IMAGE, FLUX, AND SPACE IN PLATO'S *TIMAEUS*

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HERACLITUS WROTE THAT YOU CANNOT step into the same river twice for the waters are ever flowing new upon you (B49a, B12, B91, A6). We are told by Aristotle (*Metaphysics* 1010a11–14) that Cratylus, a follower of Heraclitus, revised this slogan to read "one cannot step into the same river even once," and then stopped talking altogether. Cratylus believed that nothing whatsoever may be predicated of the phenomena in flux.

We are also told by Aristotle that Plato was a follower of Cratylus and adopted Cratylus' views into his metaphysics (987a30–b1). In this paper, I will discuss to what degree this is true. The paper has two sections. The first gives a new analysis of the tortuous and much debated[1] passage of the *Timaeus* in which Plato discusses the possibility of making predications of the phenomena in flux and in the course of which he formally introduces his conception of space. The passage is *Timaeus* 49b–50b. The second section is a general discussion of Plato's conception of space.

I

The second part of the *Timaeus* (47e ff.) where Plato discusses the nature of the physical world begins by assuming that some problem confronts all who try to discuss the nature and generation of earth, air, fire, and water. The problem is to say what each of these severally is (*πῦρ ὅτι ποτέ ἐστιν καὶ ἕκαστον αὐτῶν*, 48b6–7). In this way, the second half of the *Timaeus* begins like many of the Socratic dialogues by asking the what-is-it question. The question, which is repeated at the start of the gold analogy (50b1), is an internal question which asks us to *identify* various phenomenal kinds (in the first case, earth, water, etc., and in the

[1]See: Cherniss, H. F., "A Much Misread Passage of the *Timaeus* (*Timaeus* 49c7–50b5)," *AJP* 75 (1954) 113–130. Cherry, R. S., "*Timaeus* 49c–50b," *Apeiron* 2, No. 1 (1967) 1–11. Cornford, F. M., *Plato's Cosmology* (London 1937) 178–185. Gulley, N., "The Interpretation of Plato, *Timaeus* 49d–e," *AJP* 81 (1960) 53–64. Lee, E. N., "On the Metaphysics of the Image in Plato's *Timaeus*," *Monist* 50 (1966) 341–368; "On Plato's *Timaeus* 49d4–e7," *AJP* 88 (1967) 1–28; "On the 'Gold-Example' in Plato's *Timaeus* (50a5–b5)," in *Essays in Ancient Greek Philosophy*, ed. J. P. Anton and G. L. Kustas (Albany, N.Y. 1971) 219–235. Mills, K. W., "Some Aspects of Plato's Theory of Forms, *Timaeus* 49c ff.," *Phronesis* 13 (1968) 145–170. Mohr, R. D., "The Gold Analogy in Plato's *Timaeus* (50a4–b5)," *Phronesis* 23 (1978) 243–252. Zeyl, D. J., "Plato and Talk of a World in Flux: *Timaeus* 49a6–50b5," *HSCP* 79 (1975) 125–148. I allude to these works by their authors' names and in Lee's case by year.

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gold analogy, various geometric figures).[2] The what-is-it question is not here, or in the early dialogues, an external question which asks after the ontological status of an object. Plato is here interested in how earth can be distinguished from water, rather than whether it is a substance, quasi-substance, quality, quantity, a form, a matter, an Idea, etc. In order to answer the question of identifying earth, water, etc., we are told that a third sort of entity must be added to the furniture of the universe. For the first half of the dialogue, two sorts of entities were sufficient. The one is the Ideas, which are spoken of as paradigms or models, and as being intelligible and always unchangingly real; the second is the phenomena, which are said to be copies of these models, are in the process of becoming and are visible (48e3–49a1). This "becoming" (cf. 52d3) refers to the pre-cosmic or acosmic flux of the phenomena described at 30a and 58b–c. The third thing which must now be added to the ontology is called the receptacle of all becoming and is later identified with space (52a8). Why this third thing is required we are not yet told; that requires elaborating the earlier difficulty of identifying phenomenal kinds. The first stage of the elaboration is contained in the following sentence: "It is difficult to say with respect to each of these kinds (earth, water, etc.) what type (*ὁποῖον*) we really ought to call water rather than fire, and what type (*ὁποῖον*) ought really to be spoken of as a particular type of thing rather than as all types taken together or severally, so that we really use language in a *somewhat* (*τινί*) reliable and stable way" (49b2–5). The problem, it seems, is not that various phenomenal types shade off into each other, in such a way that, say, we might be confused as to whether a patch of rust should be called orange or brown. Rather, it is that all phenomenal types seem to be interchangeable so that all the phenomena are equally well called by any and all names of types of phenomena.

