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## FORM AND FLUX IN THE *THEAETETUS* AND *TIMAEUS*

David P. Hunt

The subject of this essay is the "Heraclitean" flux in the *Theaetetus* and its role in the discussion of the first definition of knowledge, particularly in light of the flux doctrine that Plato propounds in the *Timaeus*. There are two principal interpretive approaches to the argument in this part of the *Theaetetus*, and the question whether its theory of flux is, to any appreciable degree, Plato's own view is perhaps the central issue dividing the two camps. Though the *Timaeus* has been cursorily cited by the one camp, and as cursorily dismissed by the other, I believe that a closer comparison of the two dialogues can be genuinely helpful in adjudicating the dispute over how best to read the *Theaetetus*.

### *The Dialectic*

The *Theaetetus*'s exposition and examination of the first definition of knowledge at 151d-186e is essentially a story of three theories. The first is Theaetetus's proposal that "knowledge is simply perception" (151e). The second is introduced almost immediately when Socrates says of Theaetetus's theory that

it's what Protagoras used to maintain. He said the very same thing, only he put it in rather a different way. For he says, you know, that "Man is the measure of all things: of the things which are, that they are, and of the things which are not, that they are not. . . . [Again], he puts it something like this, that as each thing appears to me, so it is for me, and as it appears to you, so it is for you . . . (151e-152a)<sup>1</sup>

This *homo mensura* theory and its connection with Theaetetus's theory of knowledge are then illustrated with the favorable case of a wind that feels cold to one person and not to another (152b-c). This example, in which the absence of a competing objective standard is said to guarantee that each person's perception is "of what is, and unerring" (152c), provides a model for Socrates' subsequent elaboration of Theaetetus's theory that knowledge in general is just perception.

No sooner is the connection between the first two theories secured than Socrates is linking them with a third, a "secret doctrine" allegedly taught by Protagoras and espoused by "all the wise men of the past, with the exception of Parmenides" (152e). This third position is first formulated as

the theory that there is nothing which in itself is just one thing: nothing which you could rightly call anything or any kind of thing. . . . What is really true, is this: the things of which we naturally say that they 'are', are in process of coming to be, as the result of movement and change and blending with one another. We are wrong when we say they 'are', since nothing ever is, but everything is coming to be. (152d-e)

Socrates then develops an account of perception that is consistent with this doctrine of metaphysical flux (restated at 156a as "the principle . . . that everything is really motion, and there is nothing but motion") and supportive of Protagoras's *homo mensura* doctrine.

When Socrates is finally ready to present the results of his midwifery to Theaetetus, he does so with the announcement that "the various theories coincide: that of Homer and Heracleitus and all their tribe, that all things flow like streams; of Protagoras, wisest of men, that man is the measure of all things; and of Theaetetus that, these things being so, knowledge proves to be perception." (160d-e) Despite the fact that the increasingly radical implications Socrates has teased out of Theaetetus's original idea--e.g., that perceptible qualities do not really belong to their apparent objects (156d-e), that things exist only in relation to other things (156e-157a), and that language must be reformed to eliminate the verb "to be" (157a-b)--are undoubtedly more than Theaetetus bargained for, he is still prepared to describe the package of ideas Socrates presents to him as "an extraordinarily reasonable view" that "has got to be accepted" (157d) and to acknowledge it as his own offspring (160e).

Socrates then commences to examine this tripartite theory part by part, beginning with its characteristically Protagorean component. Initial difficulties with the view are raised (161c-162a, 163a-164d), Protagoras is imagined clarifying his position in response to the difficulties (162d-163a, 164e-168c), and final objections are registered (169d-179b), punctuated by a "digression" in which Socrates sketches an exaggerated picture of the philosophical life (172e-177c). The last objections are regarded as decisive, at least so far as the universal *homo mensura* doctrine is concerned; but the possibility that a restricted version of the doctrine--one limited to "that immediate present experience of the individual which gives rise to perceptions and to perceptual judgements" (179c)--might survive the critique motivates a special examination of the third of the three theories, now identified specifically with Heraclitus and Ionia (179d). The argument here is that the "Heraclitean" flux will not serve its Protagorean purpose (which requires it to destabilize absolutely everything that might rival personal opinion as a standard of truth) unless "all things are always in every kind of motion" (181e-182a), with 'motion' explicitly understood to include *both* "alteration and spatial movement" (181d). But this, Socrates shows, leads to absurdity--no answer on any question would be more correct than any other, and language itself would be impossible (181b-183c).

