PARMENIDEUM

II

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Contents

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A Portrait of Reason
Vincenzo Cerino's *Parmenides*

Else Mogensen

The words of Parmenides that have come down to us from antiquity are somewhat like the frozen words found by Pantagruel in *The Histories of Gargantua and Pantagruel*, Rabelais' tale of the dream of the perfect human being, the humanist ideal, utopia, mingled with farcical events and social satire. When dining on his boat out at sea, the great Pantagruel suddenly heard voices and sounds of men, women, children and horses, but although his eyes could see a hundred miles around, he could not make out anybody. The captain explained to him that they were in the vicinity of the frozen sea, where sometime earlier there had been a bloody battle, and the noises from the battle became frozen in the air; now that the weather was milder, the noises were melting and that is when he could hear them. Pantagruel found some words that were not yet thawed; when he warmed the words a little in his hands, they melted like snow and he heard them, but they were in another language and were therefore not intelligible.

The bronze sculpture on the lawn of Palazzo Alario in Ascea, appearing as a Homeric god who has stepped down from the Olympus, stands as a guardian of the Greek words that tell of the relations of being and thought; it is as if these words by Parmenides are frozen in time, and for more than two thousand years we have been trying to thaw them with our brains, with our minds, just like Pantagruel did with his hands; the words of Parmenides, though, are fragmented like those found by Pantagruel, and without the proper context, we do not immediately understand their meaning even if they are melted so we can hear each single syllable; the thawing involves, as we are taught by Heidegger, that we learn to think Greek in order to comprehend the Greek mode of thought. Even today the poem of Parmenides is a riddle and we have to cross over the abyss to the frozen sea to find the fragments of early Greek thinking, melt them, hear them, and make them part of our thinking, a thinking that they, in fact, themselves have shaped.

Vincenzo Cerino *Parmenides* (Photo: Don Clark)

Vincenzo Cerino's sculpture of Parmenides, an oversized bronze figure, brings to mind the severe style of early classical Greek art that form the transition from the archaic period to the potent period of the classical style, of which the Charioteer from Delphi is the outstanding example. There are certainly parallels between these two pieces of sculpture in their formal arrangement. Like the Charioteer, the Parmenides bronze has a well-balanced posture and it is formulated in a style that seems to represent the quintessence of the Apolline, the intellectual aspect of Greek culture or as Nietzsche has pointed out, the controlled and harmonious in contrast to the Dionysian way of overstepping the norms. The sculpture also contains modernity and has some of the classical tranquility, the quality of self-possession, similar to Maillol's harmonious sculptures that again constitute a contrast to the emotionalism or Dionysian quality of Rodin's work.

The figure carries a globe, a "well-rounded sphere " (εὐκυλος σφαῖρα), in one hand, an attribute that seems to signify that Parmenides, one of the foremost representatives of Greek culture in Magna Graecia with a pervading importance in the Western world, has focused our attention on the pivotal problem of metaphysics pointing out the contrast between "the way of seeming" and "the way of truth", making us understand that the only way of looking for and finding the truth is by reasoning. In the other hand he is carrying the caduceus with two snakes, the attribute of Hermes, but now also a symbol of the medical science, giving the connection to the much discussed assertion of a medical establishment in ancient Elea.

The syntax of Cerino's sculpture is like an ode by Pindar, a contemporary of Parmenides, who offered immortality in poetry. Pindar's odes, written in praise of athletic victors in the various disciplines, phrase conventional wisdom with lively retelling of his own versions of the Greek myths with colorful imagery, aristocratic values and reminds the audience of the limitations of man, as he often talks about human failure and points out that "the ways of wisdom are steep" and that the only test of real truth is time, expressing the belief of mortals, the way of seeming. Cerino's work, however, also presents Parmenides as an Olympian, a mythological figure, almost as an essence of being, and tells about a master of thought, a master of minds, who taught the world to conduct discussions, using philosophical arguments, to use reason to find the truth. The way of truth frozen in time for us to comprehend.

Logic and Semantics of Being and Time:
A Way Out of Parmenides' Paradoxes?

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1. *Parmenides' puzzles*

The reader of Parmenides' Poem is confronted by well known puzzles, his supposed negation of what is obvious: the heterogeneity of reality, change and motion, birth and death.

One might suggest that Parmenides is actually speaking of Being taken as the whole of whatever exists, say, the whole universe. For, moving from the reasonable principle that what is cannot have come from nothing, nor revert into nothing, one could well accept that Being as a whole is eternal. But why should it be homogeneous, unchangeable and motionless? Parmenides' apparent argument is that non-being does not exist, and heterogeneity, change and movement imply non-being (since B is the non-being of A, change is turning being A into non-being A, and movement is turning being at A to non-being at A). So, there can be no heterogeneity, change or movement. But in the face of such paradoxical results, the appearance of a stringently logical argument immediately gives way to suspicion of a sophistic fallacy. In fact, the argument is patently open to the fatal objection underlying Plato's "parricide":[1] Parmenides confuses being as existence with being as predication: granted, from nothing nothing comes into existence, what exists cannot cease to exist, and if A *exists*, it is not the case that it does not *exist*; but certainly A *is A*, and at the same time it *is not B*, and it can turn from *being A* to *not being A*, or from *being at A* to *not being at A*. In other words, Parmenides seems to have missed the obvious distinction between absolute non-being and relative non-being.

Otherwise, one might suppose that Parmenides is not talking about the universe, but about an underlying metaphysical reality. However, postulating unobservable entities is justified, in as well metaphysics as in science, only if it helps explaining some puzzling features of what is

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[1] Plato, *Sophist*, 241D-242A, 258A – 259B.

observable.[2] But in this instance, the observed phenomena of heterogeneity, change, and motion are not problematic in themselves; the problem only resides in our apparent inability to offer a rational account of them. So, in view of the *prima facie* veridical nature of what we experience, it would seem that the correct strategy is not to modify our account of reality, but our reasoning, i.e., finding out its fallacies. Far from convincing us of the superiority of reason over the senses, Parmenides' argument would thus lead to the opposite conclusion.

Moreover, it is a sound principle of theoretical reasoning that whenever theorization leads to conclusions which apparently conflict with observation, it should not be believed unless it also explains why appearances differ from actual reality.[3] Contemporary science, for instance, teaches that solid everyday objects like stones, tables, etc., contrary to appearances are not completely filled up by dense matter, but mainly consist of void with sparse tiny particles. However, it also explains, by the mechanisms of electromagnetic forces, optics, physiology, etc., why they appear to us in this way. Now, although something of this kind seems to be promised at the end of the Proemium ("But you shall learn these too: how, for the mortals passing through them, the things-that-seem must 'really exist', being, for them, all there is" (fr. 1, 31-32), it would not seem that the promise is delivered: the two parts of the poem seem utterly disconnected; according to a widely accepted reading it is explained in detail how the rational and the empirical accounts differ, it is claimed that the former is true and the latter is false, no independent criterion is offered, and above all, no explanation is given of why an homogeneous, unchangeable and motionless reality should appear to us as heterogeneous, changing and moving.

Admittedly, too little of the Poem is extant, and we know too little about Parmenides' theoretical context, purposes, polemical targets, etc., to be able to recognize the correct interpretation of his thought beyond doubt. But, given this unsatisfactory situation, even somewhat hazardous hermeneutic hypotheses may be worth exploring, if they can contribute to void the appearance of paradox, fallacy and inconsistency in the Poem.

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[2] Cf. M. Alai, "Dal realismo scientifico al realismo metafisico", *Hermeneutica* (nuova serie) 2005, pp.167-189, § 1.

[3] A. Angelucci, V. Fano, "Quale realtà? Per un realismo empirico tra fisica e psicologia", *Fisica e metafisica*, ed. M. Alai, supplement to *Giornale di fisica* 50 (2009), pp. 29-37, § 6.

2. *Existence, predication, identity*

A clue may be offered by two minor puzzles about Parmenides' verses: they say there are two ways of reasoning and inquiry: the "path of Persuasion" and Truth is "that *it* is and *it* is impossible for *it* not to be" (ὅπως ἔστιν τε καὶ ὡς οὐκ ἔστι μὴ εἶναι: fr. 2, 3); the other, the "wholly unthinkable path" is that "that *it* is not and *it* necessarily must not be" (ὡς οὐκ ἔστιν τε καὶ ὡς χρεών ἐστι μὴ εἶναι: fr. 2,5). The first puzzle is that there is no expressed subject to which the italicized 'it' refer. Why? It is usually assumed that the subject is Being, the sort of all-encompassing metaphysical entity which later on (supposedly) is described as one, eternal, homogeneous, unchanging, etc. But given its overriding importance (supposedly *it* is *the* subject of the Poem), why is it not explicitly mentioned? Why, in other words, did Parmenides not write "that *Being* is, and *it* is impossible for *it* not to be"?