Why the phenomena are in this strait has not been fully stated. But with the statement that we are eventually to end up with language that is *somewhat* stable and certain (49b5) we are already given a hint of the solution to the problem. For this phrase harks back to the principles which open Timaeus' discourse at 29b–c. There it is said that language will be as certain as its objective referents are stable; language about the immutable Ideas will be absolutely certain, while language about becoming will be certain to the extent that becoming is a *likeness* of the Ideas (29c1–2). The hint, then, is that the phenomena may be identified

[2]Throughout the paper by "identify" I mean to pick out an individual as the kind or type of individual it is, as in the sentence, "the chemistry student correctly identified the samples as zinc." I do not mean "identify" in the sense of picking out an individual as the individual it is, as in the sentence, "the victim identified the culprit in the police line-up." Zeyl uses "identify" in this latter sense (128, 130, et passim); where Zeyl uses the term "identification," I use the term "individuation."

insofar as they are likenesses or images of the Ideas. On the other hand, the first stage of the elaboration of the problem of identifying the phenomena in saying that a phenomenal object in and of itself can have any and all predications applied to it, more or less accuses the phenomena of being referents for self-contradictory propositions. Plato makes the corresponding ontological claim in the *Phaedo* where he claims of the phenomena, just as phenomena, that they are "never the same as themselves" (*Phaedo* 80b4–5).

To assert this logical and ontological contradictoriness, though, is not to assert directly that the phenomena in no way exist, but rather, I suggest, is to assert only that the phenomena are in flux (cf. *Phaedo* 80b4–5 with *Philebus* 59b1).[3] This is how Aristotle interprets the predicational schemas of the Heracliteans (*Metaphysics* 1010a6–37) and contradictory propositions seem to be entailed by Plato's analysis of change in his discussion of "the suddenly" in the *Parmenides*.[4] Note also the description at *Timaeus* 57c3–4 of things that are changing as things which are becoming different from themselves.

That the first stage of the elaboration of the problem of identifying phenomena suggests that the phenomena are subject to contradictory predications should leave it no surprise, then, that the final elaboration of the problem is the assertion that the phenomena are in flux. The reason the names of all types fit each phase of the phenomena is that the phenomena are in a universal flux, in which every type is constantly transmuting into all other types, as described at 49b7–c7, where water is traced through a cycle of transformations which turns water into all the other three types of primary bodies.

The difficulty of answering the original what-is-it question, then, is the difficulty of being able to *identify* or state the kind (*ποῖον*) of phenomenal objects, given that they are in flux and transmute into each other. This difficulty is finally fully stated at 49c7–d3. The sentence fuses the problem of identification with the assertion that the phenomena are in flux: "accordingly since each of these (earth, fire, etc.) never appears the same [i.e. is in flux], which of these types [*ποῖον*] could one steadfastly affirm without embarrassment as being this particular type and not another? It

[3]Some critics wish to claim that for Plato, though the phenomena are in some sense disparate, they are in no way (self-)contradictory. See for instance R. E. Allen, "The Argument from Opposites in *Republic* V," *Rev. of Metaphysics* 15 (1961) reprinted in *Essays in Ancient Greek Philosophy* 166–167. *Phaedo* 80b4–5 and *Timaeus* 49b2–5, however, would seem to undermine this claim.

[4]*Parmenides* 155e–157b, and cf. 156e7–8 for the full generality of the doctrine. Here it is claimed that when a thing is changing from having a property to having its opposite, it passes through what is called "the suddenly" in which it neither has the property nor its opposite (156d). This is logically equivalent to a denial of the law of non-contradiction.

is not possible." The rest of the passage which gives the answer to this problem of identification runs as follows:

Rather, the safest way by far to speak concerning these is by proceeding in the following manner. What we see, since it always is becoming at different times and in different ways—for example, fire—we should not say on each occasion that this is fire[5] but that something of a certain kind [τὸ τοιοῦτον] is fire, and on each occasion say not that this is water, but that something of a certain sort [τὸ τοιοῦτον] is water, nor should we call ⟨this⟩, as though it had some stability, anything else [say, "air" or "earth"] which we suppose reveals something when we point and use the terms "this" and "that" [as in "this is fire"]. For it flees and does not abide the assertion of "this" or "that" or any assertion that indicts them as being stable. But instead of calling them [earth, fire, etc.] each of these things ["this," "that," etc.], we should thus call these [the fleeting phases of the phenomenal flux] "a certain type" [τὸ τοιοῦτον], which always recurs similarly in each and all cases; for instance, fire should be called "that which is on each occasion of a certain type" [τὸ . . . τοιοῦτον], and so with everything that goes through transformations. But, that *in which* each of these appears and again out of which they pass away [i.e. the receptacle or space], this alone by contrast ought to be designated by the use of the terms "this" and "that", but what is of any kind whatsoever, hot or white or any of the contraries and all that consists of these, this [i.e. space] should not be called any of these ["hot," "white," etc.].[6]

At 50c4–5 the referents of "a certain sort" (τοιοῦτον), which are said to enter into and leave the receptacle, are explicitly equated with images of the Ideas. The passage, then, is to be interpreted as follows.

