue may not have been the behavior of οὐ . . . οὐδέ (Smyth 2939). My interest in line 20, however, focuses on οὐδ' εἰ with indicative, and, as Thanassas says, this is

Conclusion

Time is the 'engine' of participation in late Platonism. As the life of Soul, it exercises demiurgic power (*Timaeus*). The "first psychical projection" of the λόγοι takes place in the "coming down" of Soul from eternity, when it opens them up into the intervals (διαστήματα) their unfoldings occupy in the scaling of frame-space. This is "the present change" that is one, not itself a motion among the motions, but motion with respect to eternity alone. What has "uttered" Mind within Being is the goddess's pronouncement, "Now, all at once, total." Mind is not found apart from Being, "as little as if Time is or is going to be" something outside of Being—*and as little as the phenomenal world*, the world of mortal existence (subject to Fate), is outside the Truth of Being. Hence, in the 'naming ceremony' with which Signpost 3 concludes,

> 38b For this the name shall be everything
> 39 which mortals posit convinced that it is true:
> 40 becoming as well as perishing, being as well as not,
> 41 and alteration through place, and exchange of bright colors.

these are not 'mere names', even though they are the elements of the discourse we call Δόξα. As in Signpost 3, they are still within the "all at once total" of the living Now, so that although no longer fully or perfectly ἀληθής, they remain ἐτήτυμος.

The phenomena have life, have come under the sway of the existential and dramatic necessities of Time and Fate. All that now remains until the subject of the poem, Truth, can be handed over to the goddess in anticipation of her "disguising cosmos of words" in the Δόξα, is what Timaeus called Space and Receptacle—the bulk and extension of the Sphere. With Being One so disposed in its coherence (Signpost 4), Fragment 8 concludes the *Way of Truth*. It slides almost effortlessly into the discourse of mortal seeming-being:

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a negative concessive clause (Smyth 2381). Literally, it means "and not even if." The sentence would therefore mean "You will not find Mind apart from Being, and not even if Time is or will be. . . ." That is, you won't 'find them apart', not even if 'time is apart' (a kind of worst-case scenario). But time is *not* separate! Why should we expect that it would be? I could also write, "You will not find Mind apart from Being, not even if (*per impossibile*) Time is or will be . . ."—and it won't come to that!

50 With this, I stop for you the convincing discourse and the thought-
upon
51 around the truth. Hereupon, opinions of mortals
52 learn, listening to the disguising cosmos of my words.[47]

[47] The word for 'disguising' here is ἀπατηλὸν, routinely misconstrued as 'deceiving'. It means producing illusion—like the landscape painter who uses just a few strokes to put the forest on the mountain (cf. *Critias* 107d). For the goddess in this role Peter Kingsley has the apt phrase, "the honest deceiver" (*Reality*, p. 208).

CHAPTER FIVE

HERACLITUS AND THE NEED FOR TIME

Review: The Path to Heraclitus

Parmenides has been understood too readily to be an eternalist, in the sense that he is thought to be claiming that there exists some 'timeless' eternity—one that is absent even in Neoplatonism. It was therefore necessary for critical scholarship to test the famous 'refutations of motion and change' in the *Way of Truth*; and it was also inevitable that it would discover that the very μένειν ἐν ἑνὶ itself—the abiding in unity which Plato attributed to αἰών, 'eternity'—depended on time. In the foregoing analysis of the Parmenidean text, I have agreed not only to the timelikeness of the abiding of the Being One, but have also read the very word χρόνος at the point in the argument where the belonging together of Mind and Being is unfolded phenomenologically (Signpost 3). The timelikeness of this was announced programmatically in the "Now!" (line 5), not in the 'sometime' (ποτέ) of the refutation of genesis and perishing. Time is the spanning, framing, and scaling of motion, not its division into transitions and edges. This makes time the very power of thinking as it bears on existing truth (being)—not just as νοεὶν, but as λέγειν as well.

In its Parmenidean syntax, the sentence which concerns this begins Fragment 6:

> It is required: to say as well as to apprehend being to be.[1]

This means that χρόνος in Parmenides yields what the Platonists later find in the notion of αἰών. Nor is this surprising, since the need for eternity is the same as the need for time: *Both* are required to configure the disclosure space of nature.

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[1] Reading the text χρὴ τὸ λέγειν τὸ νοεῖν τ' ἐὸν ἔμμεναι, as corrected by Néstor-Luis Cordero, "L'histoire du texte de Parménide," *Études sur Parménide*, Tome II: Problèmes d'interpretation, Pierre Aubenque, dir. (Paris: Librairie Philosophique J. Vrin, 1987), p. 19.

In the discussion of Heraclitus, we take too quickly for granted that, where Parmenides deals with eternity, Heraclitus deals with time. Since both thinkers' work seems to be reciprocal, the assumption is perfectly correct, but it cannot become fruitful until we make clear precisely *how* the phenomenon of time figures in Heraclitan discourse.

The finding of this study is that for the entirety of Greek philosophy, from as late as Iamblichus and Plotinus to as early as Heraclitus and Anaximander, a single but initially pre-thematic identification of phenomenal time prevails. This identity is different from what we generally mean by 'time' today.

Our first sketch of this earlier construal of time arose from an interpretation of the two-dimensional 'diagram of time' in Husserl. The presence of a similar two-dimensional diagram of time in the Pythagorean tradition (rooted in Archytas) supported a schematic mapping between Husserl and late Neoplatonism. But I took the connection to be more substantive than this.

From Husserl to Heraclitus via Iamblichus

The issue that arose for Husserl in his two decades of work on the 'phenomenology of inner time-consciousness' was the self-constituting structure of pure consciousness itself. Since he understood that the phenomenon of time is in some way implicated in the capacity of the 'flux' of consciousness to constitute its own disclosure, Husserl brought himself to the threshold of speculative logic. The latter later became thematic as the problem of 'transcendental subjectivity' in *Ideas*. In the author's preface to the English edition,[2] at the crux of his effort to distinguish "phenomenological idealism" from earlier idealisms, Husserl retained a major claim made in speculative logic:

> The result of the clarification of the meaning of the manner of existence of the real world (and eidetically, of a real world generally), is that only transcendental subjectivity has ontologically the meaning of Absolute Being, that it only is non-relative, that it is relative only to itself.[3]

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[2] 1931. English edition of *Ideas* trans. by W. R. Boyce Gibson. I cite from the Collier Books edition, 1962 (New York and London).

[3] Preface, p. 14.

This claim, as it was interpreted in the time-consciousness studies of 1893–1917, did not require us to deal with the amplifications of the problem of 'Ego' and 'fellow subjects' that Husserl began to provide in 1931, but only with the way in which time as he identifies it in the phenomena of motion functions as a self-constituting disclosure space. In that way, he *interprets* what he means when he goes on to embrace 'transcendental' philosophy.

It is not because phenomenology is a 'transcendental' philosophy—in the usual post-Cartesian sense—that we moved from Husserl to Iamblichus and Plotinus, but because they both have at the heart of their speculative logic a phenomenologically legible identification of time. For Iamblichus and Plotinus, time subsists in a *movement* between Eternity and Time, a special kind of motion "in respect to eternity alone" (Iamblichus) and not among the natural motions that appear *in* this second dimension. Only because natural motions (κίνησεις) appear within this descending, originary time do they demonstrate order and purpose and become gestures or actions (κινήματα); hence only in that way does nature evince 'existence' or participation in being. The great contribution of the Neoplatonists to speculative logic was their resolution of the problem of Platonic 'participation', in response to peripatetic objections. On their system, this is the problem of the relationship between the condition-of-life (βίος) of Mind and Being, and that βίος which is Soul and Nature. Where Plotinus tells us that time *is* the Life (ζωή) of Soul in a "motion of transition" between these two conditions, Iamblichus shows how this makes time a perpetual *arrival into itself*, into its own distentions (ἔκστασεις). Self-arrival into its own ecstases (i.e., constituting its own disclosure space) is precisely what Husserl claims for time-consciousness—a hyphenation that means neither consciousness of time, nor time within consciousness, but both as two aspects of the same disclosedness.[4]

Plotinus appears to know Aristotle's "Treatise on Time" directly.[5] For his part, he (Aristotle) makes an observation about time so

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[4] Hence I disagree with John Brough's translation of "*zur Phänomenologie des inneren Zeitbewusstseins*" as directed at the "consciousness of inner time." E. Husserl, *On the Phenomenology of the Consciousness of Internal Time (1893–1917)*, trans. John Barnett Brough (Dordrecht: Kluwer Academic Publishers, 1991).