The second puzzle is: fragment 3, "τὸ γὰρ αὐτὸ νοεῖν ἐστίν τε καὶ εἶναι", apparently says "the same is thought and Being" or "the same is thinking and being". But why should it be so? Lots of things exist without thinking, and there are lots of things which are never thought of; and if the verse means that our thought corresponds exactly to what exists and to the way it is, this is again patently false, as thought can be mistaken.

Now, turning to the first puzzle, a tempting suggestion is that what is missing is missing on purpose: the subject's place is intended to be a blank fillable by any possible subject. In other words, 'it' is a variable, and it is as if the Path of Truth were "… it is", or "∀x (x is)", and the Unthinkable Path "… it is not", or "∀x (x is not)". So, the subject here would not be the all-encompassing Being (εἶναι, latin *Esse*), but a variable ranging over any particular object (ἐὸν, latin *ens*) one could fit in place of the blank.

But the Way of Truth would be clearly false, if 'is' meant 'exists', for it is not the case that any object we could name exists. So, Parmenides should be read instead as claiming that any object we could name or describe, although not existing, *is*, just as Meinong did.[4] According to

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[4] A. Meinong, "Über Gegenstandstheorie", *Untersuchungen zur Gegendstandstheorie und Psychologie*, hrsg. von A. Meinong, Leipzig, Barth, 1904.

Meinong, one couldn't even discuss whether a given object exists or not, let alone claim that it does or does not exist, unless there *were* such an object. Moreover, the admission that there are inexistent objects, such as, e.g., a round square, would seem to explain how assertions concerning them, such as 'a round square cannot exist', or 'the round square is triangular' can be true or false: for otherwise they would not refer to anything, and so would be bereft of truth- or falsity-makers.

Apparently, in this way, Meinong introduced a third possible ontological status for objects, besides existing and non-existing: not existing, but just *being*; in other words, he would seem to have introduced a mysterious realm inhabited by all kinds of merely possible, or even impossible, inexistent objects. For this reason he has been strongly criticized by Husserl,[5] Russell[6] and Quine.[7] But Meinong may be interpreted in a much more favourable way if 'being' is read not as a predicate of the same kind as 'existing', but as the copula in predication:[8] he clearly indicates that this is the correct reading when he explains that his only point is that being so-and-so is independent of existing.[9] This is to say, properties can be meaningfully and truly (or falsely) predicated of objects, no matter whether they exist or not (or, in object language, an object may have a property even without existing). Thus, the two uses of

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[5] In E. Husserl (1894) "Vorstellung und Gegenstand", hrsg. von K. Schuhmann, *Brentano Studien*, 3 (1990/1991), pp. 137-176; (1901/13) *Logische Untersuchungen. Zweiter Band: Untersuchungen zur Phänomenologie und Theorie der Erkenntnis*, hrsg. von U. Panzer (Husserliana XIX), Dordrecht, Kluwer, 1984, pp. 384-389, 436-440; *Ideen zu einer reinen Phänomenologie und phänomenologischen Philosophie. Erstes Buch: Allgemeine Einführung in die reine Phänomenologie*, hrsg. von K. Schuhmann (Husserliana III), Den Haag, Nijhoff, 1976, pp. 206-207.
[6] B. Russell, "On Denoting", *Mind*, 14 (1905), pp. 479-493; B. Russell (review) A. Meinong, *Untersuchungen zur Gegenstandstheorie und Psychologie*, *Mind*, 14 (1905), pp. 530-538.
[7] W.v. Quine, "On What There Is", *Review of Metaphysics* (Sept. 1948), 2(5): 21-38 [reprinted in W. v. Quine *From a Logical Point of View,* Harvard University Press 1953].
[8] Cf. M. Alai, "Speaking of Nonexistent Objects", V. Raspa (ed.), *Meinongian Issues in Contemporary Italian Philosophy*, *Meinong Studies,* vol. 2., Ontos Verlag, Frankfurt, 2006, pp. 119-159.
[9] A. Meinong, "Über Gegenstandstheorie", op.cit., § 4.

the verb 'to be' as predicating existence and as copula are independent of each other and should not be confused with each other.

So, also Parmenides' verses might be read as claiming the same: "ὅπως ἔστιν τε καὶ ὡς οὐκ ἔστι μὴ εἶναι" ("that … is, and is impossible that it is not") says that any object is a possible subject of predication, and necessarily so; and "τὸ γὰρ αὐτὸ νοεῖν ἐστίν τε καὶ εἶναι" (the same is thinking and being) says that thought and being are the same, since thinking is predicating, and predicating is just asserting that the subject *is* such and such (or this or that):

> Neither could you know what-is-not (for that is impossible), nor could you point it out[10] (fr.2, 7-8).

> Whatever can be spoken or thought of necessarily *is*, since it is possible for it to be, but it is not possible for nothing to be (Fr.6, 1).

> It is the same thing, to think of something and to think that it *is*, since you will never find thought without what-is (fr. 8,34-36).

Thus, the Goddess would be offering here a sort of basic teaching in logic and philosophy of language, preliminary to the metaphysical, ethical and political wisdom she is going to dispense within the walls of the high city to which the Poet was carried by his mares. This teaching is necessary to avoid sophisms and confusions like those encountered on the "unthinkable path", according to which any object "*is not* and *necessarily must not be*". For instance,

- Polyphemus does not exist, hence he *is not* a Cyclops (on the contrary, Polyphemus *is* a Cyclops, although he does not exist);
- Homer *is not* Athenian, hence he does not exist (on the contrary, denying the copula (i.e., that a predicate applies) is not denying existence);
- Homer *is not* Hesiod, hence he does not exist (on the contrary, denying identity is not denying existence: the third meaning of 'to be', identity, must be kept distinct from the other two, existence and copula);

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[10] For, of course, "if you can't think it, you can't whistle it either".

- Homer *is not the same* as Greek, hence, Homer is not Greek, and/or
  Homer does not exist (on the contrary, again, identity is not the same
  as copula or existence).

But those falling into such confusions, if unable at the same time to
abandon the usual commonsensical counterparts of these assertions, might
be tempted to follow the second wrong path rejected by the Goddess,
according to which "τὸ πέλειν τε καὶ οὐκ εἶναι ταὐτὸν νενόμισται κοὐ
ταὐτόν" ("being and not-being are thought the same and yet not the same",
where the first 'being' (πέλω, similar to the Latin *fio*) has the prevalent
sense of a copula, almost as if it were "being [thus and thus] and not-being
are thought the same and yet not the same"). So, according to this confused
way of reasoning, one would claim that

- Homer is both Greek and not Greek; Polyphemus both is (e.g.,
  a Cyclops) and is (=exists) not; Homer both is (=exists) and is
  not (e.g., Athenian); etc.

In this way the Goddess might be warning against the Heraclitean
coincidentia oppositorum (the same thing in us is quick and dead, awake
and asleep, young and old" DK 22 B 88), or against a pre-Hegelian
principle of dialectical contradiction, as held by Heracleitus ("In the same
rivers we step in and do not step in, we are and we are not", DK 22 B 49a;
"The wise is one only. It is unwilling and willing to be called by the name
of Zeus", DK B 32) or by his disciples or by some lyrical poets.[11] In their
place, the Goddess would thus prescribe strict adherence to a sound
principle of non-contradiction.

3. *Why the subject of predication is one, homogeneous, indivisible,*
   complete, finite, eternal, unchanging and motionless
If Parmenides is not talking about the all-encompassing underlying
metaphysical Being (εἶναι) but about particular objects as subjects of
predication (ἐὸν), it becomes perfectly understandable that the entities he is
talking about are continuous, indivisible, homogeneous, and finite:
whenever we pick something as subject of predication, we consider it as one
and homogenous, abstracting from whatever might distinguish it in different

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[11] Cf. Parmenide, *Sulla natura*, ed. G. Reale, Bompiani, Milano 2001,
footnote 19, p. 133f.

parts, or differentiate its parts from one another. This is why, as Quine *pace* Heracleitus explains, that we can bathe twice in the same river (although not in the same *water*).[12] For instance, we say "The people is unhappy with the government", taking "the people" as a unity, in spite of the fact that it is made up of numberless individual persons:

> Nor is it divisible, since it all alike *is*. Nor is there any more of it here than there, to hinder it from holding together, nor any less of it, but it is all a plenum, full of what-is. Therefore, it is all continuous, for what-is touches what-is (fr. 8, 22-25).