The passage reconfirms the view that the phenomena *as in flux* cannot be identified as to type. Nevertheless, the passage maintains that the phenomena can be identified and are subject to the predication τοιοῦτον, "of a certain sort."[7] It is as recurring rather than as being in flux that a type of phenomena may be identified. What recurs in the flux of phe-

[5]With Cherniss (116) and Mills (154, n. 14) I take the presence of πῦρ (d6) as decisive against taking τοῦτο and τὸ τοιοῦτον as the secondary objects of προσαγορεύειν (d6). Πῦρ at d6, by position, is obviously not resumptive, as Cornford (179) and Zeyl (132) seem to take it.

[6]The gold analogy immediately ensues and runs as follows:

But we must try again to speak still more clearly concerning this. For,

IA: if a man, while forming out of gold every type of shape, never stopped remolding each into all of the rest and if someone indicated one of the shapes and asked "what is it?"

IB: then, by far the safest answer with regard to truth would be "it is gold,"

IIA1: but, the triangle and all the other shapes which come to be in ⟨the gold⟩,

2: these should never be said to be real,

3: since, indeed, they undergo change even while this is being asserted,

IIB: but if, then, he is willing also to accept with some certainty (the answer "it is) something of a certain kind," we should be glad.

For a commentary to these lines see my article cited in note 1.

[7]The claim that the phenomena are τοιοῦτον ("of a certain sort") answers the question ποῖον; ("of what sort?") (49d1). Τοιοῦτον is simply the demonstrative pronoun correlative with the interrogative ποῖον. It has been raised against me that my taking τοιοῦτον

nomena are images (50c4–5). We can tell that what recurs is the same recurring image by referring it to the original of which it is an image. The phenomena, then, have a double aspect. On the one hand, they are in flux; on the other hand, they are images of Ideas. Insofar as the phenomena are in flux, nothing whatsoever may be said of them. But insofar as they are images of Ideas, they may be identified according to kind.

The introduction of the phenomena as images solves the problem of identifying the phenomena. This solution gives the formal reason for the introduction of the receptacle. The third thing is needed as a medium in which the phenomena, as images, may appear. This need was not felt, though, until the problem of identifying the phenomena had been clarified (49b–c). That the phenomena are in flux required some means other than direct appeal to the phenomena themselves in order to identify them. The third thing having the nature and power (49a4–5) of a receptacle and medium is a requisite for fulfilling this need, since it makes it possible for the phenomena to appear as images and so makes possible the identification of the phenomena insofar as they are images of Ideas.

Further by drawing into doubt the ontological status of the phenomena as being in flux (esp. 50b3, IIA2 in note 6) and by contrasting the phenomena as in flux with the phenomena as images, our passage leads the way to the assertion that the shifting phenomena *as images* in the receptacle "cling in some way to existence on pain of being nothing at all" (52c3–5). Thus is resolved the problem, left over from the *Republic* and not resolved in the *Sophist*, of how Becoming holds a middle ground between Being and Non-Being: the fact that the phenomena are reflections of Ideas saves them from the non-existence and complete unintelligibility which threatens them as a result of their being in flux.[8]

Though my interpretation of the passage is simple, it has eluded Platonic scholarship. Some critics (notably Zeyl) have construed the problem with which the passage deals as a problem of how the phenomena are individuated rather than identified and claim that in the passage sensible phenomena are not in themselves substantial, but are made substantial by their relation to the receptacle, which individuates them and serves as a substrate for their changes. For these critics, τοιοῦτον does not distinguish an aspect of the phenomena as images from their aspect as in flux, but rather applies even of the phenomena as in flux and denotes a form-like

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to denote type or kind in our passage overlooks its demonstrative ("picking out") force. But denoting type or kind is a standard Platonic use for τοιοῦτον: at *Symposium* 210d7, ἐπιστήμην τοιαύτην means a "kind of knowledge" or as we would say "a branch of knowledge."