[5] I argue that his references to "someone" (τις) in III 7, 8 (lines 4 and 53) are to Aristotle—whose position he takes very carefully and accurately into account,

Neoplatonic-sounding that it has been used to support efforts to discredit the authenticity of *Physics* IV, 14:

> For if nothing other than *soul and the mind of soul* (ψυχὴ καὶ ψυχῆς νοῦς) were suited by nature to numbering, time would be impossible, there being no soul.[6]

We argued that "ψυχὴ καὶ ψυχῆς νοῦς" here is neither hendiadys nor redundancy, but the unique two-dimensionality that phenomenology discovers about time. It derives directly from the way that Aristotle himself identifies it in chapter 11: τὸ ὁριζόμεον τῷ νῦν, "what is horizoned/defined by the Now." We therefore transposed the conventional identification of time in Aristotle—as 'number'— from its usual context of metric space and the mathematics of the continuum, and developed it phenomenologically as the *spanning, framing, and scaling of motion*. So far as number in this sense has any connection with 'measure', it is with measure-number in the musical sense, the 'time-signature' of musical notation (e.g. 2/2, 3/4 etc.), not with the measure of magnitudes.

Aristotle obscures the unique and time-identifying character of the 'now' by discussing at length (IV, 12) how motion is *measured* with respect to time. This is analogous to the way that size in general is measured. Time eventually becomes a dimension of size in Cartesian analytical geometry and the calculus of Newton and Leibniz. Aristotle is moved in that direction by his fascination with the problem of the continuum, the question which was treated in such radical terms by the Eleatics. The Platonic τόπος, out of which this aspect of Aristotle's effort principally arises, is the problem of the 'instantaneous' in hypothesis 2a (3) of *Parmenides*, and only incidentally the essentially astronomical (as he reads it) exposition at *Timaeus* 37d ff.

In Plato's *Parmenides*, only a negative result is reached in hypothesis 2a. In order for the transition from rest to motion to be possible, an absurdity (ἄτοπον) must be embraced, namely, that involved in the concept of the instantaneous (τὸ ἐξαίφνης).[7] By contrast, Parmenides himself identifies time as a positive determination of Being (Fr. 8) and moreover, as illuminating the way in which Mind

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noticing in particular that the phenomenological issue is the 'number' of motion, not its 'measure' as extended.

[6] *Phys* IV, 14: 223a30. See chapter 3, pp. 87–91.

[7] *Parmenides* 156D.

and Being belong to one another. This is only intelligible, I argued, if Signpost 3 of the *Way of Truth* functions systematically as a kind of 'transcendental deduction' of pre-sensible being (Signpost 4) from the purely intelligible wholeness of true being (Signpost 2).

As recent work on Parmenides increasingly argues,[8] he is less concerned to distinguish Truth from Δόξα as separate modes of appearance than he is to move between them correctly. This requires special attention to the usage of the verb 'to be', which he judges to have unique properties in speculative logic (in reciprocity with νοεὶν and λέγειν, it is a 'one-sided' fact, an inside without an outside, and stands in no way in contrast with anything else). In particular, he seeks to protect discourse about Mind and Being from the composition-of-opposites discourse in which "wandering mortals, lacking insight, two-headed, helpless, deaf, blind, and dazed" apply the logic of "same and not the same."

> [I warn you also against the way . . .] of those for whom to be and not to be are the same and not the same, for whom backward-turning (πάλιντροπός) is the way (κέλευθος) of all things.[9]

This, of course, becomes the challenge as we seek to read Heraclitus in concert with Parmenides on the nature of time and its role in speculative logic. For Heraclitus seems to embrace the 'backward-turning way' as a key to his deepest claims. It is even possible that he uses the same word, πάλιντροπός, to describe the internal harmony overlooked by those who fail to grasp how

> a thing at variance with itself speaks in agreement (with itself)—a backward turning harmony exhibited by the bow and lyre (B51).[10]

So, does he espouse precisely the mortal position decried by Parmenides? Is his

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[8] Peter Kingsley, *Reality* (Inverness, California: Golden Sufi Press, 2003). Panigiotis Thanassas, *Die Erste "Zweite Fahrt": Sein des Seienden und Erscheinenden der Welt bei Parmenides* (Munich: Fink Publ., 1997).

[9] B6. The contrast here is neither ἐόν vs. μὴ ὄν, nor εἶναι vs. οὐκ εἶναι, but τὸ πέλειν vs. οὐκ εἶναι. Πέλω means 'to be' in the sense of 'turn up', 'occur', and it is deliberately chosen in place of εἶναι or ἔμμεναι (B6, line 1) to bring out the essential emptiness of any meaning of 'be' that would support a contrast between 'to be' and 'not to be'.

[10] Kahn, Commentary on LXXVIII, in *The Art and Thought of Heraclitus* (Cambridge: Cambridge University Press, 1979), pp. 195–200; DK B51 gives the same reading of πάλιντροπός; KRS 209 prefers παλίντονος, 'back-stretching'.

> Way (ὁδος): there and back [up and down]: one and the same (B60 DK, CIII Kahn).

the same as the "backward-turning path of all things" that Parmenides warns against?

There is no straightforward way to compare Heraclitus and Parmenides by relying on explicit verbal parallels. We also cannot assume that either one of them is either alluding or responding to the other. For all practical purposes, we must treat them as independent contemporaries. But what they do share in an historical sense is parallel frustration with the Milesian physics, a discourse "on Nature" conducted primarily as cosmography and mechanistic physiology—a natural philosophy limited to 'material' explanation as attributed to them by Aristotle (*Met.* A, 3). In responding to this early materialist physics, both thinkers make fundamental contributions to speculative logic. Their positions are comparable, not in terms of their systematic strategies (one is in effect the reciprocal of the other), but as concerns the nature of time as they both experience it. We therefore require an interpretation of time in Heraclitus.

This exercise has had his thought in its sights from the beginning, because in an unexpected way he is entirely focused on time. It is not an explicit theme in his words and works; he does not mention it by name (χρόνος) in what survives to us. Instead, it is the field in which the whole of his writing and experience takes place. For him, it is disclosure space itself, the invisibility in the visible—and he was the first among the ancient Greeks to devote himself to this view. Like Parmenides, like Plato in *Timaeus*, and like Plotinus, his thought moves between time and eternity. Some discussion of this claim follows below.

Time in Heraclitus: The Circular Joining of αεὶ *and* αἰών

In his *Studies in Heraclitus*, Roman Dilcher has given proper prominence to the text referred to as 'Fragment' 1.[11] He is certainly not alone in seeing that it is an introduction to the lost book, but he has perhaps best brought out how deeply implicated it is methodologically in all the sayings.

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[11] Spudasmata 56, (Hildesheim, Zürich, and New York: Georg Olms Publ., 1995).

Charles H. Kahn has pointed out that Fr. 1 "is probably the longest piece of surviving Greek prose before the *Histories* of Herodotus,"[12] and has given it an especially important role as an introduction to the collection of sayings. Dilcher builds upon Kahn's conviction that Heraclitus worked in writing—that the book was not a compilation of oral declamations—but he has a much more radical account of the role of the proem as key to the nature of that work. With one modification which I will explain below, I shall adapt Dilcher's suggestions to our purposes here.

Let me place before us what is certainly not a 'fragment', but a complete and rigorously constructed introduction to what Heraclitus says he is doing, and how we are to read him philosophically. My provisional interlinear translation here leaves a number of important ambiguities unresolved as concerns how one should construe the text.[13]

Fragment 1 (I Kahn):

1 τοῦ δέ λόγου τοῦδ' ἐόντος αεὶ ἀξύνετοι γίνονται ἄνθρωποι
of the Logos the (one) being always uncomprehending become humans

2 καὶ πρόσθεν ἢ ἀκοῦσαι καὶ ἀκούσαντες τὸ πρῶτον·
both before hearing it and hearing it at first

3 γινομένων γὰρ πάντων κατὰ τὸν λόγον τόνδε ἀπείροισιν ἐοίκασι
for although all things happen according to this Logos they seem untried/untested—

4 πειρώμενοι καὶ ἐπέων καὶ ἔργων τοιούτων ὁκοίων ἐγω διηγεῦμαι
those tried/tested by both such words and works as these such as I expound

5 κατὰ φύσιν διαιρέων ἕκαστον καὶ φράζων ὅκως ἔκει·
according to nature distinguishing each and showing how it holds/tends;

6 τοὺς δέ ἄλλους ἀνθρώπους λανθάνει ὁκόσα ἐγερθέντες ποιοῦσιν
the other humans let slip away what they do awake

7 ὅκωσπερ ὁκόσα εὕδοντες ἐπιλανθάνονται
just as what they do asleep escapes them.

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[12] In the work cited (1979), p. 96.

[13] Greek text from Diels/Kranz, 6th ed. (1951ff); line numbers are *ad hoc* for ease of reference within this discussion.

The most famous ambiguity in this text is easily that of the adverb αεὶ, "always" (line 1). It can be taken with the preceding participle ἐόντος, yielding the claim that the Logos is "always being," or with the subsequent verb γίνονται, producing the statement that humans "always become uncomprehending" of it. Aristotle complained that this line is "not easy to punctuate," (μὴ ῥᾴδιον διαστίξαι, *Rhet.* Γ 5, 1407b) and he includes it in his list of affronts to Greek style (τὸ ἑλληνίζειν).[14] In the main, translators join him in assuming that the line *must* be punctuated one way or the other. I am, however, convinced that the ambiguity is intended by Heraclitus. It can be reproduced in English,[15] and I will argue below that it should be. But at least this issue is very well known and has been amply discussed. In line 5, on which I wish to focus, it has not even been noticed that there is an ambiguity.