So, holding that each single object, *qua* subject of predication, is homogeneous and undivided, in no way contrasts with the commonsensical fact that the world as a whole is heterogeneous and divided up in numberless things. Equally, when we pick something as a subject of predication, we automatically consider it as a *complete* and *finite* unity: for instance, we refer to the right amount of people (not excluding any tribe or clan belonging to *that* people, nor including any group from a neighbouring people), so that

> it must not be any greater or smaller here than there. For neither is there what-is-not, which could stop it from reaching its like, nor is there a way in which what-is could be more here and less there, since it all inviolably *is*. For equal to itself in every direction, it reaches its limits uniformly (fr. 8, 44-49).

According to a quite natural conception of time ("presentism")[13] the past does not exist (any longer), and the future does not exist (yet): "Neither future nor past exist".[14] But this conception raises problems similar to those concerning the truth values of statements about empty terms: how can the statement "Homer wrote the Iliad" be true (or false) if in any case Homer is dead, hence nothing exists (any longer) making it true (or false)? Its truth-

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[12] In "Identity, Ostension, and Hypostasis", *Journal of Philosophy* (October 26, 1950), 47(22): 621-633 [reprinted in W. V. Quine's *From a Logical Point of View*, op. cit.].

[13] Steven Savitt "Being and Becoming in Modern Physics", *Stanford Encyclopedia of Philosophy*, 2006, § 2.1.

[14] St. Augustine, *Confessions*, XI, 20,26.

(or falsity-)maker supposedly is Homer's writing (or not writing) the Iliad, but that does not exist (any longer). The same goes for future-tensed statements: how could "Themistocles will win tomorrow's battle at Salamis" ever be true? As a solution, one may adopt an almost equally intuitive conception, according to which at least the past ("possibilism"), or even the future ("eternalism"),[15] are no less real than the present, although they are not "here" with us in the present, but so to speak, "elsewhere". According to Christian theology, for instance, God can directly perceive past, present and future events at once, just like we perceive present events at different places, because He is "outside" time. This conception clearly solves the problem of the truth-conditions of tensed statement, for past and present events alike "are there" to make tensed statements true or false; but it raises puzzling problems of its own, for saying that something exists is saying that we might at least in principle encounter it by moving in space: but there is no way in which we could in principle meet Homer, see the battle of Salamis, or our future grand-grand-grand children.

However, we may save the benefits of eternalism without literally claiming that past and future *exist*, by adopting even in this case a Meinongian treatment of predication: just as we may truthfully say that an inexistent object *is* thus and thus, so we may truthfully say that at a certain past or future time something *is* the case (in ordinary language we say that it *was*, or it *will be*, the case) even if that time is not present, and so it does not exist: truth-conditions need not be something *existing*, but simply something *being*. Hence, past and future events *are* (thus and thus) even if they do not *exist*; and by extension, all past and future instants *are*, although they don't exist. A tensed statement referring to a time *t* is true just in case what it says *is* the case at time *t*. For instance, "In 480 b.C. Themistocles won the battle at Salamis" is true because in 480 b.C. it is the case that Themistocles wins the battle. (Of course, the way in which "In 480 b.C. Themistocles won the battle at Salamis" is true is different from the way in which "The round square cannot exist" is true, in at least two ways: because what the former statement says is (i.e., was) the case at only one time, while what the latter says is the case at all times; and because the subject of the former statement existed at least at some time, while that of the latter never did or will exist).

If this kind of semantics is presupposed by the Goddess' discourse, it is no longer paradoxical that being (with lower case 'b', i.e., whatever is a subject of predication) is eternal and unchanging: whatever happens,

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[15] Savitt "Being and Becoming in Modern Physics", *op. cit.*, § 2.1.

happens at one extensionless instant *t*, and it *is* the case at *t* even when *t* is gone, or has not arrived yet (or, so to speak, it remains the case at *t* forever): "Look upon things which, though absent, are yet firmly present in thought; for you shall not cut off what-is from holding fast to what-is" (fr. 4). Themistocles does not *become* or *cease* to be the victor at any instant, nobody is born or dies at any instant: at any instant one either is or is not (victor, alive, or dead). Precisely as explained by Zeno, at any given instant a flying arrow is exactly at one place: "Nor was it once, nor will it be, since it is, now, all together, one and continuous" (fr. 8,5). This is in no way incompatible with becoming and changing, being born or dying, in the ordinary sense: ordinary change and becoming is accounted for just by recognizing that there *are* different time instants at some of which something is the case and at some of which the same thing is not the case: Themistocles is not the victor in 481 b.C, he is the victor in 480 b.C., he is not even alive in 380 b.C.

Of course, it is still quite understandable why Parmenides holds that being could neither "grow out from what-is-not", nor revert into what-is-not" (fr. 8, 7.13): both in the sense that if absolutely nothing existed at one time, no thing could come into existence at a subsequent time; and in the sense that if an object A exists, and if we thought that any different object B, or C, etc., since it *is not* A, *does not exist*, then we should conclude that A cannot have been generated by B, or C, or any other entity, so it is eternal. On the other hand, it is quite all-right that, since B, C, etc. exist, A may have been generated by B, and may eventually transform into C.

4. *The final part of the Poem*
Thus, there is no need to see any contradiction between the first and the last part of the Poem, for the 'appearances' described there are veridical: the Goddess says

> You shall *know* the nature of the aether and all the signs
> in the aether, the destructive works of the splendid Sun's
> pure torch, and whence *they came-to-be*. And you shall
> *learn* the wandering works of the round-faced Moon, and
> its nature, and you shall know also the surrounding
> heaven, whence it *grew* … (fr. 19),

and the verbs 'knowing' and 'learning', used here, imply truth. So, it is implied, that there is a true account of the variety of natural phenomena, of *coming-to-be*, and of *growing*, etc. In fact Reale, renders verse 8, 60 (Τόν

σοι ἐγὼ διάκοσμον ἐοικότα πάντα φατίζω) as "This ordering of the world, altogether truthful, I completely expound to you".[16] By the same token, the promise, made at the end of Proemium, to show how and why from the human point of view things must appear as they do, is not undelivered. Precisely as we just saw, "'to come-to-be and to perish', 'to be and not to be' and 'to shift place and exchange bright colour'" (fr. 8, 40-41) are "names" we give to the global fact that in different instants of times things exist or don't exist, have certain properties or different properties. Quite in the same way, 'heterogeneity' and 'division', "aetherial flame of fire" and "dark night" (fr. 8, 56-59) are "names" we give to the fact that there are different objects of predication, and they have different properties.

Where mortals may (but by no means need to) err, is in supposing that, e.g., since day is not night, it does not exist (i.e., confusing "relative" with "absolute" not-being, as Plato will remark); or in supposing that, since they have opposite properties, either one is non-existent. For, on the contrary, each of them *is*, they have existence in common, and neither is non-existent. More generally, all different things (as well as the same thing at different times, in spite of having different properties at these times) have in common being, in the sense of being a subject of predication:

> Mortals have settled in their minds to speak of two forms, the unity of which for them is not necessary, and that is where they go astray from the truth[17] (Μορφὰς γὰρ κατέθεντο δύο γνώμας ὀνομάζειν· τῶν μίαν οὐ χρεών ἐστιν - ἐν ᾧ πεπλανημένοι εἰσίν: fr. 8, 53-54).

> All is a plenum of light and obscure night together, both equal, since nothingness partakes in neither (fr. 9).

Ruggiu and Reale adopt a similar interpretation, saving the coherence of the different parts of the Poem: Parmenides is not denying that there exist different things and different properties (in particular, day and night), but only stressing that they are manifestations of a common fundamental principle, Being; so that mortals only err when they forget the basic unity of

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[16] G. Reale, "Introduzione", Parmenide, *Sulla natura*, op.cit., p. 29.
[17] This is the translation suggested by Giovanni Reale (in Parmenide, *Sulla natura*, op.cit., p. 55 and footnote 38, p. 137).

day and night, and conceive them as absolutely opposite principles.[18] However, since Ruggiu and Reale interpret Being (with capital 'B') as a unitary cosmic principle, Reale believes that in this way Parmenides is still caught in an insuperable aporia: having denied the possibility of any differentiation within Being, he cannot explain the origin of the bipolar structure day – night. So, Plato's parricide becomes inevitable. My suggestion is, instead, that for Parmenides what is common to all things is not any unitary substantive principle, but just (a) mere (individual) existence, and (b) the capacity of becoming subject of predication. Hence, Plato's distinction of absolute *vs.* relative non-being (inexistence *vs.* just being something different), far from being a refutation of Parmenides, is firmly anticipated by him.