[8]For the relation of *Timaeus* 49b–50b to the *Cratylus* and *Theaetetus* see Mohr 249–250. See also N. H. Reed, "Plato on Flux, Perception and Language," *ProcCambPhilSoc* 18 (1972) 65–77. Reed follows Lee's interpretation of *Timaeus* 49–50.

quality of the phenomena (in Aristotle's sense of form). For these critics the whole passage looks forward to Aristotle's form-matter distinction (see Zeyl esp. 146–148). The formal reason for the introduction of space, on Zeyl's account, is to serve as a principle of individuation and as a substrate for change.[9]

Three other critics (Cherniss, Lee, and Mills) form a group which claims the passage has nothing to do with form-like properties; each of these critics, though, takes τοιοῦτον as picking out a different sort of entity. Cherniss takes τοιοῦτον correctly as referring to images of Ideas, but wishes to separate the images from the phenomena in flux, by equating images rather with what he calls "self-identical characteristics," which, he claims, cause the phenomena to come into existence by their entrances into space (128–130). The chief objection to this view is that there are at least four places in the dialogue, three in the immediate context, where the phenomena as images and the phenomena as in flux are taken as extensionally equivalent (29c1–3, 48e7–49a1, 50d1–2, 52a4–7).[10]

Lee, though correctly seeing that images and that which is in flux are co-extensive, nevertheless claims, like Cherniss, that τοιοῦτον denotes self-identical characteristics, which hover in an ontological twilight somewhere

[9]Zeyl's understanding of the problem with which the passage deals and its solution are the result of (1) his translating, like Cornford (178–182), ὁποῖον (49b2 and 3) and ποῖον (49d1) quantitatively rather than qualitatively and so failing also to see that ταὐτὸν τοῦτο (49c1–2), τούτων (49c7), τῶν αὐτῶν (49d1), and αὐτῶν ἕν (50a7) refer to types and not to individuals, (2) failing to see that the problem raised by the flux of the phenomena is a problem of identifying them rather than finding a permanent substrate for them, i.e., failing to see that 49a6–b2 refers back to 48b5–8, and (3) failing, like Lee (1967, 22), to see (a) that the stability of discourse made possible by our passage is a qualified one and (b) that 49b5 refers back to 29b–c.

Zeyl, however, is right, as against Cornford, in seeing that τοιοῦτον can denote properties in any category (substance, quality, quantity, relation, etc.) and is not restricted just to the category of quality, as Cornford would have it (Zeyl 147). Cornford confuses two senses of substance in his analysis of our passage. Cornford wishes to claim that our passage in calling phenomena τοιοῦτον treats phenomena as non-substantial, where substance is understood as a composite of form and matter, but he then unwarrantedly assumes from this claim the further claim that τοιοῦτον cannot denote substances, where substances are understood as essences or natural kinds as opposed to accidents (Cornford 178–181, esp. 181).

[10]Despite this overwhelming evidence, Cherniss claims that 50c3–4 supports his view by its implying that the transient phenomena are apparent alterations of the receptacle induced by copies of Forms entering it (129). But rather this sentence, which in context is offered as a reason (γάρ, c2) why the receptacle is characterless and unchanging, simply warns against inferring any diversity of the receptacle itself from the diversity of the phenomena in it. It is the diversity of the receptacle that is apparent, and, as we are told elsewhere, altogether impossible (50b8–c2, 50d–51a). The first δέ of 50c4 is adversative; φαίνεται (c3–4) here means "appears to be *x*, but indeed is not *x*" rather than "is visibly represented by *x*" or "shines forth visibly as *x*."

between the Ideas and the phenomena, but which are not images of Ideas (1966, 366–368; 1967, 22–25). This interpretation, however, collides with the explicit equation of that which is denoted by τοιοῦτον and the images of Ideas at 50c4–5.

Mills goes so far as to suggest that the referents of τοιοῦτον are the Ideas (154), despite the fact that the Ideas are explicitly said not to enter into anything whatsoever (52a3) and in particular not to enter into the receptacle (52c6–d1). Indeed, this property of the Forms is the very reason given at 52a–b for differentiating Forms *from* their images.

The convolutions of the Platonic metaphysics wrought by Cherniss, Lee, and Mills are motivated by an attempt to get around asserting τοιοῦτον ("of a certain kind") of the phenomena, which they take to be denied in the sentence of my translation which starts "what we see . . ." (49d4–6). Here I take the participial construction *causally* rather than purely *descriptively*, rendering it "*since* it always is becoming . . ." and taking it to mean "*insofar as* it always is becoming." This construction and interpretation is justified by the fact that the phrase is a summary of the preceding description of the phenomenal flux (49b7–c7), which raised the difficulty of identifying the phenomena as being of a certain kind. I suggest, then that my simple interpretation of the passage holds.