What is the antecedent of ἕκαστον, "each," here?

Prior to Roman Dilcher, there seems to have been no discussion in which the antecedent is not assumed to be line 3's πάντων, "everything." The traditional interpretation has implications for the way the phrase κατὰ φύσιν, "according to nature," is understood. Here certain Aristotelian assumptions come into play—and they are far more insidious than his constraints on punctuation. πάντων is assumed to mean everything in the sense of every *thing*, and ἕκαστον, "each" in the sense of each *thing*. Hence, no matter which of the several verbs in the passage (expounding, distinguishing, showing) is qualified as being acted out κατὰ φύσιν, the translation is expected to read "according to *its* nature," with the focus on individual things.

Some of the most influential translations of lines 4–5 may aid us at this point:

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[14] The cited line is not "easy," as Aristotle notes, but is "work" (ἔργον). It should be noted in passing here that the "punctuation" he is discussing is a matter of syntactical construction and not of the employment of glyphs or marks in the graphics of writing. Hence the Heraclitean context is not writing but reading, specifically, that property of texts that makes reading on the level of recognition (εὐανάγνωστον) straightforward enough for fluent reading aloud (εὔφραστον). The two amount to the same thing, Aristotle tells us. It is precisely in the absence of punctuation that constructions that stop the flow of reading (but not the flow of thought!) are so intrusive. They call for "work," a kind of advance preparation that, for Aristotle, threatens to impede the arrival of thought into language.

[15] Jonathan Barnes makes this clear in his *Early Greek Philosophy* (1987), p. 101; Dilcher's argument is that it is not ambiguous. He claims that ἀεὶ goes with the being of the λόγος. It is engaged below.

> Such words and works as I set forth, distinguishing each according to its nature and telling how it is.[16]
>
> such words and deeds as I explain, when I distinguish each thing according to its constitution and declare how it is.[17]
>
> the words and deeds which I expound as I divide up each thing according to its nature and say how it is.[18]

The assumption that the "all" means all *things*, and that it is "each" *of them* about which Heraclitus is speaking, shows yet again the influence of Aristotle's stance toward his predecessor φύσικοι in *Metaphysics* A, 3. He there surveys them with respect to the four 'causes' or patterns of explanation that taken together account for the being of the *thing* (the τόδε τι or ἑκάστον of Book Z). He attributes to them the same interest in particulars that founds his physics. In that connection, φύσις or 'nature' "in the primary and chief sense is the οὐσία of those things which have in them their own source of movement" (*Met.* Δ, 4, 1015a13–14) —precisely how the Heraclitan κατὰ φύσιν is being understood in the translation, "according to *its* nature."

Kahn's commitment to the notion that Heraclitus inspects 'each thing' according to 'its nature' shapes his construal and translation of a related fragment:[19]

> Fr. 112:[20]
> σωφρονεῖν ἀρετὴ μεγίστη καὶ σοφίη ἀληθέα λέγειν καὶ ποιεῖν κατὰ φύσιν ἐπαΐοντας
>
> Thinking well is the greatest excellence and wisdom: to act and speak what is true, perceiving things according to their nature.

There are many difficulties with this saying, but I am content with Kahn's account of it—except for the final phrase, κατὰ φύσιν ἐπαΐοντας. Nothing in the Greek corresponds to the "things" that he supplies, and nothing other than a presupposition that 'nature' in Heraclitus means the 'nature of things' suggests that the simple phrase "according to nature" should be read as "according to *their* nature."

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[16] Kahn, p. 29.
[17] KRS 194.
[18] Barnes, in the work cited, p. 101.
[19] A connection he makes explicit, p. 121.
[20] XXXII, Kahn; DK adds a comma after μεγίστη; Kahn reads it after σοφίη.

The verb ἐπαϊω means 'give ear to', 'hear', in the sense of perceive or understand. It is idiomatic for 'hear or follow with understanding', e.g. "not understand a barbarian language" (τὴν βάρβαρον γὰρ γλῶσσαν οὐκ ἐπαϊω, Sophocles, *Ajax* 1263). It also comes to mean the 'hearer' of a discipline as designating someone well acquainted with or expert in it (pervasive in Plato, cf. LSJ, entry 4). By analogy, in Heraclitus it should have the sense, "giving ear or paying attention according to nature," where nature should be understood globally, as the 'language' of the cosmos, so to speak—an intelligibility for which Heraclitus has trained his attention, but which "other humans" miss in their preoccupation with the obvious.

Let us return to line 5 in Fragment 1, about which I raised the question of the antecedent for the word "each." Not only on the grounds of grammatical proximity, but from precisely the movement of thought itself within the text, it is far more natural to take line 5's "each" to refer to the "words and works" just mentioned in line 4 than to the "all" in line 3. But, with this, the whole sense of the passage is transformed! The phrase "according to nature" now qualifies Heraclitus' own practice in his "words and works," instead of referring to "all that happens in accordance with the Logos." The translation I propose is:

4 πειρώμενοι καὶ ἐπέων καὶ ἔργων τοιούτων ὁκοίων ἐγω διηγεῦμαι
(those who) are tried/tested by such words and works as these that I elaborate

5 κατὰ φύσιν διαιρέων ἕκαστον καὶ φράζων ὅκως ἔκει·
in accordance with nature, choosing each with discrimination and exhibiting its tendencies.

Suddenly we hear Heraclitus describing the very features of his "words and works" with which the student of his Greek is massively familiar. He is extremely deliberate and precise in his choice of words (διαιρέων ἕκαστον), crafty and cunning in his maneuvering of syntactical and semantical relations among them, forcing these to our attention (φράζων ὅκως ἔκει).

Roman Dilcher construes the 'each' as I do. He consistently opposes the notion that Heraclitus has 'cosmological' interests alongside methodological and psychological ones.[21] He spends little time on the

[21] G. S. Kirk, *Heraclitus: The Cosmic Fragments* (Cambridge, 1954).

conventional view that its antecedent might be line 3's "all (things)," but turns directly to interpretation of the ἔπεα καὶ ἔργα (line 4).

Recognizing it to be "an old formula, frequent in Epic literature as well as in Herodotus, that signifies the whole of human behavior," Dilcher translates naturally: "words and deeds."[22] Based on the premise that human activities in the broadest sense are in question, he makes the remarkable assumption that it is the doings of "the other humans" (line 6) about which Heraclitus expounds, discriminates, and demonstrates, so that it is *their* nature that is to be emphasized.

> The second half of this sentence therefore [line 5 in my notation] provides . . . the formal indication of content and method. It is these "words and deeds" in general which Heraclitus claims to explain. His logos investigates the very state of this uncomprehending behaviour. . . . Heraclitus' foremost concern, therefore, is human life and its self-understanding.[23]

I judge to the contrary that it is not the words and deeds of οἱ πολλοὶ to which Heraclitus addresses himself, but his *own*. In the first place, line 4's ἐγω διηγεῦμαι, "I expound," is emphatic and self-assertive in Greek, where the pronoun is grammatically unnecessary. And more to the point, it is precisely in regard to his own concrete discourse that he lodges his provocative complaint: Humans are uncomprehending of the logos, even after they have heard it for the first time (lines 1–2). How have they heard it? Though they seem inexperienced, they *have* experienced its "words and works."

This juxtaposition of the logos with what Heraclitus is doing in his own discourse recurs in B50 (XXXVI Kahn):

> οὐκ ἐμοῦ ἀλλὰ τοῦ λόγου ἀκούσαντας
>
> not to me but to the logos listening
>
> ὁμολογεῖν σοφόν ἐστιν ἕν πάντα εἶναι
>
> it is wise to acknowledge all to be one.

Here again Heraclitus inserts himself in the first person. How could we make the mistake of listening to him and missing the logos?

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[22] In the work cited, p. 16. In addition to the discussions of the phrase Dilcher cites in note 15, see also Christopherus Barck, *Wort und Tat bei Homer*, Spudasmata 34, (Hildesheim, New York, and Zürich: Georg Olms, Publ., 1976).

[23] In the work cited, pp. 16–17.

Because it is his ἔπεα καὶ ἔργα that we experience immediately (which I translate as "words and works"; Latin, *verba et opera*).

An argument of a kind that Dilcher himself makes in other contexts applies here. Of course the stock phrase "words and works" is familiar to Heraclitus' readers, and there is also the expectation that "works" means deeds and actions. But the Heraclitan move here confounds expectations! His goal is to jolt us into recognizing configurations of *words* (ἔπεα) as themselves *works* (ἔργα)—to make writing itself a new kind of work, philosophical work.

Heraclitus uses words "in accordance with nature" in a very direct sense: They 'work' like nature does. They are a kind of performance art.