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[18] L. Ruggiu, "L'essere e gli enti: unità e molteplicità in Parmenide", in AA.VV. *L'uno e i molti*, ed. V. Melchiorre, Vita E Pensiero, Milano 1990, pp. 68 ff., 76 ff.; G. Reale, "Introduzione", Parmenide, *Sulla natura*, op. cit., pp. 28-31.

Epistemological Boundaries of Language and Thought: Parmenides as Forerunner of Wittgenstein

Habeeb Marouf

Parmenides' thesis, expounded in the remnants of his poem *On Nature,* can be interpreted in a Wittgensteinian sense, in that it identifies the limits of language as a means of both understanding and expressing propositions about the world. (Cf. *Tractatus* § 5.6)

In terms of the intelligibility of language propositions, that is, whether a statement is meaningful and well formed as apart from being simply syntactically coherent, we usually have no difficulty in judging whether a proposition is intelligible. However, what can be made of the following propositions?

1. If Reality ceased to exist then there would be Nothing.
2. If Reality ceased to exist then Nothing.
3. If Reality ceased to exist then _____
4. If Reality ceased to exist _____

We could go on to posit other propositions that could try and describe the state of reality if all Being were to cease being. But these four are sufficient to illustrate the dilemma at hand, and the one that also confronted Parmenides all those years ago.

With a little thought, it should be obvious that only proposition 4 is intelligible, or at least valid. Propositions 1, 2, and 3 masquerade as meaningful, well formed propositions but they are in fact non-starters and meaningless.

Proposition 1 is internally inconsistent and therefore meaningless since the copula "then there would be" cannot be applied to "nothingness". To say that "there would *be* nothing" is incoherent. Nothingness – whatever it is – cannot have a *being*, a logically obvious truth pointed out by Parmenides.

Proposition 2 is slightly better, since it does not use "beingness" in relation to nothingness. However, it still fails, because it *assumes* to speak of "Nothing".

Proposition 3 is an attempt to eliminate all reference to the "state" of "reality" which would ensue if all objects in present Reality ceased to exist. It in fact does not say anything about that ensuing "state". Except however, that it would *follow on* from the previous state (present Reality). Nevertheless, this is still somewhat a non-starter, because the proposition retains a concept of time in the use of "then". There is no legitimate reason to use temporal references to any event, even hypothetical, whose outcome results in _____ (i.e. nothingness). This objection also applies to propositions 1 and 2.

It would seem therefore, that the only proposition possible that could be considered to be well formed as well as a *starter* (that is, admissible in discourse), is of the type similar to proposition 4. Although this proposition is somewhat unhelpful, it is nevertheless well formed, though it is of course syntactically inelegant and incomplete and could rightly be rejected as inadmissible.

In fact, proposition 4 *should be* rejected as inadmissible, but not on "superficial" grounds such as syntax or inelegance, but for the fact of the lack of semantic content, rendering the proposition utterly useless. The proposition is meaningless beyond the trivial fact that it highlights the fact that of "nothing" we cannot speak.

However, this is the whole point of the thesis of Parmenides, that anything that could be said, or any *attempt* that could be made to think or say anything concerning nothingness or Not-Being is, from the start, inadmissible.

Parmenides recognised that it was not only impossible to speak of Not-Being, but that it was also unthinkable.

Therefore Parmenides faced an insurmountable difficulty in trying to articulate what he thought - or *couldn't* think - regarding "nothingness". (Though he admirably and brilliantly addressed this difficulty).

His experience may have been similar to that of the ancient Hebraic tribes when they sought to speak of God, or Yahweh. To them, this entity was so *unspeakably* unspeakable that where its name should be written in texts, it was left blank _____.

Significantly however, in the case of the Hebraic tribes, the reason for omitting the name of this supernatural being was because it was held to be unspeakably *sacred*, and not because it was simply impossible to *know* or *articulate* anything about this entity. Indeed, the Hebrews had very much to say about this supernatural being, all of it unreliable due to its being pure

doxa, one doctrine of which was that this being (God) is the cause and reason for the universe's existence.

In contrast, in the case of Parmenides (who leaves questionable positions such as sacredness well alone, something which we could be sure he would also have classified as *doxa*), he considers only what can be thought to entail knowledge and truth, or simply *alethea*.

As a result Parmenides rightly declares "not-being" as an unthinkable state of reality. He does this not simply because it is physically impossible that reality could cease to exist (or equally, that reality could come from "not-being"), but unthinkable in the sense that *no* language predicates of any description can be attached to the state that would "immediately follow" once all existent objects in the universe ceased to exist.

In other words statements such as:

"Not-Being is…" or "Not-Being would be..."

cannot be completed, and will forever remain with just a "subject" (Not-Being) and a copula (is), but no predicate. Indeed, how is it possible to predicate Not-Being?

It is therefore not possible to speak of Not-Being. It is *unspeakable*, literally, except perhaps to identify it as an imperfectly formed pseudo concept that *would* form itself coherently in our thought if it were *possible*, but the true fact is that it is both unthinkable and unspeakable.

In fact we commit a fallacy when we attempt to speak of Not-Being precisely because it is not possible to speak of it, and what ever it is that we do in fact speak of when we use the term "Not-Being", it cannot refer to _____.

Parmenides recognises this, that both conceptually and linguistically any thought or proposition that concerns "Not-Being" is imperfect and not well-formed, and is in fact a *non-starter* - including the present sentence.

In this sense of "articulating" the unspeakable, or rather articulating the *impossibility* of articulating the unspeakable, Parmenides is seen to have stated once and for all an eternal truth. He recognises, in a fundamental and rather overwhelming manner (but emphatically without mystical connotation, as Nestor Cordero explains in his book *By Being, It Is*) that it is impossible to articulate the central thought that *would*, if it were otherwise

possible, form itself with regard to the question of existence and that it therefore lies outside of language.

Parmenides' inquiry is in fact a "Wittgensteinian" type statement on the epistemological bounds to knowledge - 2500 years before Ludwig Wittgenstein, that other great, though somewhat confused, thinker.

As Wittgenstein states (in the only intelligible sentence) in his work *Tractatus Logico-Philosophicus* (§7):

> "What can be said at all can be said clearly, and what
> we cannot talk about we must pass over in silence".

I think it is not uncharitable to Wittgenstein to say that he was in fact pipped at the post (pre-empted) on this colossal truth by Parmenides, in his realisation that "of not-being we cannot think or speak".

Zeno's Dichotomy and Modern Science

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1. *The paradox*

1. Let's suppose that a physical body *B* moves at a constant speed from *a* to *b*, two different places in space. Let us also suppose, for the sake of simplicity, that *a* and *b* are 1 meter apart and that *B* takes 1 second to go from *a* to *b*. Being constant, the speed of *B* is thus one meter per second. This is just about the speed of someone strolling leisurely about in his house. We now ask: how long does *B* take to cover half the distance between *a* and *b*, i. e. 0,5 meter? We have to recall that the time taken by a journey amounts to the distance divided by the speed of the body. The distance between Florence and Rome, for example, is 300 km. If a car travels at 100 km per hour, it will cover that distance in:

$$Time = \frac{space}{speed} = \frac{300km}{100km/hour} = 3 \ hours.$$

This means that, in order for *B* to cover half the distance takes:

$$Time = \frac{space}{speed} = \frac{0,5m}{1m/\sec} = \frac{1}{2} \ second$$

and to cover ¼ of the distance takes:

$$Time = \frac{space}{speed} = \frac{0,25m}{1m/\sec} = \frac{1}{4} \ second.$$

In general, according to classical kinematics, it will take $\frac{1}{M}$ of the time unit for a body to cover an $\frac{1}{M}$ distance of *ab*.

2. Let's suppose that the space between *a* and *b* is a dense set of points.

3. It is correct to maintain that, in order for *B* to move from *a* to *b*, it has to go through an infinite succession of adjacent intervals, the first of which measures ½ meter, the second ¼, the third ⅛, and so on. We can summarize this series as follows:

$$\tfrac{1}{2} , \tfrac{1}{4} , \tfrac{1}{8} , \ldots\ldots \frac{1}{2^n} \ldots\ldots \quad (1).$$

4. Since the speed of *B* is finite, i. e. 1 m/sec, it will take a finite time to go through every single interval of the (1) series.