The problems (insurmountable in my view) which beset the interpretations of Zeyl, Cherniss, Lee, and Mills are dissolved if we read 49b–50b along the lines I have suggested. The passage distinguishes but does not separate the phenomena viewed as being in universal flux from the phenomena viewed as images of Ideas. As in flux, the phenomena cannot be identified according to kind. The mutability of the phenomena draws into doubt their intelligibility and even their very existence. On the other hand, as images of Ideas, the phenomena are subject to the predication τοιοῦτον, are saved from utter non-existence, and can be identified according to kind. As images of stable reality, the phenomena are subjects for discourse which is stable to the degree that its objects are likenesses of the Ideas.

II

I now wish to appraise the consequences our newly interpreted passage has for Plato's overall conception of the third thing or space. I will do this in two parts, first by showing what light our passage throws on the various metaphors which Plato uses to describe the third thing or space and secondly by discussing how the passage helps us determine whether or not Plato's conception of space operates philosophically like Aristotle's conception of matter.

Plato uses two groups of metaphors to describe the third thing. One

group of metaphors treats the third thing as a container and suggests a "bucket" theory of space. The other group of metaphors treats the third thing as a mirror or more accurately as a medium or field for receiving images.

The third thing is a container insofar as it is called a receptacle or reservoir (49a6) and space (52a8) and is compared to a winnowing basket (52e6) and to a place for sitting (ἕδραν, 52b1). Philosophically such metaphors of the third thing as a container serve to distinguish Plato's conception of space from conceptions which take space as equivalent to material extension. Such conceptions in general (1) make space that out of which phenomenal objects are made and (2) make space ontologically dependent on the existence of phenomenal objects. By using the container metaphor Plato wishes to deny both (1) and (2). On the metaphor of a container, the third thing with its contents is rather like an urn full of potsherds. It makes sense on this metaphor to say that one can place objects in the receptacle and again take them out keeping each intact, unaltered, and numerically one. That this is so, however, I suggest, is a non-relevant consequence of the container metaphor and is not intended to have metaphysical implications.

For, on the other hand, Plato speaks of the third thing as though it were a mirror (49e7–8 with 50c5). He does not specifically use the term "mirror" of the third thing, no doubt because that would entail the notion of a perceiver in accordance with his earlier analysis of mirrors (46a–c, cf. *Sophist* 266c) and he does not wish to imply that the relation between the Ideas and the receptacle implies the presence of a perceiver (see 61c–d). Plato may be a phenomenalist with regard to perception, but he is not a subjective idealist.

Plato does, however, explicitly use metaphors which portray the third thing as a medium, as opposed to a container. Such are the comparisons of the third thing to a scent base (50e) and the description of the third thing as an ἐκμαγεῖον (a soft substance capable of receiving impressions, 50c2, cf. 50e8–9). And viewed functionally rather than descriptively, the third thing as compared to a mother (50d3) should be ranked as a medium (see Cornford, 187), as should perhaps also the metaphor of the third thing as a nurse (49a6). Now philosophically the metaphor of space as a mirror or medium serves to show the ontological dependence of the phenomena on both the Ideas and the third thing and suggests that only the third thing and not its contents is stable and so subject to being called "this." The metaphor also serves to distinguish the third thing from those conceptions, including Aristotle's, which view space as that which surrounds on the outside the extension of phenomenal objects. These philosophical functions do not hold for the metaphor of the third thing as a container, where objects in it are surrounded by it, are stable, and

are ontologically independent of it, like marbles in a goldfish bowl. So Plato while setting forth the philosophical functions of the third thing uses metaphors which, if read literally, would, when taken together, assign incompatible properties to the contents of the receptacle. Which set of properties should we choose?

It is clear from our passage *Timaeus* 49b–50b that it is the metaphors of space as a medium for receiving images which are meant to be taken at face value and that the reading of the other metaphors must be brought into accord with the conception of space as a medium. And indeed this can be done.

For Plato is not committed to the contents' of the third thing being like the contents of a container, since the philosophical points Plato wishes to make about the third thing by using the container metaphor hold also of the third thing viewed as a mirror, even though the mirror metaphor does not make the points as perspicuously as does the container metaphor. A mirror is not equivalent to the extension of an object, nor is it ontologically dependent on its contents, nor is it a material constituent of its contents. We need not then accuse Plato of any philosophical confusion about the status of the third thing and the properties which the phenomena have as phenomena in it. Whereas Plato is committed to seeing the contents of the third thing as being like the contents of a mirror (each mention of images present in something makes such a commitment, esp. 52c3–5), Plato is not committed to viewing the contents of the third thing as the contents of a container. Nor does he make appeals to the contents of the third thing viewed as contents of a container.