At the start of Fragment 1, his sentence *performs* (at the meta-level) the double-dynamic that the text goes on to introduce, and that pervades his entire thought. Tilted toward what "ever happens" with men, the "always" evokes the pervasive λανθάνειν, slipping off into the obliviousness of the obvious and everyday. This is the dynamic he wishes to counter by startling us awake through "words and works" that cannot be taken at face value. Tilted toward the ever-being of the Logos, on the other hand, the "always" evokes ἀληθέα, truth as *un*-slipped-away, the *Unverborgenheit* that Heidegger so stresses as the fruit of a counter-exertion against the subsidence into oblivion.[24]

> τοῦ δέ λόγου τοῦδ' ἐόντος αεὶ ἐξύνετοι γίνονται ἄνθρωποι
>
> Of this Logos the one being always uncomprehending become humans . . .

This sentence is a kind of linguistic Nekker cube. This is the famous optical illusion discussed in the psychology of perception, in which a two-dimensional drawing of a wire-figure cube can be seen alternately with one face forward, or to the rear—but not both at once. By intentionally making a sentence that forces a 'double-take' upon us, Heraclitus forces our reading to a meta-level.

Dilcher argues that the phrase τοῦδ' ἐόντος requires ἀεὶ to be understood with it (assuming that 'to be' here is predicative), so that

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[24] Heraclitus' use of *two* words from λανθάνω in his description of how "other men" conduct themselves (end of fragment 1), together with the ἀληθέα λέγειν καὶ ποιεῖν κατὰ φύσιν ἐπαΐοντας, all but conclusively corroborates Heidegger's insistence that the alpha-privative sense of the word ἀληθής, 'true', is evident in early Greek writing. Here and throughout, I adopt the archaic spelling of the noun ἀληθέα.

the clause is *not* ambiguous.[25] But even if this were correct, it doesn't speak against ἀεὶ *also* being required to make sense of line 2's "before having heard and hearing the first time"—i.e., humans "*always* become uncomprending." While one tilt to the sentence is in force, the other one is not disabled. They simply can't both be in force at the same time.

Or rather, ἀεὶ, always, is precisely the *time* in whose context both are indeed valid at once. Ever-being, ἀεὶ ὄν, becomes in later writers the (fictitious) etymological meaning of αἰών, or eternity. But together with γίγνομαι, ἀεὶ/always signifies for those same writers the sensible motion in becoming. The term harbors in itself, therefore, the two-dimensionality we have stressed throughout this study. In Heraclitus, time is not named but evoked, or more perhaps performed, by the ἀεὶ in this sentence. Time is what reaches from eternity into time. Time is arrival into itself as the disclosure space of sensible motion, in the intellectual motion by which it produces itself from eternity.

It is time that we encounter in Heraclitus. Yet in his extant texts we find no direct reference to χρόνος. Instead, where we might look for χρόνος, we find αἰών.

> αἰών παῖς ἐστι παίζων, πεσσεύων· παιδὸς ἡ βασιληίη.[26]
>
> Αἰών is a child playing, throwing dice.[27] Of the child is the kingship.

That there is something unexpected here, a reversal, is hardly ever noticed, because of the consensus that early use of αἰών in Greek has nothing in common with its later-Platonic development (where we translate it as 'eternity'). Αἰών is duration, lifetime, eon or epoch; it is clearly timelike, and here sometimes even translated as 'time'. Yet it is the "αεὶ ἔον" of the Logos in Fragment 1. It is the Everliving Fire (Fr. 30), that which never sets (Fr. 16), the hidden harmony which prevails everywhere (Fr. 54), the 'togetherness' (ξύνον, Fr. 103) of the All One (ἕν πάντα, Fr. 50). In Fragment 52, its economy is celebrated, its simplicity of means and its transparency. Αἰών is the

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[25] In the work cited, p. 27.

[26] DK B52, Kahn XCIV.

[27] The precise nature of the game πέσσος remains conjectural. I am taking it to be a forerunner of backgammon, as does Kahn, following Marcovich. See Kahn's commentary *ad loc.*, in the work cited, 227. Children at play prize both order (the rules of the game, including the board moves and exchange of turns) and happenstance (the roll of the dice).

οἰκονομία of life; where home and city live by νόμος, in the plurality of human rules ("πάντες οἱ ἀνθρώπειοι νόμοι," Fr. 114), nature lives by λόγος, law in its divine unity ("ἑνος τοῦ θείου").[28] Αἰών, embracing both, is eternity.

Just as we arrived at the proper attribution of eternity in Parmenides only by first exposing his dependence on time, so, too, should we look to understand the role of time in Heraclitus first by acknowledging that he discovers the *eternity* of truth.

We understand this in Heraclitus most clearly where he uses its classic image, the noetic circle, the circle fitting itself about its center.[29]

> ξυνὸν γὰρ ἀρχὴ καὶ πέρας ἐπὶ κύκλου περιφερείας.
>
> For together: origin and boundary at the periphery of a circle.[30]

Those who are certain that the influence of Heraclitan thought on Parmenides is on the level of Δόξα construe this text along the lines of the Goddess' announcement there about "starting out" and "coming back again."[31] They make it a circling which always ends where it started. Kahn, who grasps the methodological import of the fragment, is so certain that the πέρας of the circle is an 'end' like that of a journey that he interprets the use of the wrong Greek word for 'end' (one expects τελευτή) as an archaism which supports the authenticity of the quotation.[32] But here as always, the origin of a circle is its center, and the limit is its radial constraint, its compass setting.

In both geometry and physics, this circle is different from an orbiting or journeying around. The ξυνὸν applies not to a point *in* the periphery, the beginning and the end of travel around it, but speaks to it in its entirety. Heraclitus' text comes near to saying the 'periphery of a circle' *is* what an origin and a radial constraint 'agree upon'.

In its physical application the circle directs us not to the back-and-forth of enantiodromia, nor to the cyclical phases through which elemental change progresses, but instead to what is cryptic, hidden, or unexpected about such process, namely, the composure, spontaneity, stability and *unity of its disclosure space*. The space within which the origination and the being-bound-within-limits take place is the

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[28] DK B114; Kahn, XXX.
[29] See chapter 2, p. 64.
[30] DK B103; Kahn, XCIX.
[31] Parmenides, DK B5.
[32] In the work cited, commentary on this same passage and note 317.

ἀληθέα, the disclosure space of the "gathering and doing" which are "according to nature."[33] This is the dimension articulated by the Logos, in which we acknowledge "all to be one" (ἕν πάντα εἶναι).[34]

Certainly this unity is timelike. This is what Heraclitus' choice of αἰών implies. Αἰών is eternity; but the need for time is the same as the need for eternity.

Heraclitus as a Gloss on Anaximander

Time is named, in the eternal aspect Heraclitus studies as the Logos, in the surviving λόγος of Anaximander. The ἀρχή, says Anaximander,

> is neither water nor any other of the so-called elements, but some different, boundless nature, from which the heavens arise and the κόσμοι within them; out of those things whence is the generation for the beings, into these again does their destruction take place, *according to what needs must be*; *for they make amends and give reparation to one another for their offense, according to the syntax of time.*[35]

The eternity of time is its τάξις. It shapes nature into the sphere of the All One, collecting its processes into the structure of the ἀλλήλοις, the reciprocity of cosmological oppositions. Since origin, ἀρχή, is the boundless (τὸ ἄπειρον), it is time that gives boundary (πέρας). The final πέρας is seen in the heaven of the stars, in the perfect circle of the all-about, in the Sphere of the All One whose truth is eternity and whose image is time.

One thinks too easily of the ἄπειρον of Anaximander as beyond the heaven—that his thought moves from some limitless space downward toward heaven reached from outside, and again downward toward earthly genesis and perishing. But the ἄπειρον is instead the abyss *within* the Sphere, the boundless which needs *centering*, the potential sphere of gravitational space.

Time gives the Boundless syntax in the following way. Origin within the Boundless is gravity, downward motion, converging toward

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[33] DK 112, Kahn XXXII (accepting Heidegger's account of λέγειν).

[34] DK 50, Kahn XXXVI.

[35] κατὰ τὸ χρεών· διδόναι γὰρ αὐτά δίκην καὶ τίσιν ἀλλήλοις τῆς ἀδικίας κατὰ τὴν τοῦ χρόνου τάξιν, KRS 101. Adapting Kahn's translation in some respects, and accepting his demarcation of what Simplicius takes Theophrastus to be setting forth as a direct quotation. Kahn, *Anaximander and the Origins of Greek Cosmology* (New York: Columbia University Press, 1960), p. 166.

center. Time is the circular outreach, ecstatically crossing the downward and inward direction, creating the spiral and counter-spiral of the Flux. Syntax is the form of the inward agreement of gravity and time. Its most perfect utterance is silence. In the end, it is αἰών. It is the "Now!" pronounced by the goddess of Parmenides, the numbering power of the soul in Aristotle, the soul in the two-dimensional self-constituting ecstases of consciousness that connect Plotinus and Iamblichus to Husserl, and ourselves.

Time is what reaches through this entire history. It is the phenomenon of the phenomenal itself, it is what silence says to consciousness.