5. Since the total of an infinite summation of finite numbers is itself infinite, it will take *B* an infinite time to go from *a* to *b*, which means that *B* will never reach its destination.

It shouldn't be hard for a mathematically educated to detect a fallacy in Zeno's argument in point 5: 'the total of an infinite summation of finite numbers is itself infinite'. As a matter of fact, present-day mathematics allows us to state that the total of the infinite summation of the elements of the (1) series is 1 and not infinite.

There's a sense in which we could claim that our problem is therefore solved. However, a careful historical and philosophical analysis of the above argument, will nevertheless enable us to get a better grasp of many interesting features of space, time, their quantification, and infinity.

2. *Aristotle's solution*

There are three passages in Aristotle's work that are fundamental in understanding his discussion of the dichotomy,[19] namely:

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[19] For interpretations of Aristotle's passages on the dichotomy see Huggett, 1999, pp. 38-44, Faris, 1996, pp. 6-25 and the classic Vlastos, 1966. Our interpretation diverges from all three of these, even though we are far from confident that our explanation is correct, since, as Vlastos (1966) put it, we probably don't have enough evidence to solve the problem. In reading Aristotle, one should keep in mind that one is dealing with notes for lectures, which are often brachylogous and self-referential. Ross (1936, pp.

A. He first asserts the non-existence of motion on the ground that that which is in locomotion must arrive at the half-way stage before it arrives at the goal. This we have discussed above. (*Phys.* 239b 11-13).

B. Hence Zeno's argument makes a false assumption in asserting that it is impossible for a thing to pass over or severally to come in contact with infinite things in a finite time. For there are two senses in which length and time and generally anything continuous are called 'infinite': they are called so either in respect of divisibility or in respect of their extremities. So while a thing in a finite time cannot come in contact with things quantitatively infinite, it can come in contact with things infinite in respect of divisibility: for in this sense the time itself is also infinite: and so we find that the time occupied by the passage over the infinite is not a finite but an infinite time, and the contact with the infinites is made by means of moments not finite but infinite in number». (*Phys.* 233a 21-30).

C. The same method should also be adopted in replying to those who ask, in the terms of Zeno's argument, whether we admit that before any distance can be traversed half the distance must be traversed, that these half-distances are infinite in number, and that it is impossible to traverse distances infinite in number – or some on the lines of this same argument put the questions in another form, and would have us grant that in the time during which a motion is in progress it should be possible to reckon a half-motion before the whole for every half-distance that we get, so that we have the result that when the whole distance is traversed we have reckoned an infinite number, which is admittedly impossible. Now when we first discussed the question of

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72-75) claims that the paradox hasn't been solved yet, but he doesn't seem willing to bring mathematics to bear on problem. His interpretation of the three passages though, even if briefly argued, is very similar to our own. See also Makin, 1998, pp. 847-849.

motion we put forward a solution of this difficulty turning on the fact that the period of time occupied in traversing the distance contains within itself an infinite number of units: there is no absurdity, we said, in supposing the traversing of infinite distances in infinite time, and the element of infinity is present in the time no less than in the distance. But, although this solution is adequate as a reply to the questioner (the question asked being whether it is possible in a finite time to traverse or reckon an infinite number of units), nevertheless as an account of the fact and explanation of its true nature it is inadequate. For suppose the distance to be left out of account and the question asked to be no longer whether it is possible in a finite time to traverse an infinite number of distances, and suppose that the inquiry is made to refer to the time taken by itself (for the time contains an infinite number of divisions): then this solution will no longer be adequate, and we must apply the truth that we enunciated in our recent discussion, stating it in the following way. In the act of dividing the continuous distance into two halves one point is treated as two, since we make it a starting-point and a finishing-point: and this same result is also produced by the act of reckoning halves as well as by the act of dividing into halves. But if divisions are made in this way, neither the distance nor the motion will be continuous: for motion if it is to be continuous must relate to what is continuous: and though what is continuous contains an infinite number of halves, they are not actual but potential halves. If the halves are made actual, we shall get not a continuous but an intermittent motion. In the case of reckoning the halves, it is clear that this result follows: for then one point must be reckoned as two: it will be the finishing-point of the one half and the starting-point of the other, if we reckon not the one continuous whole but the two halves. Therefore to the question whether it is possible to pass through an infinite number of units either of time or of distance we must reply that in a sense it is and in a sense it is not. If the units are actual, it is not possible: if they are potential, it is possible. (*Phys.* 263a 4-b 9)

Passage A briefly expounds the paradox and probably refers to passage B. This latter passage is found in that part of the *Physics* in which Aristotle discusses the continuum. He has just proved that, if magnitude (space) is infinitely divisible, then time must also be. After his proof he points out that:

> Moreover, the current popular arguments make it plain that, if time is continuous, magnitude is continuous also, inasmuch as a thing passes over half a given magnitude in half the time taken to cover the whole: in fact without qualification it passes over a less magnitude in less time; for the divisions of time and of magnitude will be the same. (*Phys*. 233a 14-16)

Soon after he focuses his attention on Zeno's argument. We summarize his discussion as follows:

We just proved that not only space (magnitude, *Met*. 1020a 10ss.) but also time is infinitely divisible. Moreover, divisions in time can correspond to divisions in space. The division of space which appears in the paradox is not the division in respect of the extremities (which means that we are not talking about an infinite space), but the one in respect of divisibility, i. e. it has to do with a finite space which is infinitely divisible. The same applies to time. We therefore don't have a correspondence between an infinite space and a finite time, but rather between space and time, both infinite in respect of divisibility.

This is a first reasonable solution given by Aristotle to the paradox.

Passage C comes soon after Aristotle has discussed whether a point in the motion of a body should be regarded as a potential or as an actual entity. He comes to the conclusion that, if the body reaches a point and starts out again without interrupting its motion (we could think, e.g., of the oscillations of a pendulum), then that very point should be regarded as actual, whereas if we are considering a point in the middle of a motion, then this point should be regarded as potential. Aristotle applies this conclusion to the following discussion concerning the dichotomy. At this point he states for the second time the paradox and his own solution to it; by doing this he probably refers to passage B. He then passes on to expound a further weakness of Zeno's argument, which doesn't concern the fact that an infinite amount of time would be required to cover an infinite collection of finite stretches, but rather the fact that the task of performing an infinite

series of acts is intrinsically impossible, because the infinite simply doesn't imply such a thing as a final element (Faris, 1996, pp. 14-17), i. e. it is not possible for a body B to go from a to b because, in order to do so, it should cover an infinite amount of stretches, but, as we just said, the infinite doesn't have a final element, therefore B will never reach b and the validity of this conclusion does not depend on the length of the stretches.

There's an analogy between Aristotle's criticism of Zeno's argument and the objection raised by modern supertask theorists to standard solutions of the dichotomy paradox. These solutions are based on the fact that the series $\frac{1}{2} + \frac{1}{4} + \frac{1}{8} + \dots + \frac{1}{n}$ tends to 1 as n goes to infinity. The core of the argument, as we would put it today, is the following: when we say that the series tends to 1 we are talking about all it's elements except for 1, which is not itself an element of the succession. Therefore, by saying that the series tends to 1 we haven't yet proved that the body B reaches it's destination.

As a matter of fact, when, in passage B, Aristotle says

> For suppose the distance to be left out of account and the question asked to be no longer whether it is possible in a finite time to traverse an infinite number of distances, and suppose that the inquiry is made to refer to the time taken by itself (for the time contains an infinite number of divisions): then this solution will no longer be adequate,

he's probably referring to this very argument. Here we are not dealing with the finiteness of time or with the length of it's intervals, but rather with the possibility to perform an infinite task, that is, the passing of an infinite number of time intervals.

Aristotle's own solution to this problem is, as usual, very clever and it will be rediscovered by Grünbaum (1968, pp. 78ss.) after two thousand years. His argument runs as follows:

We may think of the stretch ab, that the body must cover, in two different senses: either as continuous, i. e. according to the definition of the latter (*Phys.* 227a 10ss.), so that it won't have any internal limits, or as divided in an infinite number of intervals. In the first sense the intervals are potential entities, whereas in the second sense they are actual entities. It doesn't seem impossible to cover an infinite number of finite intervals as long as we regard these intervals only as potential entities, whereas it's

obviously impossible to do the same if these intervals are actual entities. As a matter of fact, if the intervals are potential entities, then this means that the body will cover them only accidentally, whereas if they are actual entities, then a problem arises.