When, then, Plato says that the contents of the receptacle appear in and then vanish out of the receptacle (49e7–8), he does not mean (and cannot consistently maintain) that the contents of the receptacle can be placed in and taken from it, each remaining intact, unaltered, and numerically one, like marbles in a goldfish bowl, though Cherniss's self-identical characteristics would commit Plato to this contradictory view. Rather the contents appear in and vanish from the receptacle as images in a medium. "To vanish" here, then, means not to go elsewhere, but simply means that the image's original stops being projected into space.

We can clarify Plato's conception of space even further if we compare it to Aristotle's conception of matter. Philosophers and critics of many persuasions have from Aristotle to the present tended to identify the two, taking Plato's conception of space as a failed formulation of Aristotle's conception of matter. This view is maintained I suggest largely by taking various phrases which Plato uses to *describe* the receptacle and wedding these to Aristotelian *descriptions* of matter without seeing what philosophical roles the two entities play in each philosopher's system. By

viewing Plato's space as a permanent, characterless substrate which is known only by some non-standard mode of cognition (cf. 51a–b), these critics make Plato's space look much like Aristotle's matter, which is permanent, lacks formal properties, and is known only by analogy. However, if we distinguish the philosophical *functions* of the two sorts of entities in each philosopher's system, we will see that they have little in common. There are five basic functions which matter serves (or can be construed as serving) in Aristotle's metaphysics: it serves (1) as a material cause or that out of which phenomenal objects are (made), (2) as a principle of individuation, (3) as a subject of predication, (4) as a substrate for change, and (5) by inference, as a principle of existence. I suggest that only the last function is held in common between Aristotle's matter and Plato's space.

(1) It is largely by pressing the comparison of space to gold in the *Timaeus* that critics have been able to construe space as a material constituent of phenomenal objects or that out of which phenomenal objects are made[11] and so claim that Plato, like Aristotle, is viewing phenomenal objects very much like substances composed of form or shape and matter (see, e.g., Zeyl 142 top, 147). I suggest though that Plato's description of the gold as that out of which shapes are formed (50a6) is an exigency of the metaphor and is not the relevant aspect of the gold that is being compared to space. Gold is chosen in the *Timaeus*, I suggest, not to typify matter entering into a substance as the constituent which offers stability to form, as the bronze of a sculpture offers stability to the shape of the sculpture, but exactly because of its malleability. Though the gold in itself is permanent, it does not transmit or contribute its permanence to the phenomena. Just look at the sentence in which the gold metaphor arises (IA, 50a5–b1): the figures in gold are being ceaselessly remolded into each other and it is this impermanence of the phenomena that raises the difficulty of identifying them. This difficulty is resolved by our ability to identify phenomena *as* images. Appeals to the gold do not help us to identify the phenomena or to view the phenomena as stable. Indeed the gold itself, as that which is ceaselessly molded, is not even being treated here as a medium for images, whether or not these images are treated like Aristotelian forms.

When space *is* viewed as a medium for images (50c), the images are, to borrow a phrase from Lee, non-substantial images, images, that is, which depend for their continued existence upon the persistence of their originals (Lee, 1966, 353–360). They are like images in mirrors, or like shadows, and are unlike statues of living individuals, where the image

[11]See for example, G. S. Claghorn, *Aristotle's Criticism of Plato's Timaeus* (The Hague 1954), chapter 2, and more recently W. K. C. Guthrie, *A History of Greek Philosophy* 5 (Cambridge 1978) 253, and 262–269, esp. 265.

may persist, as the result of its material component, even after its original perishes. The stability of the phenomena, as we already know from 29b–c, is dependent on the images' relation to the Ideas, rather than on the relation of the images to space. Neither the gold analogy nor any other passage in the *Timaeus* entails viewing space as a material constituent out of which substances are created. Rather space is a medium or field *in which* phenomena appear as (non-substantial) images.[12] If Plato had lived into our century he might very well have chosen, not gold, but a movie screen or television screen as his analogue to a field across which ceaselessly changing non-substantial images may flicker.

(2) For Aristotle one of the main philosophical functions of matter is to serve as a principle of individuation. There are many places where matter is viewed as *a* principle of individuation (*De Caelo* 278a26–27; *Physics* 190b22–25; *Metaphysics* 1074a33–35) and in *Metaphysics* Delta he goes so far as to say that it is *the* principle of individuation (1016b32–33). Socrates and Coriscus are, as men, formally identical, but because they are made out of different matter, they are numerically distinct. This does not mean that matter for Aristotle consists of pre-packaged parcels of numerically distinct stuff, like Democritean atoms or bare particulars, which individuate qualities because the parcels are in and of themselves individuals.[13] Rather Aristotelian matter individuates, but is not in and of itself individuated; rather it is like dough to a cookie cutter: the dough individuates the various cookie cut-outs, but does not consist of a group of individuals independently of having been cut into cookies. Now it is clear that Plato's space does not consist of pre-packaged units. He speaks of regions of space but these regions are posterior to the images which fill space (51b4–6): there is a fire region because fire is extended through part of space. Space does not consist of a grid of cubbyholes, which images of fire may then fill. But I also suggest that space for Plato does not serve as a principle of individuation in Aristotle's sense. Plato certainly never says that space individuates phenomena of the same kind, though space, as a whole, is numerically one.