APPENDIX 1

ARISTOTLE'S *PHYSICAL LECTURES ON TIME*

Physics *IV, 10–14: A Minimal Translation*

What follows is a minimal translation, that is to say, a text that is minimally made English in order to preserve as much of the syntax of the Aristotelian Greek as possible. It follows Ross's text except in a few passages discussed in Chapter 3. It relies largely on Hardy and Gaye as far as construing the Greek is concerned. Hope and Apostle have both been consulted, but seemed not to serve here. Even Hardy and Gaye, who are strenuously literal, seem to resolve too many idioms into English 'equivalents'. It does not seem appropriate in a treatise on time to decide in advance which features of the syntax are to be understood under the aegis of the formal problematic, and which are merely idiomatic. Is it safe to replace a tensed triad of the verb 'to be' with an English 'past, present, future'? And, can we safely replace a phrase containing an important temporal adverb, e.g. ὃ ποτε ὄν, with a noun like 'substrate'? What are the limits on changing the order of clauses and of parenthetical inclusions? The version that follows—more a study than a translation—is intended to be entirely literal.

Articulation of the argument into paragraphs, especially in those cases when they are numbered or otherwise indexed, closely follows the account of its structure with which Thomas Aquinas begins each Lecture of his *Commentary*. Typographical and layout devices within paragraphs vary with the density of the exposition, which is sometimes quite prosaic, sometimes tightly dialectical and dense.

Chapter 10: The Temporal Aporetic

217b Next to be taken up in these inquiries is to seek after time.

30 And first it bodes well to consider perplexities about it and to do so through exoteric reasonings, [asking]: (1) whether it is of things being or nonbeing, and then (2) what is its nature.

(1) That indeed it either entirely does not be, or scarcely and obscurely, one might suspect from these [considerations]:

a) For *this* of it has happened and does not be, *that* comes along
218a and does not be yet; and of these consist both boundless time and the time which is always being taken up. It would seem impossible that what is put together from non-being participates in essence.

b) Furthermore, of every divisible thing it is necessary, if it is, for either all of the parts to be or some. Of time, some of the parts
5 have happened, some happen, none are—time being of parts. The Now is not a part; for the part measures, and the whole must be put together out of the parts, but time does not seem to be put together out of Nows.

c) Again, of the Now that appears to divide the past and the future:
10 whether it always remains one and the same or is other and other, is not easy to see.

(i) For if it is always different and different, and none of what are other and other parts in time are simultaneous (unless the one contains, the other is contained, as the lesser time by the fuller), and the non-being Now, beforehand being, necessarily perished some-
15 time, then the Nows too will not be simultaneous to one another, but the one beforehand of necessity has always perished.

It is not as though it has perished in itself, however, since then it is, and it is inadmissible that the former Now has perished in another Now. For we may lay it down that it is impossible for the Nows to be neighbors of one another, any more than a point of a
20 point. Yet if it did not perish in the one next in succession but in another, it would be simultaneous with the infinite Nows in between; but this is impossible.

(ii) On the other hand, it is not possible that it remains ever the same. Of no divisible determinate thing is there one boundary, whether it be continuous in one [dimension] or in more; but the
25 Now is a boundary, and time is grasped as a determinate thing.

Further, if to be simultaneous according to time—neither beforehand nor afterward—is to be in one and the same Now, then if things beforehand and things afterward are in this Now, then things which happened ten thousand years ago would be simultaneous with things which happened today, and neither beforehand nor afterward
30 would anything be to anything else.

About the things taken for granted about time, let these remarks lay down the difficulties.

(2) What time is, and what is its nature, is alike as unclear from what has been handed down as among those things which we wound up working through earlier. For some assert it to be a) the motion
218b of the whole, others b) the sphere itself.

a) Yet part, too, of the revolution is a time, but is not a revolution. For what is taken is part of a revolution, but not a revolution. Moreover, if the heavens be more than one, the movement of any
5 one of them would alike be time, resulting in many times at once.

b) To those who said time to be the sphere of the whole, it seemed that everything is in time, and in the sphere of the whole. This interpretation is too trivial to support inspection of the impossibilities about it.

10 But since, most of all, time seems to be motion and some sort of change, this view is worth study.

(i) Now the change and motion of each thing is only *in* the thing itself which changes, or *where* the moving and changing thing itself happens to be; but time is alike both everywhere and with all things.

15 (ii) Again, all change is faster and slower, but time is not; for the slow and fast are defined by time—fast is much movement in a short time, slow little in a long time; but time is not defined by time, neither by being a certain quantity of it nor a quality.

20 So it is now apparent that time is not motion. (In the present [context] we need not distinguish in speaking of motion and of change).

Chapter 11: The Number of Motion

218b And yet on the other hand not without change either.

For whenever we do not change for ourselves the process-of-thought [διάνοια] or its changing escapes us [we fail it of attention], no time seems to us to have happened;

25 Just as not for those in Sardos about whom the story is told that they sleep among the heroes, when they awaken. For they synapse the Now beforehand with the Now afterward and make them one, cancelling the in-between [τὸ μεταξύ] through anaesthesia.

It is like this: if the Now [then] was not different but the same and one, time would not be; and so too when it slips away [presently] that the different one is being, the in-between does not seem to be time.

If, then, the non-supposing [τὸ μὴ οἴεσθαι] time to be happens to us when we do not define/delimit/horizon [μὴ ὁρίσωμεν] any change at all, but the soul appears to remain in one and in indivisibility, while when we perceive and define [changes], then we affirm time to have happened, it is evident that time does not be without motion and change.

219a So then: that time is neither motion nor without motion is evident.

Since we are seeking *what* time is, we must take our start from this: *What* is it *about* motion?

For simultaneously [ἅμα γὰρ] we are sensible of [αἰσθανόμεθα] motion and of time.

For even when it is dark and we suffer-no-affect through the body, but some motion takes place in the soul, straightaway at once time also seems to have happened.

Not only that but, when there seems to have happened some time, at once too some motion appears to have happened.

Hence time is either motion or something about motion. Since it is not motion, it is necessary that it be something about motion.

Now [δε] since a thing moving is moved *out of* something *into* something, and all magnitude is continuous, motion corresponds to magnitude; for on account of the fact that the magnitude is continuous, the motion too is continuous; and through the motion, time. For how much the motion, just so much too does time ever seem to have happened.

Now then [τὸ δὴ . . .]:

The beforehand/afterward is first of all in place;
therein, however, in respect to *position* [τῇ θέσει];
and since the beforehand/afterward is in magnitude, it is necessary that beforehand/afterward be in motion too,
it [motion] having analogy to them [position and magnitude].

But then in time too is the beforehand/afterward, through the ever-corresponding of the one [of time and motion] to the other.

But the beforehand/afterward *is* in motion;
what is being at the time [ὃ ποτε ὄν] is motion;
the 'to be' of it [τὸ εἶναι] is different and is not motion.

But this anyway:
we *recognize* time [γνωρίζομεν] when we have defined/identified [ὁρίσωμεν] the motion determining/horizoning [ὁρίζοντες] the beforehand/afterward;

and we then affirm time to have happened, when we take perception [αἴσθησιν λάβωμεν] of the beforehand/afterward in the motion.

But we define/identify/horizon by the other and other,
grasping [ὑπολαβεῖν] them and something in between [μεταξύ τι] different to them;
for when we apprehend [νοήσωμεν] the extremes different from the middle and the Soul says the Nows two,
the one beforehand, the other afterward,
then and this we affirm to be time.

For what is defined/identified/horizoned by the Now seems to be time.

And let this be laid down.

So then:
when we are sensible of [αἰσθανώμεθα] the Now as one
and neither as beforehand and afterward in the motion
nor as the same [Now] of some beforehand and of some afterward,
time does not seem to have happened, not a bit, because no motion.
When however [we are sensible of] the beforehand/afterward, then
219b we read/speak of [λέγομεν] time;
for this is time, the *number* of motion according to the beforehand/afterward.

Time then is not motion, but that by which motion has number.
A sign of this:
we decide/discern [κρίνομεν] more and less by number,
but more and less motion by time,
so time is some sort of number.

But since number is in two ways,
(for both what is counted and the countable we call number, and that by which we count),
time is what is counted and not what by which we count. That by which we count and what is counted are different.
And just as motion is ever other and other, so too is time.
But all simultaneous time is selfsame;
for the Now is the same, which was at the time [ὅ ποτ' ἦν]; the 'to be' for it is different.

The Now horizons/delimits [ὁρίζει] time in respect to beforehand/afterward.
The Now is, on the one hand, the same, on the other, not the same.