Abandoning the distinction between *actus* and *potentia* has been one of the central features of modern science. The reason for this is not to be found in the fact that, besides actual entities, we cannot also accept possible entities within our ontology – which as a matter of fact many philosophers do – but rather in the fact that it is very difficult to provide exact identity criteria for this sort of entities. Let's consider, for example, the following two definitions: «the set of clothes which *are* in my closet» and «the set of clothes which *could be* in my closet». The first set is perfectly defined, whereas the second is not. All this means that, even if Aristotle's solution to the problem is certainly sensible, it doesn't completely fit the standards of modern science.

Grünbaum expresses the difference between actual and potential infinity by the two concepts «staccato-run» and «legato-run». The idea underlying the «staccato-run» is the following: *a* and *b* are 1 meter apart from one another and it takes 1 second for *B* to go from *a* to *b*. In the first quarter of a second the body covers half a meter and then it is at rest for another quarter of a second; in the next eights of a second it covers a quarter of a meter and then it is at rest for another eights of a second, and so on. This way *B* will cover an infinite number of space intervals separated from one another, i. e., Aristotle would say, actual intervals. The idea underlying the «legato-run», on the other hand, is that of an uninterrupted motion. In this case the problem does not arise because we are dealing with one and the same motion and this implies that strictly speaking there isn't any ontological difference between each one of the infinite small parts of that motion and it's final point.

We could nevertheless raise a further objection. In fact, even if in this last case we are not actually dividing the interval *ab*, we could still claim that, nonetheless, none of the statements concerning the series (1) also applies to *b* itself, because *b* is simply not included in that series. As Laraudogoitia (2009, § 3) points out, in order to solve this problem for good, we should make use of a sort of «continuity principle» stating that: if space is continuous, then there isn't any gap between the infinite succession of intervals included in *ab* and the final point *b*. This means that the body *B* has

to reach *b* and this conclusion is just as valid for today's physics[20] as it was for Aristotle.

In short: in passage B Aristotle was trying to face, with his own limited means, the problem of covering an infinite number of finite intervals of space in a finite amount of time and in the second part of passage C he shows that it is possible to accomplish an infinite task.

3. *Is Space a dense set of points?*

Every time we come up with a mathematical hypothesis concerning the nature of a real object it is advisable to compare this hypothesis with our perceptions (Grünbaum, 1968, p. 44). The reason for this is that, even if our perceptions are to some extent deceptive, they are nonetheless our first source of knowledge and they must therefore be respected.

A spatial continuum, as for example a black pencil stroke on a white paper, is not perceived by our senses as a dense set of points. Considering the fact that our visual perception has a certain threshold, we can surely ascertain the perceptual minima contained in that stroke. We could also regard it as a finite set of discrete perceptual minima *in potentia*. The problem would nevertheless be that these minima are not actually manifest. Following Grünbaum we therefore have to maintain that perception does not prove that space is not a dense set of points, although nor does it prove that it is. The strongest evidence supporting the idea that space is a dense set of points comes from the corroboration of modern physical theories: classical mechanics, quantum mechanics, special and general relativity, electromagnetism, quantum electrodynamics and the standard model. All these theories assume the existence of a dense (actually continuous) physical space and therefore, even if we endorse a moderate form of scientific realism, we must come to the conclusion that, as far as we know, physical space is dense. As a matter of fact the best available explanations that we have for a certain class of objects must also apply to, and therefore be true of, those non-observable elements of that same class, and this claim seems to follow even from a moderate form of scientific realism. Obviously the notion of truth is here to be understood as correspondence. It is therefore plausible to assume that physical space is dense.

4. *On the density of time*

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[20] In spite of quantum mechanics.

In the last paragraph we presented the arguments supporting the thesis according to which space is dense, this being one of the premises of Zeno's argument. We also pointed out that Aristotle's solution of the paradox is based on the infinite divisibility of time. If we therefore wished to endorse a solution which is both consonant with the spirit of Aristotle's thought and rigorous, we should now try to support the thesis according to which time is also dense.

In order to do this, just as we did in the case of space, we might start from a concrete example. In the case of space we considered the spatiality of a black pencil stroke on a white paper, here we could consider the temporality of a bowling ball rolling down a bowling lane. The main difference between the example of the bowling ball and that of the pencil stroke is the presence of *motion*. According to Aristotle, motion can only take place within a certain time and time itself is always linked to motion.

Our empirical point of view compels us to start by considering what experience tells us about the density of time.

According to several authors, perceived time, unlike perceived space, appears as discontinuous (James, 1911, *passim*, Whitehead, 1929, *passim*, Grünbaum, 1968, p. 45ff., Dummett, 2000). Experienced temporality is marked by the uninterrupted becoming present of one situation after another. It seems nevertheless natural to assume that, just as in the case of space, the continuity or discontinuity of time depends on the very nature of what we are perceiving: if we are perceiving the motion of a bowling ball, then it's temporality will be continuous, whereas if we are perceiving our own heartbeat, then it's temporality will be discontinuous. This view seems to be corroborated by recent research in cognitive psychology (Fingelkurts e Fingelkurts, 2006).

From the point of view of perception then, the situation we are confronted with in the case of time is similar to the one we have to face in the case of space, i. e. we neither necessarily perceive time as made up of a finite number of perceptual minima, nor is perception itself sufficient to support the view according to which time would be made up of an infinite number of instants.

As we did in the case of space, though, we can rely on the fact that the best physical theories on the market assume time to be dense and we therefore have good reasons to assume that it actually is. There's also a further hint that seems to support our view.

Aristotle maintains (*Phys.* 233a 15ff.) that, since motion links space and time together, if one of the two is infinitely divisible, then the

other must also be. This argument has been unwittingly restated by Grünbaum (1968, p. 56ff.). It is therefore reasonable to hold that, once we acknowledge the density of space, we are very likely to acknowledge that of time as well.

5. *Analytical solution of the paradox*

We can now summarize our argument against the dichotomy paradox, trying at the same time to stick as closely as possible to the spirit of Aristotle's thought.

I.   If space is a dense set of points, then time is a dense set of instants.
II. It will take e the body *B* a time interval I/M to cover the stretch 1/M.
III. The summation

$$\frac{1}{2} + \frac{1}{4} + \frac{1}{8} + \text{.......} + \frac{1}{2^n} + \text{......} \qquad (2).$$

never goes past 1.
IV. Space is continuous, therefore after 1 second the body *B* will reach *b*.

In section 4 and 5 we expounded point I. To claim that the summation (5) of point III never goes past 1 is very different from proving that it converges on 1. We decided to make use of this weaker claim in order to solve the dichotomy because, unlike what many authors think (e. g. Huggett, 1999, pp. 42-43 and 2009, § 3.3), it is sufficient to our purposes (as showed in Grünbaum, 1968, p. 72) and because it is a theorem already known by Euclid (*Elements*, Proposition IX,35), therefore not very far from Aristotle's spirit. Point IV refers to the issue of supertasks mentioned in section 3.

The dichotomy paradox, already solved by Aristotle, seems therefore to be solvable from the point of view of contemporary mathematics and physics as well. We ought nevertheless to keep in mind that throughout our analysis we often made use of empirical claims and that our arguments are therefore not a priori, which means, of course, that our conclusions could be modified by future empirical research.

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Time Age

Lars Aagaard-Mogensen

Superficially read, Parmenides transgresses his own prohibition against speaking of that which is not by using past and future tenses of 'be'. At least it appears so to Mr. Raven (with Mr. Kirk's approval) as he writes under the heading 'denial of time' about frg. 8: "It follows, therefore, that past and future are alike meaningless, the only time is a perpetual present time". This inference, however, is a howler; Parmenides nowhere asserts that time is meaningless or does not exist (nor mentions anything like a "perpetual present time"). Mr. Raven's own suppressed premise to reach his conclusion is, of course, the typical relativist doctrine that 'time is the measure of motion', and if one denies motion, then time is unreal. What Parmenides wrote is that 'it is' and 'it was not in the past, nor shall it be, since it is now, whole and entire, one, continuous'. (The language Quine treats as a fish that can't stand water with a school of detensers in the wake).