This is a more crushing defeat for the knowledge-is-perception thesis than the one inflicted *via* Protagoras alone, and it ought to be definitive, given Socrates' claim that the three theories coincide. Yet Plato adds one more refutation, this one addressed to Theaetetus's original definition in apparent abstraction from the carefully developed connections with its Protagorean and Heraclitean counterparts. A possible explanation for this additional argument is suggested by the conditional conclusion with which Socrates wraps up his critique of radical flux: "we are not going to grant that knowledge is perception, not at any rate on the line of inquiry which supposes that all things are in motion; we are not going to grant it unless Theaetetus here has some other way of stating it." (183c) Though no mistake in Socrates' conflation of the three theories is ever

identified, and Theaetetus does not so much as attempt to provide an alternative way to understand his thesis, it may be that the bare possibility of a shaky connection somewhere in Socrates' story is enough to motivate the final refutation.

In any case, Socrates announces his intention to "make use of our midwife's art to deliver Theaetetus of the thoughts which he has conceived about the nature of knowledge" (184a-b)--an odd remark, given that Theaetetus has already birthed a child and Socrates has "perform[ed] the rite of running round the hearth with it" (160e). (Is Theaetetus pregnant with twins?) The refutation that follows distinguishes judgments *about* perceptions from the perceptions themselves (184b-186c), attributes such judgments to the soul (a new *dramatis personae* excluded from the earlier discussion by its materialist presuppositions), and concludes that "knowledge is to be found not in the experiences but in the process of reasoning about them; it is here, seemingly, not in the experiences, that it is possible to grasp being and truth" (186d). Theaetetus then adds: "we have now got the clearest possible proof that knowledge is something different from perception" (186e).

### *Two Readings*

The foregoing synopsis--too lengthy for some purposes and too sketchy for others--is offered with an eye toward the two readings that we must now consider. The first reading, which was favored by earlier commentators like Cornford,<sup>2</sup> is summarized by Myles Burnyeat as follows:

[P]erception is something of which Protagoras and Heraclitus give a true account. But nothing of which these theories are true can yield knowledge. Therefore, knowledge is not perception.<sup>3</sup>

On the alternative approach favored by a number of more recent scholars (including Burnyeat himself), the theories of Protagoras and Heraclitus enter the argument, not because Plato accepts them (even in a qualified way), but solely because they follow from Theaetetus's definition. So "the structure of the argument is that of a *reductio ad absurdum*: Theaetetus → Protagoras → Heraclitus → the impossibility of language."<sup>4</sup> Let's follow Burnyeat in designating these "Reading A" and "Reading B" respectively.

Burnyeat is not alone in seeing these as the major interpretive options. Ronald Polansky, in a more recent commentary, also demarcates two fundamental approaches to the work. On the one hand, "[s]ome argue strongly that Plato accepts" the doctrine of perception and flux in the *Theaetetus*, not only because "many passages in the dialogue fit this construal" but also because "[t]hey think it necessary for Plato to offer his own view in order to be fair to Theaetetus' conception and to foster understanding." On the other hand,

[a] quite different comprehension of this section is that Plato is merely allowing Theaetetus' conception the best hearing by revealing the only conditions upon which perception has a chance to be knowledge, these conditions being the doctrines of Protagoras and Heraclitus. Because Plato would only be determining the necessary and sufficient conditions for Theaetetus' proposed account of knowledge, he need have no personal commitment to them.<sup>5</sup>

This clearly amounts to Burnyeat's distinction between Reading A and Reading B.

The first thing to notice about these two readings is that they are not much concerned to explain Socrates' final refutation of Theaetetus's definition; what drives them is the Protagorean-Heraclitean phase of the argument. This is not to suggest that the supporters of these rival readings will have nothing to say about the final refutation, or that what they have to say won't be influenced by their support for A or B.<sup>6</sup> But the final refutation is clearly an afterthought so far as these two readings are concerned. Because I am concerned to grapple with these readings and the different roles played by the flux, I will also have little to say about the final refutation.