[12]Guthrie claims that Plato uses the expressions ἐν ᾧ and ἐξ οὗ indifferently "in connection with raw material" and cites *Philebus* 59e and *Politicus* 288d as evidence (265, n. 3). In both of these passages, though, Plato is talking of already highly organized materials which are then, as instruments, put to a final use. The referents of both passages are what in the *Timaeus* would be called accompanying causes and in any case refer to the receptacle's contents rather than to the receptacle itself. It should be remembered that both the receptacle and its contents, as described in our passage, exist independently of demiurgic crafting. When the demiurge does start making things, he makes them out of the receptacle's contents and not out of the receptacle itself.

[13]*Physics* I.7 seems to offer a single exception to this rule: "Now the subject is one numerically, though it is two in form. For it is the man, the gold—the 'matter' generally —that is counted, for it is more of the nature of a this" (190b23–26).

And indeed since space is not that out of which the phenomena are made, it cannot serve as a principle of individuation at least as Aristotle's matter individuates. Consider again the relation of original, (non-substantial) image, and medium. In this relation it is not the medium which individuates the image. There are several ways for the image to be multiplied: the medium may be divided, like a shattered mirror; the original may be reproduced (as shadows of two hands cast on a screen), or the projecting light may be reproduced (one hand may cast several shadows, if there are diverse light sources). But as long as the medium remains intact and numerically one, it does not provide the principle for individuating phenomena of the same kind.

I suggest that Plato does not have a principle of individuation for the phenomena, rather he takes the plurality of instances of the same Form as a *given* (as at 52d5–e2). I suggest that this is also what he intends when, in discussing the sort of existence which the physical world has, he calls phenomenal existence "partible" as opposed to the impartibility of the Ideas (35a). For this partible existence is later called "dispersed, scattered, or strewn existence" (37a). Images, then, are strewn across space like individual seeds onto a field (σκεδαστή, 37a5). How the projection of images effects this we are not told, though we know it cannot be achieved by reproducing more originals of the same sort (31a, cf. *Republic* 597c). The plurality of the phenomena, then, simply seems to be an unanalyzed and possibly unanalyzable *given* in the Platonic metaphysics.

Cherniss, while wisely avoiding asserting that space is a principle of individuation for the phenomena, has suggested that the demiurge or god of the *Timaeus* serves as a principle of individuation for the phenomena. This is an elegant variation on the recurrent view in the history of ideas that particulars can be individuated by their accidents and relations. Cherniss writes: "Since the spatial mirror is homogeneous and the Ideas themselves are non-spatial, the reflections in space would not be locally distinct; and the Demiurge is conceived as delimiting them by geometrical configurations, thus representing spatially the 'logical' distinctness of their non-spatial originals."[14] This interpretation, if true, would have the unfortunate consequence of strapping Plato with a fallacy of division, but in any case, it runs up against the texts cited above which suggest a plurality of the phenomena in and of themselves prior to any demiurgic interventions, especially 52d–e, where it is claimed of the pre-cosmic receptacle that it receives shapes of earth and air, is qualified by all the other affections that go with these, has every sort of diverse appearance, and is filled with powers that are neither alike nor evenly

[14] "The Sources of Evil According to Plato," *Proc Amer Philos Soc* 98 (1954) reprinted in G. Vlastos, ed., *Plato* 2 (Garden City, N.Y. 1971) n. 18.

balanced in any region of it. It is not possible, then, that there is in the pre-cosmos only one instance of each kind of image spread over the whole of space, so that the demiurge can proceed to chop each up into many instances.

Rather I think it is safer to say that Plato does not have a principle of individuation for the phenomena and that probably he does not need one, since propositions all ultimately refer to Ideas, which are individuated by their unique conceptual content (31a).