Now I will, in the grand manner of Zeno, assume the relativist theory, that is, time is a function of change,[*] and show that contradiction inevitably results. Everyone has, by now, heard of the Big Bang – though no one has heard it (it wasn't banging loud enough?), except for a few who cannot get rid of "noise" in their very costly equipment (like drunks the ringing in their ears or one of the first symposiasts voices in his head). The story goes like this: There was nothing, the next (the first) moment a bang, and the next there were everything. Likewise everyone has also heard of the bang as kind of an explosion (which we parodially reenact every 'new years' with rockets and crackers), something escaping from nothing and nowhere. Since 'nothing' is very, very small (to say the least) and the world

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[*] Adherents are legion, e.g., Leibniz's "time is merely relative, is an order of successions of (orders of) things"; K.F. Dougherty's "the category of time, which is an extended measure of the duration of a mobile thing", *Metaphysics* (1965) p. 174; similarly the digitalized world of M. Gormsen *Tilværelse*, København 1957, Del III, Kap. III; "time is the ordered set of moments, and moments are defined as equivalence sets of events under the relation of simultaneity", D. Zeilicovici "Temporal Becoming Minus the Moving Now", *The New Theory of Time*, Yale UP 1994, p. 237. Etc.

is now (it's said) very, very big, in the meantime that very nothing – you guessed it – *expanded* (like greed into 'global economy'). So, in short, a long, long, long time ago the universe was an itsy bitsy teeny-weeny (next to nothing) bangthing, expanded ever since, and is now immensely big.

Everyone has also, by now, heard about the dizzying speed of light (though no one has seen it. It just whizzes by – in total silence – without a trace). Still, even if that fast, light takes quite some time to travel real long distances. Therefore, to go from the far outskirts of the (presently so hugely big) universe to us, it's being relatively slow, takes years and years – in fact *light-years* (one of which is not a year, but the distance light calculatedly travels in the total number of seconds of some standard calendar year). But then, they say, that means that the farther away 'objects' and places you look at, the older they are, because the light you see, has taken that awfully long to get to you.

Now put these two relativist doctrines together, and this is what you get: The farther away, say, the star you see, the older it is; and: the older part of the universe you see, the smaller it was. The smaller it is, the closer the star is, the less time light takes to reach you. Hence you end up saying the smaller it is the longer away you see. If you, as some want badly to do now, see the Big Bang, that has to be up very close (and hot) – like your lover's navel.

Now, I do not claim it follows that motion is impossible, which 'follow' I do not know, but merely that the relativists' view of time is spurious (they are loath of time's nudity and compulsively dress it up in, even false, things). (Some obvious remedies would of course be either to a) abandon the evolutionary theory of the universe, or b) modify the fantastic theory of the speed of light, or c) dump both of these doctrines, or d) ....). Meanwhile, Parmenides' (however fragmentary) explication of the concept of time, including, I see him write, continuousness, can and should be expanded thus:

No one can disagree with Parmenides' assertion that neither the past nor the future is now. (A small space can make a big difference, such as between 'nowhere' and 'now here'). What he does assert also about time is: (How) could it come into being? and (How) could it perish? If it came to be (became), there was a time when time was not, which is a contradiction. If it perishes, there will be a time when time is not, likewise a blunt contradiction. Both are alien to common sense.

But 'start' (and begin) and 'stop' (and end) are not temporal phenomena (has no active present tense verb form); that's easy to

demonstrate. Whatever it is, it either has not yet or has already begun; and whatever it is, it either has already or not yet stopped. There is no such state (duration) at which something is 'beginning' or 'stopping'. A person, say, either is not yet or is already conceived, just as a person (even a beast like Schrödinger's "cat") is not yet or is already dead. (As a tribute to the death cult, we do not have 'conceiving', but wallow in 'dying'). These are not "events" taking (occupying) any time. It neither makes sense to ask when the start started or when the start stopped, as if it could be (somewhere) in between its beginning and end, or barely started starting or nearly stopped starting. Nothing can be in the middle of starting, such that it would be true to say that the start has begun but is not yet over, has not yet ended, is not finished. Had a beginning a beginning, that beginning had a beginning, that had a beginning, that .... Nor does it make any sense to ask when the stop stopped, as if a stop has a start, carries on, takes some time, and then ends. As if the stop (end) could be half way over; "the stop is about to finish" is outright absurd. Had an ending an ending, that ending had an ending, that had .... * By an 'instant' is understood no time at all. One can (be told, unfortunately, to) wait a while, a minute, or a second, but one cannot wait an instant.

In an otherwise level, yet cavalier treatise, Hamlyn suddenly wrings out: "Time really could 'have a stop'. Whether or not there will be a time after which there will be no further times (no *after*, not just no further events) is a factual matter." Recall Hein's prescription for the art of timing toast, namely until it smokes and then twenty seconds less. I repeat, pardon, were time to stop, one can always ask: when did it stop? that is, how long ago that was? Of course that could only be ascertained *after* the "stop", and not even Hamlyn can get away with, factual or otherwise, 'after which there is no after'. Ask him what is it that isn't *after* the stop?

A start, a stop, (a beginning, an end, a conception, a death) occur at a certain time, certainly, but it makes no sense to say that time began at a certain time or that time ends at a certain time. That time should itself be a thing, an event, a phenomenon in time is nonsense. Nor does it make any sense to talk about a 'state' of something of no duration. An instantaneous state is no state of anything. Something cannot start at the same time it stops. The start and stop of something cannot be simultaneous. (A state of affairs, such as say a status of a family's economy, is sheer fiction as

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* What to do with these nings and pings? For the time being, let them join the hings of the nots.

everyone submitting a tax return knows). Time takes no time and doesn't age. It may be very, very long, but it can't be old.

In other words, to speak about the beginning of time is utter nonsense (and so, dear doomsday prophets, is the end of time). ('History of time' is convoluted nonsense). No sane person would enquire about the beginning and end of 2. Maybe, just maybe, one can speak of the beginning of the universe, and maybe, just maybe, subsequently about the end of the universe. But if so, both of these "events" have to occur at certain times. That much being clear, one would still have to explicate the consequences of Parmenides' arguments regarding nothing and (the becoming and perishing of) something or everything at such times.

The skeptic Russell held that the supposition that "The world was created five minutes ago" is irrefutable, is undetectable, cannot be disproved. Quite as frivolous as "The world will be created in five minutes". The supposition implies that it is false that the world was created ten minutes ago. Besides obvious conflict with Moore's *truisms*, among which is 'the earth had existed also for many years before I was born', we here and now see it's clearly false. To attempt refutation by amassing empirical evidence may be futile, since the supposition is that the 'world' began complete with everything we do and can observe and know about it, but that would also be irrelevant quite like trying to "solve" Epimenides' paradox by a lie-detector gadget. Yet the logician Russell should detect refutation, such as the above, by reason's nose. At least Russell was dead wrong: time didn't begin 5 minutes ago. '5 minutes ago' is a point in time. So the supposition presupposes, in fact entails, real time.

To not transgress my prohibition against (utter vacuity of) quotation, I shall myself assert: no discussion about the meaning of a word is *merely* about the meaning of a word, and to think of time is not to think merely of *ways of thinking* about the world; it is to think of how the world actually is.

Brief Illustration of the Existence of Time

in response to "Time-Age" by Lars Aagaard-Mogensen

for solo wind instrument

René Mogensen

Note: Experience will tell that time exists, at least during the performance of this piece. Only one pitch is sounded in the piece. But form occurs in spite of the absence of any change in pitch space. The manipulations of the single pitch consist of articulations in rhythms and dynamics. Hence it takes time to perform the piece.
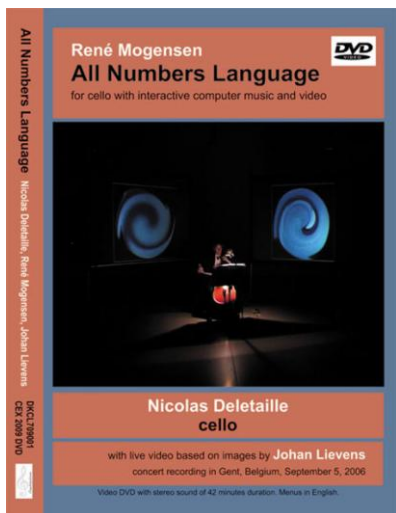
With Parmenides Today

Maurizio Tortora

If with a syringe,
by magic
I could you wake,
from two thousand and five hundred years of cold sleep,
that you live even now
in this recently cast statue,
and if I could make you descend from this stone,
in body and soul,
to come and walk with me
along the Marina...
step by step
we could go up to your home,
in the earliest Elea
and once there
under the enchantment of the Pink Door
looking at the beauty of the Piana,
that maybe still recalls a bit of your happy days,
if I suddenly should ask you
"What you think of men,
of to-day's world",
I already know
that, only with a deep sorrow-filled and painful glance,
you would answer me:
"Nothing,
my thoughts
have been of no use...
and frankly speaking,
if the truth was hidden in my times,
due to your fault,
you stupid, silly men,
it is even deeper, darker and further away
today".