The second thing to notice is the shifting identity of the "Protagorean-Heraclitean" ideas which play a positive role in Reading A and a negative role in Reading B. These cannot be exactly the *same* ideas--at least not if we want to avoid begging the question against Reading A. Supporters of this reading do not dispute that *some* selection of "Protagorean-Heraclitean" ideas is argued by Socrates to have unacceptable consequences, because this much is plain from the text; and they certainly do not suppose that the very ideas shown by Socrates to be unacceptable are the ones that Plato himself accepts and builds into the argument as essential premises. Rather, on Reading A there is a Protagorean-Heraclitean story about perception that, by Plato's lights, gets things more or less right. Socrates tells the story because Theaetetus has defined knowledge as perception, and the right story about perception is relevant to examining this definition. The definition fails because this story about perception and its objects cannot coherently be extended to encompass knowledge and its objects. According to Reading A, then, the Protagorean-Heraclitean ideas that Reading B rightly charges with incoherence are those involved in this extended story, not those involved in the initial story restricted to perception. Supporters of Reading B, of course, see the situation rather differently. They need not deny (and likely will assert) the importance of distinguishing different phases in Socrates' development of the Protagorean and Heraclitean theories. But they will insist that any effort to distinguish in the dialogue a "good" set of Protagorean-Heraclitean ideas from a "bad" set is founded on an illusion, and that in any case the former plays no essential role in the logic of the argument, which is designed simply to unpack the negative consequences of Theaetetus's definition.

With the foregoing in mind, let us summarize the two readings as follows. On Reading B, a package of ideas attributed by Socrates to Protagoras and Heraclitus--call this 'PH'--leads to contradiction, while on Reading A a more limited set of Protagorean-Heraclitean ideas centering on the metaphysics of perception--call this 'PH\*' (PH ≠ PH\*)--is assumed by Socrates to be true. Reading A, then, ascribes the following general structure to Plato's argument:

PH\*

PH\* → ~(knowledge = perception)

∴ ~(knowledge = perception)

Reading B, on the other hand, holds that this is the correct form of the argument:

(knowledge = perception) → PH

~PH

∴ ~(knowledge = perception)

The principal difference between the readings is that Reading A assumes the truth of PH\* while Reading B does not.<sup>7</sup>

Does Plato in fact accept a "Protagorean-Heraclitean" account of the metaphysics of perception? And if he does, is this account employed as a premise in the argument of the *Theaetetus*? There are at least a couple of considerations that seem to me to favor affirmative answers to these questions. I look first at a consideration based on the logic of the two readings.

### *A Logical Consideration*

Socrates responds to Theaetetus's definition of knowledge as perception by elaborating an account of perception and its objects. Supporters of Reading A think it prima facie evident that the account is one that Plato himself would regard as true (or at least a "likely story"). After all, why would Plato introduce at this point an account that he thinks is fundamentally misleading, and if he did, how could a refutation based on this flawed account possibly succeed?<sup>8</sup> This point has some force.

Take a parallel case. Theresa proposes that the mind is just the brain, and Sophie begins her refutation of this proposal by reviewing some of what current science says about the brain. If this account is fundamentally accurate (or at least believed by Theresa and Sophie to be fundamentally accurate), this can be helpful in refuting Theresa's proposal; for Sophie can then argue that something we *cannot* attribute to the mind (because it would lead to absurdity) nevertheless *must* be attributed to the mind (since current neuroscience does attribute it to the brain and Theresa has identified this with the mind). But if the neurophysiological story Sophie tells is fundamentally flawed, her "refutation" fails; if, moreover, she *believes* it to be flawed, it's hard to imagine what she thinks it contributes toward rebutting Theresa.

The partisan of Reading A believes that Socrates must assume the fundamental accuracy of PH\* for the same reason that Sophie must assume the fundamental accuracy of her neurophysiological story. It's only if the Protagorean-Heraclitean approach to *perception* is basically correct that it could *follow* from Theaetetus's identification of knowledge with perception that the Protagorean-Heraclitean approach to *knowledge* is basically correct. But both sides agree that the latter (with its absurd consequences) *is* supposed to follow from Theaetetus's definition. Plato must therefore believe, and expect his readers to believe, that PH\* tells a more or less correct story about perception and its objects.

To overturn this presumption in favor of Reading A, the partisan of Reading B must offer some alternative account of PH\*'s role in the argument, so that Socrates' rebuttal of Theaetetus does not parallel Sophie's rebuttal of Theresa. The alternative suggested by Burnyeat and others is that PH\*, rather than saying *what perception truly amounts to*, instead says *what perception would have to be if it is to qualify as knowledge*. But this suggestion is itself problematic.

On Reading B, PH\* is the opening wedge from which it will follow that perception is *not* knowledge. This should make one dubious of the claim that PH\* is the only way that perception could *be* knowledge. Indeed, since PH is shown in the end to render knowledge impossible, why not make the *denial* of PH a precondition for any proposed definition of knowledge? When Theaetetus defines knowledge as perception, Socrates should then point out how inhospitable PH is to knowledge, and argue that this definition's best chance of success is if perception is understood in a non-Protagorean, non-Heraclitean way--that is, if PH\* is assumed to be *false* instead of true.