For, in the way that it is in other and other, it is different (this was for it the being Now),
while in the way that the Now is what is being at the time [ὅ ποτε ὄν], it is the same.
For motion corresponds to magnitude, as we said,
and time with motion, as we are affirming.
And similarly, what is carried along [τὸ φερόμενον],
by which we recognize motion and in it the beforehand/afterward, corresponds to the point.
But it is this (the point or the stone or some other such),
being at the time [ὅ ποτε ὄν],
that is the same.
But with respect to logos it is different,
as when the Sophists take as different the Coriscus who is in the Lyceum and the Coriscus in the Agora.
And it is this [the thing carried along] that is different, through the otherwise and otherwise.
But the Now corresponds to the thing carried along, just as time with motion.
For by the thing carried along we recognize the beforehand/afterward in motion;
that by which the beforehand/afterward is something countable is the Now.
Hence also in them the Now, what is being at the time, is the same (for the beforehand/afterward *is* in motion),
but the 'to be' is different (for that by which the beforehand/afterward is something countable is the Now).

And it is this above all that is familiar, for motion [is recognized] through what is in motion, and a course through what is carried along. For what is carried along is something, the motion is not. And so it is that the Now is ever the same, and that it is ever not the same; for likewise what is carried along.

It is evident too that if time were non-being, the Now would not be; if the Now were not being, time would not be. For they are simultaneous, just as what is carried along and the course. For time is the number of the course, while the Now is like what is carried along, as though a monad of number.

Indeed, time is both continuous with respect to the Now, and is divided according to the Now, for this holds with both the course and the thing carried along.

For both the motion and the course are one with respect to what is carried along;

one, though, not as what is being at the time (which in fact might be intermittent/open a gap/leave an interval [διαλίποι]),

but with respect to logos.

And this is what horizons/defines/identifies the motion beforehand/afterward. And in some way this corresponds to the point; for the point both coheres the length and delimits it; for it is of the one [motion afterward] a beginning, of the other [motion beforehand] the end.

But when one takes it like this, using the one as two, it is necessary to stop/stand still [ἵστασθαι]—if the same point is to be beginning and end. But through the being moved of what is carried along the Now is ever different.

Consequently, time is number, not in the manner of the same point which is beginning and end, but instead as the ends of the line; and not as parts, both on account of what is stated (one resorts to the middle point as twofold, so that it will stand still), and because it is evident that the Now is no part of time, no more than the division of the motion, no more than the point of the line; but the lines that are two are parts of the one.

Insofar then as the Now is a boundary, it is not time, but an accident; insofar as it numbers, it is number. For there are boundaries of that alone which is bounded, but number is of these horses, is the decade, and otherwise.

And so now [τοίνυν], that time is a number of motion according to the beforehand/afterward, and is continuous (since of things continuous), is evident.

Chapter 12: The Measure of Motion

The least number simply speaking [ἁπλῶς] is the dyad.

A least number-in-particular on the one hand there is, on the other there is not, in the same way as, of the line, for plurality there is a least, namely two (or one), while there is no least for magnitude since every line divides forever.

And so it is with time; for the least according to number is one or two, while according to magnitude there is no least.

220b It is also evident that time is not said to be fast and slow; but it is said to be many and few and long and short. For as continuous it is long and short, as number many and few. But it is not fast and slow; for no number by which we count is fast, nor is any slow.

And there is the same [time] everywhere at once, but not the same [time] beforehand and afterward, because the present change is one, the change that has happened and the change coming are different.

Time is number, not by which we count but that which is counted; but this occurs ever different beforehand and afterward, for the Nows are different. For the number is one and the same of a hundred horses and a hundred men, but the things of which there is number are different—horses and men.

Yet just as it is possible for motion to be the same and one, again and again, so also the time—as year, or spring, or autumn.

We not only measure motion by the time, but time by the motion, through their being determined/horizoned by one another; for the time defines/delimits the motion, being a number of it, and the motion the time.

And we say the time to be many and few, measuring by means of the motion, just as we say the number with respect to the countable—i.e. the number of horses with respect to the unit horse. For

we know the plurality of the horses by means of the number; and again, by the unit horse we know the number itself of the horses.

And it is likewise with time and motion; for we measure the motion by the time, the time by the motion. And this happens with good
25 reason; for the motion corresponds to the magnitude, the time to the motion, in that they are each quanta and continua and divisibles. For the motion possesses these [characteristics] through the magnitude being such-and-such, and through the motion, the time. And we measure both the magnitude by the motion and the motion
30 by the magnitude; for we affirm the road to be long if the journey is long, and the journey to be long if the road is long; and the time if the motion, and the motion if the time.

Now since time is a measure of motion and of being moved, it
221a measures the motion by defining/delimiting some particular motion which will measure out the whole (just as also the yard measures length by delimiting a particular magnitude which will measure up the whole).

And for motion, 'to be in time' is for both motion itself and its
5 'to be' to be measured by time; for it measures at once both the motion and the 'to be' of the motion, and this is for motion the 'to be in time', that the 'to be' of it is measured.

It is also clear that for other things this is 'to be in time', that their 'to be' is measured by time.

'To be in time' is one or the other of two things:
a) to be when time is, or
10 b) as we say of something that it is in number. This signifies either:

(i) that it is a part of number or a state of it, and in general that it is something about number; or

(ii) that there is a number of it.

b) Since time is a number:

(i) the Now and the beforehand and whatever is of the same such sort are in time, just as the monad and the odd and the even are
15 in number (for each of the latter is something about number, each of the former something about time);

(ii) but matters-of-fact are in time as in the number of them; and if this is so they are contained by time just as both the things in number by number and the things in place by place.

a) It is plain too that 'to be in time' is not to be when time is, just as 'to be in motion' and 'to be in place' are not to be when/where motion and place are. For if 'to be in something' will be like this, all matters-of-fact will be in anything, and the heaven in a grain of sand; for when the grain of sand is, so also is the sky. But this happens by accident, while that follows of necessity—both for something being in time that there is some time when it is, and for something being in motion that there is motion when it is.

Now since 'in time' is as 'in number', some time greater than that of every being may be taken. So of necessity all the beings in time are contained by time, just as other things also that are in something, e.g. things in place by place.

And a thing is affected by time, just as we are accustomed to say that time melts things away, and everything grows old by time, and there is lapsing into oblivion through time, but not that there has been learning, nor having become young and fair. For time in itself is rather the cause of perishing; for it is a number of motion, and motion disperses subsistence [ἐξίστησιν τὸ ὑπάρχον].

Hence it is evident that the ever-beings, *qua* ever being, are not in time. For they are not contained by time, nor is their 'to be' measured by time. A sign of this is that none of them is affected by time, which indicates that they do not 'be' in time.

Now since time is a measure of motion, it will also be a measure of rest.

For all rest is in time.

For just because something being in motion is necessarily moved, it does not follow that what is in time is too;

for time is not a motion, but a number of motion, and rest can also be in a number of motion.

For not everything immobile rests, but only that which, though naturally moving, is deprived of motion, as was stated earlier [202a4].

'To be in number' is that there be some number of a matter-of-fact, and that the 'to be' of it be measured by the number in which it is—so, if a thing in time, by time.

Time will measure what is moving and what is resting, the one *qua* in motion, the other *qua* at rest. For it will measure what quantity their motion and rest are. Hence what is moving will not be measurable by time simply in that it is some quantity, but in that its motion is a quantity.

20 Hence what is not moved and what does not rest is not in time; for 'to be in time' is to be measured by time, and time is a measure of motion and rest.

So it is evident that not all of what is non-being will be in time; as in the case of what does not otherwise admit of being, for example the diagonal to be commensurate with the side.

25 For in general, if time in itself is a measure of motion, and by accident is a measure of other things, it is clear that for the things whose 'to be' it measures, their entire 'to be' will be in resting or moving.

Therefore the perishable and generable and in general what at one time is being, at another time not, necessarily is in time; for 30 there is some greater time, which will extend both beyond their being and beyond what is measuring their essence.

And of the non-beings that time contains, some were, as Homer 222a once was, some will be, as any of the things that are going to be—depending on whichever way it contains. And if in both, then in both ways.

But if time does not contain them in any way, they neither were nor are nor will be. Such are those of the nonbeings whose opposites always are. For example, it always is that the diagonal is incom- 5 mensurate, and this will not be in time. Nor therefore will [to be] commensurate [be in time]; hence, it ever is not, since it is contrary to what ever is.

But in those cases where the contrary is non-forever, the things can both be and not, and there is genesis and perishing of them.

Chapter 13: The Temporal Adverb

222a10 The Now is:

a) the continuity/coherence [συνέχεια] of time, as was said; for it holds together time which is passed and which will be.

And it is the boundary of time, too;
for it is of the one the beginning, of the other the end.
But this is not as evident as in the case of the point
which remains fixed.
It divides potentially; as such the Now is ever different;
but as connecting it is ever the same—as in the case of mathematical lines: for a point is not always the same for noesis;
dividing, it is other and other; as one, it is entirely the same.

And in the same way the Now is on the one hand a division of time with respect to potency, on the other a boundary of both and a unity. And the dividing and the uniting are the same and with respect to the same, but the 'to be' is not the same.

b) So: one of the ways 'Now' is said is like this;
another is when time is nigh to one like this, as
"he will come now" because he will come today,
"he has come now" because he arrived today.

The things that happened in the Iliad are not now, nor is the flood now—not that the time to them is not continuous/coherent, but because they are not nigh.