All Numbers Language

Concert at the Parmenideum 18:30, 7.2.2010 in Palazzo Ricci, Ascea (Sa)

All Numbers Language, by composer René Mogensen, is a multimedia chamber music work that creates interplay between visual impressions, symbolic images, by sculpturer Johan Lievens, music, computer sound and human performance, by cellist Nicolas Deletaille. In this work the cello is transformed in electroacoustic virtual spaces. Thus are built dialogues between traditional technology (the cello) and new technology (the computer), between older compositional music styles and the new computer-based sound art, between nuances in human interpretive performance and the interactive computer-generated sound and video. The score builds on the shoulders of some of the core literature for solo cello, especially the suites of J.S. Bach and Benjamin Britten. The electronic sound is created through original algorithms that are designed to integrate with the cello sound. The aim is for an immediate artistic expression through dialogue between old and new musical ideas as well as old and new approaches to sound production and enjoyment.

Further information and contact data for the artists, respectively:
www.myspace.com/ReneMogensen
www.NicolasDeletaille.com
and www.JohanLievens.be

All Numbers Language is downloadable as audio track in online stores (such as iTunes) and full version of the premier performance on DVD is available at www.contreclisse.com

DISEGNARE CON LA LUCE
MOSTRA FOTOGRAFICA

Palazzo Ricci - Ascea (Sa)
7 – 13 February 2010 - ore 17-20

Disegnare con la luce

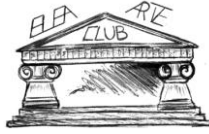## Palazzo Ricci - Ascea (Sa) - 7 – 13 February 2010

Attraverso la storia della fotografia individui hanno ricercato luoghi esotici da fotografare e portare quelle immmagini all'attenzione del pubblico. Io fotografo essendo consapevole che un "posto esotico" potrebbe essere estraneo a me, ma è la patria di altri. Mi sforzo per catturare il carattere di un luogo in modo da mostrare rispetto sia al posto che ai residenti della comunità. Cerco immagini che parlano del luogo sottolineando interazione e influenze tra l'uomo e il suo ambiente.

La fotografia e la sua percezione della realtà m'interessano moltissimo. Fotografo nella tradizione dei fotografi ''franchezza'' scegliendo di fare il minimo del ritocco delle immagini eccetto la messa a punto. Trovo questo molto più interessante della manipolazione della fotografia digitale. Mi fido della mia abilità nel vedere le cose in modo unico e interessante, portando all'attenzione dello spettatore una prospettiva mai realizzata.

Il lavoro qui esposto è il frutto di una breve visita in un paese intrigante e attraente. Queste immagini a volte possono sembrare semplici e dirette, penso che questo accade quando si fa esperienza in un nuovo luogo. Queste immagini sono infatti la reazione iniziale ad un paese affascinante, pieno di tradizioni e gente meravigliosamente gentile e sincera. Non vedo l'ora di cogliere l'opportunità in futuro per tornare al sud Italia, migliorando questo mio portfolio e la lingua italiana.

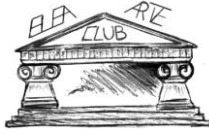*Donald Clark (Prof. di fotografia, University of Minnesota Moorhead)*

Disegnare con la luce
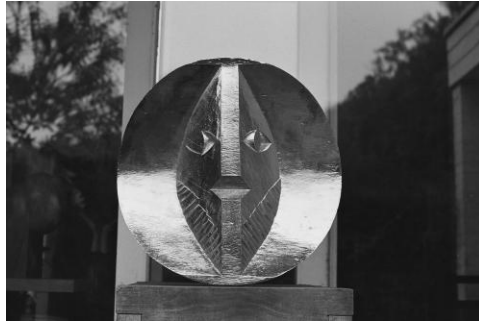Palazzo Ricci - Ascea (Sa) - 7 – 13 February 2010

Suggerire emozioni attraverso l'immagine è sempre stata la mia aspirazione... guardare il mondo stando dietro l'obiettivo di una macchina fotografica mi ha sempre affascinato molto e mi spinge quotidianamente a cercare di migliorare la mia forma di comunicare. I miei soggetti sono soprattutto i paesaggi della mia terra così antica e così meravigliosamente ancorata al suo passato ma mi piacerebbe ampliare il mio campo di azione... ritengo molto interessante fotografare i volti delle persone che incontro tutti i giorni, cercare di coglierne le emozioni, la storia... nei miei viaggi (non molti a dire il vero) ho avuto la possibilità di entrare in contatto con popoli diversi dal nostro... ma i sentimenti e le emozioni sono gli stessi in qualsiasi angolo del mondo.

Antonio Isabella

Disegnare con la luce
Palazzo Ricci - Ascea (Sa) - 7 – 13 February 2010

Scultura come metafora poetica

Per Johan Lievens ogni scultura è un'immaginazione sculturale poetica d'aspetto immateriale di vita. Ogni suo lavoro esprime simbolicamente la sua visione dell'uomo e del mondo, il suo sogno di un'analogia rinnovata tra il sacro e l'arte. Nel pensiero tradizionale, le opposizioni tra corpo e anima, spirito e materia, maschio e femmina, naturale e soprannaturale, silenzio e dinamiche, interne ed esterne designate incompatibili. È differente per Lievens. Al contrario, nello sforzarsi per riconciliare queste polarità, il sublime è incluso .... E così la scultura diviene un campo di forza con una verità intima, il Sign-ificato fondamentale che sfuggirebbe altrimenti alla nostra comprensione della bellezza come omaggio all'assenza o all'Innominato – esattamente da dove scaturisce l'arte e la contiene anche.

Els Vermeersch (storica d'arte, Belgio) ''Beauty as Homage to the Unnamable'' (passo).

Disegnare con la luce
Palazzo Ricci - Ascea (Sa) - 7 – 13 February 2010

L'occhio che non batte ciglio

L'obiettivo e l'otturatore, l'interiore buio emette immaginari: La fantasia di afferrare un'occhiata. (Il fremito del potere [scimmiottando l'autorità], la scoperta e il sequestro di tesori). La gente tende a trascurare, dimenticare che quest'occhiate su carta sono fatte di noi stessi – la gente tende a dimenticare – come tende a confondere occhiate su carta con le proprie memorie. Adesso piuttosto che raccontare o scrivere mostrano loro memorie. Naturalmente, hanno fatto anche le proprie memorie. Quindi, suppongono erroneamente che "guardarono dentro" le memorie di altre gente quando guardano le fotografie di altre persone. La fotografia, allora, è il vedere dimenticato.

L'arte della fotografia, quando esiste, ricorda di guardare ancora.

Lars Aagaard-Mogensen

Disegnare con la luce

Else Mogensen

La Musa che ci educa
a disegnare con la luce
a creare immagini
usando la capacità
chimica della luce
per raccontare una storia
per esprimere un pensiero,
un'idea, un'opinione
senza parole
è una Musa taciturna
affida agli altri mille parole.
Ciononostante
la Musa vive nel Cilento
perchè la luce del Cilento
è perfetta per unire
la tecnica all'arte e fare
immagini del momento
figure delle meraviglie
allegorie della bellezza
illusioni intriganti.
Il nome della Musa
prevedibilmente
è Fotografia.

PARMENIDEUM

at Elea

Parmenideum has the purpose of increasing our knowledge of the Eleatic philosophy and, not least, of all its contemporary ramifications in intellectual life, science, and culture. It aims to demonstrate and build insight and competency and addresses scholars, artists, scientists and intellectuals everywhere who irrespective of diverse backgrounds and disciplines share common human concerns and perspectives, such as life quality and peace.

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MSS and other communications (including books for review and inquiries about back issues), need not be in English, should be addressed to Habeeb Marouf and Lars Aagaard-Mogensen at the address below. Books sent for review are accepted on the understanding that they will be listed but that a review is not guaranteed, and that books whether reviewed or not are not returned, nor are other submissions. Electronic submission should go as attachment in MS Word format to either info@parmenideum.com or wassard@tiscali.it. Editorial response can normally be expected within 4 weeks.

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