One might wonder, in particular, why Socrates does not begin with a *naive realist* account of perception, if (as Reading B would have it) the account he offers is dictated solely by the requirements of Theaetetus's definition. If knowledge is perception, then perception (to be knowledge) must be of what is sufficiently stable (so the *H* in PH\* must be false); but then there is a standard of truth independent of us (so the *P* in PH\* must also be false). Perception, then, must be understood in such a way that it always delivers a percept correspondent with an objective (relatively stable) external standard. Naive realism secures this result (under normal perceptual conditions) by making perception transparent, disclosing to the perceiver the very qualities that things have in themselves. Perhaps Plato does not develop this potential support for Theaetetus's definition because he regards naive realism as offering a *false* account of perception--the wind example, coming so early in the discussion, certainly suggests that Plato thought it a nonstarter. But then PH\* is selected for development, not because it is required by Theaetetus's flawed definition of knowledge, but because of its (relative) plausibility. This points toward Reading A rather than Reading B.

Of course there are plenty of reasons, other than the assumption that PH\* is true, that could have been instrumental in Plato's decision to adopt this account of perception as a vehicle for refuting Theaetetus's definition. Perhaps Plato saw enough connection between Theaetetus's defective definition of knowledge and ideas he opposed in Protagoras and Heraclitus that he could not pass up the opportunity to kill three birds with one stone; or perhaps a theory like PH\* was in the intellectual air at the time Plato wrote the dialogue, making it an apt target. (Though commentators of all persuasions uniformly regard Plato's attribution of PH\* to Protagoras as fanciful, the possibility that such a theory at least *existed* could help explain something that would otherwise be puzzling about PH\* on the assumption that it is not Plato's own theory: why it is presented in such detail.) These and other alternatives are certainly available to the defender of Reading B. But what the defender of Reading B cannot do is claim that PH is *entailed* by the definition of knowledge as perception--except in the trivial sense that PH, because it is self-contradictory, entails absolutely anything (as indeed Socrates shows that it does at 183a).

### *A Comparative Consideration*

It is impossible to evaluate the suggestion that knowledge is perception unless 'perception' has some content. On Reading A Socrates supplies that content when he

develops PH\*, and unless PH\* is assumed to get perception more or less right, the subsequent "refutation" cannot succeed.

This straightforward defense of PH\*'s positive role in the argument would naturally have to be rethought if there were good external evidence that Plato would not assign it such a role. But there is, to the contrary, familiar evidence that Plato accepted some of the most characteristic features of PH\*. Aristotle's testimony, that "in his youth Plato first became familiar with Cratylus and with the Heraclitean beliefs that all perceptible things are always flowing and that there is no knowledge of them; he held these views later too,"<sup>9</sup> has been discounted by a number of commentators (though not, I think, for very good reasons).<sup>10</sup> Plato's commitment to a flux doctrine in earlier dialogues like the *Phaedo*, *Republic* and *Cratylus* can also be dismissed on the grounds that Plato may have changed his mind by the time he wrote the *Theaetetus*. I will therefore concentrate on the *Timaeus*, since the evidence there is both ample (the problem of flux is wrestled with at length) and less vulnerable to the charge that Plato has changed his position.

Let me elaborate just a bit on this last point. The dating of the *Timaeus* is notoriously controversial. I incline toward a relatively late date, but the little I could say on this question, without it hijacking the main argument of the paper, would be insufficient to persuade anyone who didn't already agree with me. But even if the *Timaeus* were written before the *Theaetetus*, it could not have been written *much* before the *Theaetetus*. This means that, for the question before us, it retains considerable evidential value. The idea that Plato might subject to sustained and withering criticism a doctrine that he was himself defending at length just a couple of years earlier, and that he might do this without so much as hinting at the fact that the doctrine was only recently his own, is hard to credit--especially coming from someone who, at approximately the same time (in the *Parmenides*), was raising embarrassing difficulties for his signature theory of Forms and frankly acknowledging ownership of the theory by making Socrates its defender.

Turning then to the *Timaeus*, let us begin by noting some of the similarities between Plato's description of perception in this dialogue and in the *Theaetetus*. The latter, consistent with its "Heraclitean" theory of flux, characterizes the relatively "stable" items involved in perception--sense organs, on the one hand, and sensed objects, on the other--as "slow motions" (156c). Though this term is not so used in the *Timaeus*, it would not be inappropriate there, given this dialogue's description (to which we will soon turn) of the primal chaos underlying all structured things. The "slow motions" of the *Theaetetus* generate "swift motions" in the space between the sense organ and the sensed object (156d-e), while the *Timaeus* speaks of a visual stream of fire (the most mobile of the basic elements--56a) flowing out of the eyes toward visible objects (45b) and another stream of fire flowing toward the eyes from surrounding objects (67c). It is here, in the intervening space and not in the organ or object, that both dialogues locate perceptible qualities: according to the *Theaetetus* "what we naturally call a particular colour is neither that which impinges nor that which is impinged upon, but something which has come into being between the two" (154a), while in the *Timaeus*

we learn that visible color depends on the interaction of different-sized particles in the space between eye and object (67c-68b).