(3) One reason I think critics have tended to treat Plato's space as a principle of individuation is because they wish it to be that by which we can pick out numerically unique subjects for sentences. They want the relation of visible property to space to correspond to and make possible the logical relation of subject-copula-(adjectival) predicate, and so to reproduce Aristotle's theory of predication. Zeyl is quite explicit about this (146–148). He takes τοιοῦτον as describing "its referent as an *attribute* of something *else* . . . In other words, these terms ["fire," "air," etc.] are to be construed as logically (though not grammatically) *adjectival.* And this is precisely what the πιστὸς καὶ βέβαιος λόγος is: the construction of our nominal references to phenomena as adjectival descriptions of some basic, permanent subject worthy of that status. This subject is the receptacle, for only *it* can be designated as τοῦτο . . . Thus it appears that Plato's use of τοῦτο, τόδε, and τὸ τοιοῦτον is the direct ancestor of Aristotle's admittedly technical use of such locutions" (146–147, Zeyl's emphasis). One problem here is the presupposition (1) that Plato in this passage is talking about the way space determines the (logical) form of propositions and (2) that the form of "a stable and certain statement" is that of subject-copula-adjective. The latter presupposition is proven false simply by looking at the one and only sentence in the dialogue for which Plato claims absolute stability and certainty (52c6–d1). The sentence reads: "So long as (the) two things are different, neither can ever come to be in the other in such a way that the two should become at once one and the same thing and two." The sentence is rather opaque, but minimally we have a proposition stating a relation between at least five terms (sameness, difference, oneness, twoness, and coming-to-be-in). The sentence cannot be reduced to a subject-copula-adjective form.

In any case, that space is called a "this" is not a consequence of the term "this"'s picking out a numerically unique substrate for phenomenal properties, since the criterion given for the designation "a this" is stability, not numerical uniqueness (49d7–e4). The stability of the phenomena that allows them to be described by discourse that is *somewhat* stable (49b5) is a consequence not of their relation to the numerical uniqueness of space or to an alleged uniqueness which it is supposed to provide them severally, but is explicitly the result of the relation of

resemblance which they hold to the Ideas (29c). If the *Timaeus* suggests a logical form for propositions about phenomena—Lee has suggested the form "Redness, or whatever-ness, is here"—space does not enter into this logical form (if it does at all) as the source of sentences' stability; and so Plato's space does not, as does Aristotle's matter, serve as the objective correlate to the subjects of predication.

(4) As a result of not being a subject for predication, space for Plato is not, at least in Aristotle's sense, a substrate for change. If by change we mean a subject's having one predicate apply to it at time T_1 and another at time T_2, then since space is not a subject for predication, it is not that which abides through the change of predicates. It is true that the receptacle, as the gold analogy shows, does abide or remain the same while the phenomena change, but it does not, as the gold analogy (properly interpreted) also shows, enter into the process of change as a constituent of that which changes. We cannot point to the receptacle as a constituent of a phenomenal object and use it as the referent for determining that a phenomenal object is the same object even though (some of) its properties change. And so too Plato's space, unlike Aristotle's matter, is not potentially the contrary of any particular phenomenal object. Space is not, then, at least in Aristotle's sense, a substrate for change. Space provides a field across which images may flicker, but it does not provide any continuity to the images as they change.

(5) Aristotle does not explicitly state that matter is a principle of existence for the phenomena, but this seems to be strongly suggested by *Metaphysics* Zeta (1032a20–22, 1039b20–31) and by *De Caelo* 278b1–2, and it is implied by the doctrine that being and unity are synonymous in each of the categories (*Metaphysics* 1003b22–37), such that, since to be one in the substance category is to be one in number and so to be individuated by matter, matter is also the principle of being for the substance category, namely, it is that by which substances exist *simpliciter*. One might say that "to be" is "to be enmattered" for Aristotle. Plato's view might be analogous. Space is a principle of existence for non-substantial images. It is claimed at 52c that since a phenomenon is a "semblance of something else, it is proper that it should come to be in something else (namely space) clinging in some sort to existence on pain of being not at all." It is only as a principle of existence that Plato's space and Aristotle's matter seem to have a similar function.

Even the *descriptive* properties of space and matter are assigned for different reasons by each philosopher. That space for Plato is eternal is the consequence of its being a field rather than of its being that which abides changes of predicates.[15] And Plato's space is characterless so that

[15] 50b6–c1; 52a8–b1, note δέ, b1; and γένεσιν, b1 means "coming into existence" not "going through change."

it offers no interference to the reception of images (50b–c, d–e, 51a7), while Aristotle's matter is characterless because it is that of which everything else is predicated while it is itself not predicated of anything else (*Metaphysics* 1028b36–37, cf. 1029a22–23).

As a medium or field which is necessitated by the interpretation of phenomena as images, Plato's space serves neither as that out of which phenomenal objects are made, nor as a principle of individuation, nor as a subject for predication, nor as a substrate for change. We may safely conclude with Cherniss then that "in Plato's theory, there is no material principle even for sensible objects."[16]

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[16]*Riddle of the Early Academy* (Berkeley 1945) 23.