SOMETIME/AT A TIME ['at some point in time'] (ποτέ) is:

a time determinate with regard to the former Now, for example: "at some time Troy was taken" and "sometime there will be a flood." For this must be made definite with regard to Now. There will therefore be some particular quantity of time from Now to that [future event], and there was [such a particular quantity] [from Now] to the past [event].

But if there isn't any time that is not 'sometime', every time will be definite. Does time then stop/leave off [ὑπολείψει]? Surely not, if there is always motion? Is it other, or is it often the same?

It is clear that as with motion, so also with time; for if one and the same motion is happening at some time, the time will be one and the same; and if not, it will not be.

222b Since the Now is end and beginning of time, not however of the same time, but end of time lying behind, beginning of time about

to be, it obtains that just as the circle is in some way, in the self-same, convex and concave, so also time is always at a beginning and at an end. And because of this it appears always different; for the Now is not beginning and end of the same thing—for then it would be opposites simultaneously and in the same respect. And it does not leave off, of course, for it is always at a beginning.

PRESENTLY (FORTHWITH/JUST: (ἤδη = *iam*) is:

the part of time-about-to-be that is nigh to the present Now-indivisible: "When do you walk?" "Presently/forthwith," because the time is nigh in which he is going to;

and the part of time-left-behind that is not far from the Now: "When do you walk?" "I have presently/just been walking."

But we do not say "Troy has presently/just been taken," because it is too far from the Now.

RECENTLY is:

the portion of the past which is nigh to the present Now.

"When did you arrive?" "Recently," if the time is nigh to the Now which is prevailing.

LONG AGO means far [from Now].

The INSTANTANEOUS (τὸ ἐξαίφνης) is:

what stands away in a time imperceptible on account of smallness; all change is by nature a standing away [ἐκστατικόν].

Everything becomes and wastes away in time; hence some have called it the wisest thing, but the Pythagorean Paron the most stupid, because in it things slip away/escape attention/are forgotten [ἐπιλανθάνονται]; he speaks more correctly. It is evident then that in itself it will be the cause of wasting away rather than of becoming, as was also said earlier (for change is in itself an ἐκστατικόν), and of becoming and of being by way of coincidence.

A sufficient indication of this is that nothing becomes without itself moving something and acting, but a thing can be destroyed and be not moving at all. And this [change] is what we are chiefly used to meaning by the 'wasting away of time'. Still, time does not do this; even this change happens incidentally in time.

It has been stated, then:

that there is time, and what it is;

and the number of senses in which 'Now' is said;

and what 'sometime' and 'recently' and 'presently' and 'long ago' and the 'instantaneous' are.

Chapter 14: Additional Considerations

These things having thus been distinguished for us, it is evident:

that every change and everything in motion is in time.

For there is faster and slower with respect to every change (for in them it so appears). By 'moving faster' I mean changing into the
223a *subjectum* [ὑποκείμενον] before [some other moving thing], with respect to the same interval [of time], moving with equable motion. An example is traversal, if both [are moving] in accordance with the periphery [of a circle] or both according to a straight line; and similarly in other cases.

But the 'beforehand' is in time; for we say 'beforehand/afterward' in relation to standing away from the Now, where the Now is the border of the past and the future; so that since the Nows are in time, so will the beforehand and afterward be in time. For in that in which the Now is, so also is the standing away from the Now.

But 'beforehand' is said in a contrary manner in reference to time passed and to time about to be; for in the past, we say that what is farther from the Now is beforehand, what is nearer is afterward, while in the future the nearer is beforehand, the farther afterward.

So: since the beforehand is in time, and the beforehand belongs to every motion, it is evident that every change and every motion is in time.

It is also worth inquiring (a) what bearing time has toward the soul, and (b) on account of what does there seem to be time in everything, both on earth and on the sea and in heaven.

b) Is this because it is some passion or state of motion (being a number [of motion]), and because all these things are movables (for all are in place), and because time and motion are simultaneous with respect to potency and with respect to act?

a) Whether, there being no soul, there would be time, someone might call into question [be at an impasse over]. For if there cannot be

something which can number, there also cannot be something numerable, so that evidently there cannot be number. For number is either that which has been numbered, or which is numerable. And if nothing other than soul and the mind of soul were so natured as to number, time would be impossible, there being no soul—unless time is, like motion (if it turns out that motion can be without soul), just a 'this' which is being at the time [ὃ ποτε ὄν]. The beforehand/afterward *are* in motion; *qua* counted, they are time.

One might also raise the question, of what sort of motion is time the number? Of any kind? For [things] both come to be in time and waste away, and increase and alter and traverse. So far as each is a motion, in that respect there is a number of each motion. And so [time] is simply the number of continuous motion, not of any particular kind of it.

But now [νῦν] [let it be supposed] there is something else moved as well; there would be a number of each of the motions. Accordingly the time is different, and there would be two equal times simultaneously.

Yes? No. For time that is equal and simultaneous is selfsame and one; even those that are not simultaneous are [one and the same] in species. For if there were dogs, and horses, in each case seven, the number is the same. Likewise, of motions that are simultaneously accomplished, the time is selfsame, though one may well be fast and the other not, and one may be traversal, the other alteration. Still, the time is the same, if it is both equal and simultaneous—that of the alteration as well as of the traversal. And on account of this, [though] the motions are different and separate, the time is everywhere the same, because also the number is one and the same everywhere of what is simultaneous and equal.

Now since there is traversal, and of this [there is] the circular; and since each thing is numbered by some unit homogeneous with it (monads by a monad, horses by a horse); then in the same way time [is numbered] by some determinate/horizoned time.

And it is measured, as we said: time by motion as well as motion by time. This is so because by a motion made determinate/horizoned by time is measured the quantity of the motion as well as of the time.

If, accordingly, that which is primary is the measure of everything

homogeneous with it, then equable circular traversal is most of all the measure of time, because its number is best known. Now neither alteration nor increase nor coming to be are equable, but traversal is. And this is why time seems to be the motion of the sphere, because by this the other motions are measured, and time by this motion. And this is why too the common saying arises, the declaration that human affairs are a circle, along with other things having natural motion and coming to be and perishing.

This is because all these are discriminated by time, and take end and beginning as though according to some period. For also time itself seems to be some [kind of] circle. Again, this seems [to be the case] on account of the fact that [time] is the measure of this traversal, and is itself measured by such, so that to say that the affairs that come to be are a circle is to say that there is a circle of time; and this is to say that time is measured by a circular traversal. For aside from the measure, nothing else appears alongside the measurable, but that the whole is a plurality of measures.

[And it is correctly said, too, that the number is selfsame of sheep and of dogs, if each are equal, but not the same decade or the same tens, just as the equilateral and the scalene are not the same triangles, yet are the same figure, because both are triangles.

For they are said to be the same which do not differ by differentiae, but not if they do; e. g. triangle differs from triangle by a differentia of triangle, therefore they are different triangles. But of figure [they are] not [different], but are in one and the same division of it. For a figure of one kind is a circle, of another kind a triangle, and of this, one kind is equilateral, the other kind scalene. Accordingly the figure is the same, and this 'triangle', but the triangles are not the same.

So too, the number is selfsame (for their number does not differ by a differentia of number), but it is not the same decade; for the things of which it is said differ—for these are dogs, those are horses.][1]

[1] It is widely, and I believe correctly, judged that the bracketed lines are a later interpolation.

And about time then,
both of itself and of those things pertinent to consider about it,
it has been treated.

APPENDIX 2

THE POEM OF PARMENIDES, FRAGMENT 8

Simplicius, *In Phys.*, 145[1]

μοῦνος δ' ἔτι μῦθος ὁδοῖο
λείπεται, ὡς ἔστι. ταύτῃ δ' ἐπὶ σήματ' ἔασι
πολλὰ μάλ', ὡς ἀγένητον ἐὸν καὶ ἀνώλεθρόν ἐστιν,
οὖλον μουνογενές τε καὶ ἀτρεμὲς ἠδ' ἀτέλεστον.
οὐδέ ποτ' ἦν οὐδ' ἔσται, ἐπεὶ νῦν ἐστιν ὁμοῦ πᾶν
ἓν συνεχές·

τίνα γὰρ γένναν διζήσεαι αὐτοῦ;
πῇ πόθεν αὐξηθέν; οὔτ' ἐκ μὴ ὄντος ἐάσω
φάσθαι σ' οὐδὲ νοεῖν· οὐ γὰρ φατὸν οὐδὲ νοητὸν
ἐστὶν ὅπως οὐκ ἔστι. τί δ' ἄν μιν καὶ χρέος ὦρσεν
ὕστερον ἢ πρόσθεν τοῦ μηδενὸς ἀρξάμενον φῦν;
οὕτως ἢ πάμπαν πέλεναι χρεών ἐστιν ἢ οὐχί.
οὐδέ ποτ' ἐκ μὴ ὄντος ἐφήσει πίστιος ἰσχὺς
γίγνεσθαί τι παρ' αὐτό. τοῦ εἵνεκεν οὔτε γενέσθαι
οὔτ' ὄλλυσθαι ἀνῆκε δίχη χαλάσασα πέδησιν,
ἀλλ' ἔχει.
ἡ δὲ χρίσις περὶ τούτων ἐν τῷδ' ἔνεστιν·
ἔστιν ἢ οὐκ ἔστιν· κέκριται δ' οὖν ὥσπερ ἀνάγκη,
τὴν μὲν ἐᾶν ἀνόητον, ἀνώνομον (οὐ γὰρ ἀληθὴς
ἐστιν ὁδός), τὴν δ' ὥστε πέλειν καὶ ἐτήτυμον εἶναι.
πῶς δ' ἂν ἔπειτα πέλοι τὸ ἐόν, πῶς δ' ἄν κε γένοιτο;
εἰ γὰρ ἔγεντ' οὐκ ἔστ' οὐδ' εἴ ποτε μέλλει ἔσεσθαι.
τὼς γένεσις μὲν ἀπέσβεσται καὶ ἄπυστος ὄλεθρος.