There are certainly differences of detail and differences of emphasis between the two dialogues. The *Theaetetus*, for example, lingers over the subjectivist implications of this theory of perception; but the *Timaeus* account is arguably pregnant with the same implications. In general, differences in the two accounts of perception are no more than one would expect if a single theory is being recounted on different occasions in different contexts and for different purposes. Similarities are even more striking when one turns to Plato's treatment of the flux underlying the mechanics of perception.

Let us look first at the *Timaeus*. At 48b Plato announces that he is going to "consider what was the nature of fire, water, earth and air before the beginning of the world and what their state was then," i.e., prior to the intervention of the Demiurge, who found "the visible universe in a state not of rest but of inharmonious and disorderly motion." (30a) Because the reference is to a flux that obtains prior to the imposition of cosmic order, let us call this the "precosmic" flux, in contrast to whatever "cosmic" flux might persist subsequent to the rational ordering of things. What Plato actually divulges about the precosmic situation is pretty meager. At 53a we are offered the unsurprising assessment that "all these things were in a state devoid of reason or measure," while at 53b we encounter the more intriguing assertion that the precosmic elements nevertheless "possessed some *traces* of their own nature." What these traces (*ichnê*) could amount to in a chaos "devoid of reason or measure" has been much puzzled over, and I have no fresh insights to offer.<sup>11</sup> But however we are supposed to understand these traces, because they belong to the *precosmic* situation, arising solely from the Errant Cause (48b) prior to the imposition of divine order, they must offer nothing on which reason or language can gain a purchase. This is confirmed when Plato reverts briefly to the precosmic situation at 69b-c, remarking that "at that time nothing partook of [harmony and proportion], save by accident, nor was it possible to name anything worth mentioning which bore the names we now give them, such as fire and water, or any of the other elements."

The Timaeian precosmic flux has its Theaetetan counterpart in the extreme Heraclitean flux toward which Theaetetus is ultimately driven by his Protagorean account of knowledge. Call this the "terminal" flux, since it represents the furthest one can go in the direction of instability and spells the end of Theaetetus's first theory of knowledge; it should be contrasted with the "initial" flux which Socrates offers Theaetetus early in the discussion as an aid to unpacking his thesis. (The terminology here, pointing to each flux's role in the dialogue rather than its intrinsic nature, is supposed to be neutral on the question whether these are *different* fluxes, as Reading A would maintain, or the *same* flux whose implications are only progressively revealed, as Reading B would suggest.) The terminal flux of the *Theaetetus*, like the precosmic flux of the *Timaeus*, is so extreme that it renders language impossible. Protagoras's *homo mensura* doctrine, which Plato treats as equivalent to Theaetetus's first definition of knowledge, requires that reality not support any objective fact, however attenuated, that could serve as a rival measure for truth; but the only way to preclude such a rival



standard is to insist that everything changes continuously in every respect (181e). Strictly speaking, nothing *is*, everything *flows* (182c). But even this is inadequate to the radical nature of the flux, which requires that the flow is itself flowing. Not only is it impossible to say that something *is* white, it's not even possible to say that it *flows* white, since the white that it flows is itself changing continuously (182d). If this were the way things are (or "flow"), we couldn't even say of anything that it is "thus." There is nothing here for language to get a grip on (183a-b). What is left of "white" in this context (the context of terminal--that is, radical "Heraclitean"--flux) but a mere inarticulable "trace" or "vestige" of what we think of as white?<sup>12</sup>

So much for extreme flux, whose presence in the two dialogues is acknowledged by virtually everyone on both sides of the dispute between Reading A and Reading B.<sup>13</sup> Extreme flux (whether "terminal" or "precosmic") is discordant with reason and so cannot be found anywhere in the actual world (except as an abstraction from it). But what about the less extreme versions of flux at work in the dialogues--the apparently benign "initial flux" involved in the *Theaetetus*'s PH\*, and the mitigated "cosmic flux" that remains after reason has made its contribution in the *Timaeus*?

One obstacle to addressing this question is uncertainty over the parameters of the fascinating flux analysis that Plato offers in the *Timaeus* between 48b and 53b. At 48b, as we saw, Plato introduces the precosmic chaos. At 53b he sums it up and begins an account of how reason makes a cosmos out of chaos by imposing a geometrical micro-structure on space and tying sensible change to the transformations in this micro-structure. The result is still a flux, but a flux with enough underlying order that thought and language can get some kind of purchase on it. This is clearly the cosmic flux. But what kind of flux--cosmic or precosmic--is under discussion in the intervening text? This is a subject of considerable scholarly controversy.

At 49b Plato raises a "problem about fire and the other elements." The problem is how "to say which particular element we ought really to term water rather than fire, and which we ought to term any one element rather than each and all of them, while still employing a terminology that is reliable and stable." This problem is rooted in an underlying flux: "no one of these [elements] ever remains identical in appearance" but is "constantly changing from one state to another." (49d) This flux is such that we cannot with propriety speak of "this" (*touto*) or "that" (*tode*) but only of what is "suchlike" (*to toiouton*) (49d-e). The question is whether Plato, in these and the following passages, is speaking of the precosmic flux or of the flux that remains after cosmic order has been imposed.

There are several reasons why I adhere to the latter. For one, Plato ascribes the problem to "what we now call water" (49b)--and what we now call 'water' is clearly not the mere water-trace that obtains in the precosmos (if indeed we could even call *that* anything at all). Moreover, the phenomena he cites as examples of the problematic flux are familiar "becomings" which "we see": condensation, combustion, dissolution, and so on (49c), all of which are orderly elemental transformations of the sort he will later provide a reasoned explanation for in terms of the cosmos's geometrical microstructure. Furthermore, in saying what kind of language is strictly permitted--and the context is

surely a strict one, since it's a context in which Plato disallows the use of "this" or "that" or any term that would make its referent stable or definite--Plato does explicitly allow the locution "suchlike." But the precosmic chaos, containing only unstructured "traces" of sensible qualities, should not even permit "suchlike"--as indeed its counterpart in the *Theaetetus*, the extreme Heraclitean to which Theaetetus is driven by his Protagorean definition of knowledge, does not permit "thus." These seem to me to constitute ample reason to regard Plato's remarks about the flux which engenders the "problem of fire" as applying to cosmic (and not just precosmic) fire, etc.<sup>14</sup>

The principle textual reason for resisting this conclusion is that Plato announces at 48b a discussion of the precosmic flux and does not clearly announce a shift of focus to the cosmic flux until 53b, when he takes up his tale of triangular atomism. But this reason is inadequate, given the points made in the preceding paragraph. Plato proposes at 48b to "consider . . . the nature of fire, water, earth and air before the beginning of the world" because his Timaeian project of understanding sensible particulars compels him to confront the contribution of necessity as well as reason, and this means bringing into the account the nature of the elements as they are apart from the imposition of rational order. This does not mean that from 48b until 53b Plato is discussing exclusively the precosmic elements; it only means that in the course of this discussion of the elements, "we must consider" their prerational nature. This he certainly does. The fact that the postcosmic stuff that we *now* see and *now* call 'water' is itself in continual flux of the sort described is relevant to an inquiry into the nature of precosmic water, since it shows errant change to be the fundamental principle whose combination with rational persuasion yields the sensible universe.

I conclude that most of what Plato has to say about "flux" between 48b and 53b is applicable to the cosmic flux. How then do the claims he makes in this part of the *Timaeus* compare with his characterization of the "initial flux" in the *Theaetetus*? The latter flux is one in which everything is in motion, to be sure, but it's also one in which the "slow motions" constitute sense organs and sensed objects and the "fast motions" produce something with enough (relative) stability for us to experience it as the perception of a (relatively) stable object--an apple, say, or a person. This is not (yet!) a world in which "thus" is not tolerated! The flux here is part of an explanation of sensible (experienced) qualities, not the abolition of such qualities. As in the *Timaeus*, the less radical flux is assigned an essential role in scientific explanation.