οὐδὲ διαιρετόν ἐστιν, ἐπεὶ πᾶν ἐστιν ὁμοῖον·
οὐδέ τι τῇ μᾶλλον, τό κεν εἴργοι μιν συνέχεσθαι,
οὐδέ τι χειρότερον, πᾶν δ' ἔμπλεόν ἐστιν ἐόντος.
τῷ ξυνεχὲς πᾶν ἐστιν· ἐὸν γὰρ ἐόντι πελάζει.

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[1] *Simplicii In Aristotelis Physicorum Libros Quattuor Priores Commentaria*, ed. H. Diels. Commentaria in Aristotelem Graeca, vol. ix: Berlin: 1882.

B8[2]
THE PROGRAM

1 This alone yet, the account of the route,
2 remains, how it is. And along this route signposts further (you),
3 many indeed, (indicating) how, being ungenerated and unperishing, (it) is
4 whole, monogeneric as well as untrembling, and not without finish;[3]
5 and never once was, never will be, since now (it) is at once total:
6a One coherent.

Signpost 1: Being ungenerated and unperishing

6b For what birth would you seek for it?
7 Whereunto, wherefrom has it grown? Not 'from non-being' shall I
8 let you propose or think, for neither proposable nor thinkable
9 is 'how it is not'. Besides, what requisite would it be that would impel it
10 afterward or beforehand as something starting from nothing to emerge?
11 So the Requirement is that it turn up either altogether or not at all
12 And not sometime will the force of Conviction allow that out of non-being
13 something eventuates besides itself. On account of this, neither generation
14 nor perishing would Justice let loose, slackening her restraints,
15a but she holds.
15b The decision about these matters consists in this:
16 is, or is not. But it has been decided, as is the Constraint,
17 the one to leave unthinkable, unnameable, for it is not a true
18 route, the other to (let) happen and authentically be.
19 How could being 'happen next'? How at all could it become?
20 For if it became, it is not, as little as if it is sometime going to be.
21 Thus has generation been extinguished, and unheard-of perishing.

Signpost 2: Whole

Monogeneric (indivisible as to kind, uniform, homogeneous, coherent)
22 It is not divisible, since it is all alike,
23 and not something here more, which might prevent it from cohering,
24 or something less, but all is filled up with being.
25 So all is coherent, for being concerts with being.

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[2] Fragment number as given by H. Diels, *Die Fragmente der Vorsokrater*, now conventional.
[3] Translating the emendation of Brandis, οὐδ' ἀτέλεστον. See chapter 4, notes 18–22.

Simplicius, *In Phys.* 145–146

27 αὐτὰρ ἀκίνητον μεγάλων ἐν πείρασι δεσμῶν
28 ἔστιν ἄναρχον, ἄπαυστον, ἐπεὶ γένεσις καὶ ὄλεθρος
146:1 τῆδε μάλ' ἐπλαγχθησαν, ἀπῶσε δὲ πίστις ἀληθής,
2 ταὐτόν τ' ἐν ταὐτῷ τε μένον καθ' ἑαυτό τε κεῖται.

3 χοὔτως ἔμπεδον αὖθι μένει· κρατερὴ γὰρ ἀνάγκη
4 πείρατος ἐν δεσμοῖσιν ἔχει, τό μιν ἀμφίς ἐέργει.
5 οὕνεκεν οὐκ ἀτελεύτητον τὸ ἐὸν θέμις εἶναι.
6 ἔστι γὰρ οὐκ ἐπιδευές. μὴ ὂν δ' ἂν παντὸς ἐδεῖτο.

7 ταὐτὸν δ' ἐστὶ νοεῖν τε καὶ οὕνεκέν ἐστι νόημα.
8 οὐ γὰρ ἄνευ τοῦ ἐότος, ἐν ᾧ πεφατισμένον ἐστίν,
9 εὑρήσεις τὸ νοεῖν. οὐδ' εἰ χρόνος ἐστὶν ἢ ἔσται
10 ἄλλο πάρεξ τοῦ ἐόντος. ἐπεὶ τό γε μοῖρ' ἐπέδησεν
11 οὖλον ἀκίνητόν τ' ἔμεναι. τῷ πάντ' † ὠνόμασται
12 ὅσσα βροτοὶ κατέθεντο πεποιθότες εἶναι ἀληθῆ,
13 γίγνεσθαί τε καὶ ὄλλυσθαι, εἶναί τε καὶ οὐχί,
14 καὶ τόπον ἀλλάσσειν διά τε χρόα φανὸν ἀμείβειν.

15 αὐτὰρ ἐπεὶ πεῖρας πύματον, τετελεσμένον ἐστὶ
16 πάντοθεν, εὐκύκλου σφαίρης ἐναλίγκιον ὄγκῳ,
17 μεσσόθεν ἰσοπαλὲς πάντῃ· τὸ γάρ οὔτε τι μεῖζον

18 οὔτε τι βαιότερον πέλεναι χρεών ἐστι τῇ ἢ τῇ.
19 οὔτε γὰρ οὔτ' ἐὸν ἔστι, τό κεν παύῃ μιν ἱκνεῖσθαι
20 εἰς ὁμόν, οὔτ' ἐὸν ἔστιν ὅπως εἴη κεν ἐόντος
21 τῇ μᾶλλον τῇ δ' ἧσσον, ἐπεὶ πᾶν ἐστιν ἄσυλον·
22 † οἱ γὰρ πάντοθεν ἶσον, ὁμῶς ἐν πείρασι κύρει.
23 ἐν τῷ σοι παύω πιστὸν λόγον ἠδὲ νόημα
24 ἀμφὶς ἀληθείης· δόξας δ' ἀπὸ τοῦδε βροτείας
25 μάνθανε, κόσμον ἐμῶν ἐπέων ἀπατηλὸν ἀκούων.

26 ταῦτα μὲν οὖν τὰ περὶ τοῦ ἑνὸς ὄντος ἔπη τοῦ Παρμενίδου.

B8

Untrembling (indivisible as to state, isotonic, homeostatic, still)

Again, quiescent in the bonds of great restraints
it is without start, without stop, since generation and perishing
here have been warded off entirely, and true Conviction has repelled them.
The same and in the same abiding by itself it reposes.

Not unfinished

In this manner it abides here steadfast; for mighty Constraint
holds it in the restraints of a bond which enfolds it all about.
Wherefore there is no Permission for being to be something unfinished.
For it is not wanting of anything; non-being would be in want entirely.

Signpost 3: Now is at once total

The same is thinking and wherefore is the thought-upon.
For not without being, in which it is what has been uttered,
will you find thinking, as little as if Time is or is going to be
something other outside of being, since Fate has shackled it
whole and quiescent to be. For this the name shall be everything[4]
which mortals posit convinced that it is true:
becoming as well as perishing, being as well as not,
and alteration through place, and exchange of bright colors.

Signpost 4: One coherent/continuous/continual (finished, nothing can intrude)

Moreover, since there is a final bond, it has been completed
in every direction well-rounded resemblent to the bulk of a sphere
from the center equipoised every which way.
For that there not be something greater
or something smaller here or there is the Requirement.
For there is not that which is not which might stop it from reaching
into sameness, nor is there that which is whereby it might be being
here more and there less, since all is inviolate.
For entirely isotropic with itself, it meets up with the bonds equably.
With this, I stop for you the convincing discourse and the thought-upon
around the truth. Hereupon opinions of mortals
learn, listening to the disguising cosmos of my words.

"These are the words of Parmenides about the Being One." (Simplicius)

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[4] Reading τῷ πάντ' ὄνομ' ἔσται. See Chapter 4, note 36.

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Abbreviation

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Chapter 4. Parmenides: Time as the Now

Abbreviations

DK Diels, Kranz, *Die Fragmente der Vorsokratiker*
KRS Kirk, Raven, and Schofield, *The Presocratic Philosophers*

Diels, H. and Walther Kranz. *Die Fragmente der Vorsokratiker*. 3 vols., 6th edition. Berlin: Weidmann Publ., 1951.
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