Nevertheless, the ontology of flux makes change rather than stability fundamental; strictly speaking, then, there is nothing with sufficient stability to constitute a "this" or "that". It is important that this point not be misconstrued. It does not mean that there are no objects like eyes and apples, or that we can't talk as though there are. The question is what eyes and apples amount to ontologically. Are they individual substances, ontologically privileged items in the metaphysical inventory of reality? Not according to the "Heraclitean" story that Plato has Socrates bring to the aid of Theaetetus's definition. This story about the underlying mechanics of perception is a story told in terms of slow and fast motions, not in terms of eyes and apples. This makes the initial "Heracliteanism" offered to Theaetetus very much like the cosmic flux

Plato endorses in the *Timaeus*, whose philosophically correct ideal language also eschews "this" and "that" in favor of "suchlike." The moderate fluxes in both dialogues, though falling short of their radical cousins, nevertheless *de-substantialize* the world. This fact about the *ontological* structure of things is perfectly consistent with Plato's *cosmological* project (as described in subsequent sections of the *Timaeus*) to construct on this foundation of flux a world of orderly middle-sized objects. In neither dialogue does Plato's rejection of the ontological propriety of "this" and "that" suggest that there are no (relatively) stable objects like those we encounter in everyday experience, any more than Bishop Berkeley's rejection of material substance entails that he rejected ordinary objects. Rather, both Plato and Berkeley, in their revisionary metaphysical theories, mean to be telling us how such ordinary objects are to be *understood*.<sup>15</sup>

We find in the *Theaetetus*, then, a doctrine of flux--both the "initial flux" involved in PH\* and the "terminal flux" that leads to absurdity--that is *prima facie* interchangeable with views about the "cosmic" and "precosmic" fluxes that Plato endorses in the *Timaeus*. For reasons given at the beginning of this section, it is very difficult to believe that Plato's position on the Theaetetan flux could be substantially different than the position he takes in the *Timaeus*.

### *Two Objections and a Response*

The foregoing considerations, based on the logic of the two readings and similarities between PH\* and the *Timaeus*, seem to me to support at least a moderate presumption in favor of Reading A. We must now review two difficulties for this reading.

The first difficulty is that Reading A, even if it compares favorably with Reading B when Socrates' argument is abstracted from its conversational context, does not hold up nearly so well when one takes into account what Burnyeat calls Plato's "stage-directions."<sup>16</sup> Here is a small sample of stage-directions that seem to me to be especially problematic for Reading A.

a) *The attribution to Protagoras*. Whether or not PH\* is Plato's own view, it is hardly surprising that Socrates would disclaim credit for this theory, even when asked by Theaetetus point-blank "whether the things you are saying are what you think yourself, or whether you are just trying me out" (157c). There are familiar Socratic reasons for this reticence, and Socrates' role as mid-wife to others' conceptions is developed at length and adverted to frequently in this dialogue. But why attribute the theory to *Protagoras*? For Plato, what could be more prejudicial than such an attribution?

b) *Opening ironies*. Why does Plato treat so ironically what (from the standpoint of Reading A) is simply the sober truth about perception? So long as Plato reserves his irony for the later *unrestricted* Protagorean position, there is no problem. But the irony is laid on pretty thick from the very beginning. One of the less subtle examples coincides with one of the strongest pieces of evidence favoring Reading A's claim that PH\* is Plato's own view: Socrates' opening summary of Protagoras's "secret doctrine" at 152d-e. This passage sounds like it could have been lifted from one of Plato's middle dialogues; yet it is prefaced by Socrates' remark that "it is not likely that a wise man [i.e.,

Protagoras, the alleged exponent of this "secret doctrine"] would talk nonsense" (152b), and followed by this comment:

And as regards this point of view, let us take it as a fact that all the wise men of the past, with the exception of Parmenides, stand together. Let us take it that we find on this side Protagoras and Heraclitus and Empedocles; and also the masters of the two kinds of poetry, Epicharmus in comedy and Homer in tragedy. . . . And if anyone proceeded to dispute the field with an army like that--an army led by Homer--he could hardly help making a fool of himself, could he? (152e-153a)

Is there even the remotest possibility that Plato means to be commending the view endorsed by this crowd of "wise" men?

c) *More irony.* When Socrates, having completed his Protagorean-Heraclitean account of the metaphysics and epistemology of perception, asks Theaetetus, "does this look to you a tempting meal and could you take a bite of the delicious stuff?" (157c), can there be any doubt that this tasty morsel is *bad* for him? Or when, referring to the Protagorean and Heraclitean theories he has introduced on behalf of Theaetetus's definition, he shifts metaphors and speaks of having "unearthed all this extraordinary stuff" (163a), can he really speak in such bemused fashion of views which at least approximate to Plato's own? Finally, while Plato's debts to the historical Heraclitus should make the latter less likely than Protagoras to trigger warning flags, the over-the-top description of contemporary Heracliteans at 179d-180d is very difficult to reconcile with the idea that a suitably qualified flux doctrine functions as a premise in Socrates' argument.

In sum, one would have to be tone-deaf to miss the manifold ways in which Plato signals his real attitude toward PH\*. It's true that the signals are not entirely univocal. Defenders of Reading A may even appeal to some of their own--e.g., Socrates' remark that "there is good enough evidence for this [flux] theory" (153a) and his report that he "was delighted with [Protagoras's] general statement of the theory that a thing is for any individual what it seems to him to be" (161c). But it's easier to discount these passages as further evidence of Socratic irony than it is to take straight-up the obviously ironical passages which favor Reading B. It's also true that *some* features of Reading B do not harmonize very well with the passages cited above--e.g., why does Socrates at 157c present to Theaetetus as a *temptation* (which he could presumably resist) what on Reading B is supposed to be an *entailment* (which he could not resist because his definition commits him to it)? But on the crucial question which divides the readings--whether Socrates' refutation presupposes PH\*--the advantage appears to lie squarely on the side of Reading B.

The second difficulty for Reading A is that the previous section's comparison between the Theaetetan and Timaeian fluxes ignored some important differences. In the first place, the mitigated flux in the *Timaeus* is subsumed within a *cosmos*. It is undergirded by the fleeting (but nonetheless non-"Heraclitean") stability of the microtriangles, and forms the basis for the subsequent construction of an ordered world of middle-sized objects. But the corresponding flux in the *Theaetetus* is one in which states and things collapse into processes (even before we learn, in the final refutation of

"Heraclitus", how far that collapse must go). In the second place, the mechanism of vision described in the *Timaeus* "produce[s] in the soul the sensation which we call sight" (45d); it is the *soul* that perceives things through the senses. In the *Theaetetus*, on the other hand, the account is thoroughly materialistic and soul is excluded from the discussion until the final refutation proves its importance. In the third place, the Theaetetan account (in line with its Protagorean parentage) eschews any objective criteria by which one perception might be judged more "true" than another. The Timaeian account, however, is shot through with objectivity at almost every level, from the simple veridicality of perception (the *Timaeus* makes a point of associating the experienced qualities of things, when our perceptual apparatus is operating properly, with the geometrical structure of the experienced objects--see, e.g., 61c ff.) to the normativity of perceptible cosmic order ("the cause and purpose . . . of sight was that we should see the revolutions of intelligence in the heavens and use their untroubled course to . . . correct the disorder of our own revolutions by the standard of the invariability of those of god"--47b-c). In sum, there are more than enough differences on nontrivial points to overturn the Timaeian evidence that Plato subscribed to PH\*.

There is a single response that seems to me to provide an adequate answer to both of these objections. The critic is looking for the wrong evidence that PH\* is Plato's theory; not finding this evidence, the critic mistakenly concludes that PH\* does *not* reflect Plato's views on the subject. What the critic is overlooking is how different the "likely story" about perception and its objects will look (and how different will be Plato's attitude toward it) when it is set within the right metaphysical and epistemological context, as it is in the *Timaeus*, and when it is not, as in the *Theaetetus*.<sup>17</sup>

On Reading A, PH\* is an otherwise correct theory which, because it is cut off from the eidetic context Plato provides it in the *Timaeus*, is unable to articulate for perception its proper role in our cognitive economy. Because it has been decontextualized, it is hardly surprising that the initial flux in the *Theaetetus* cannot support a cosmos, that there is no place in it for soul, and that normativity is a lost cause. But once the importance of context is recognized, it is possible to make perfect sense of the contradictory "stage-directions" in the *Theaetetus*. As a fragment of the truth that has been abstracted from the theory of Forms, the *Theaetetus*'s initial flux warrants Plato's claim that "there is good enough evidence for this theory" (153a), while there is little reason to doubt the sincerity of Plato's remark that he "was delighted with [Protagoras's] general statement of the theory that a thing is for any individual what it seems to him to be" (161c). But inasmuch as it is *just* a fragment of the truth, whose pretensions to tell the whole story got Theaetetus heading in the wrong direction in his quest to understand knowledge, Plato rightly regards it as seductive and pernicious, a deserving subject of ridicule.

Plato's cavalier treatment of Heraclitus, despite his deep debt to him, may perhaps be explained in the same way. For the historical Heraclitus, the discord of warring opposites is subsumed within a deeper harmony and the flux flows in accordance with *logos*. This context for Heraclitean flux is completely missing from the *Theaetetus*, even from its initial and more moderate presentation. PH\* appears to

decontextualize Heraclitus's actual position in the same way and for the same reason that it decontextualizes Plato's own views from the *Timaeus*: there is no room for this richer context if, as Theaetetus has asserted, knowledge is just perception.<sup>18</sup>

This brings us to the question of the Forms in the *Theaetetus*. The foregoing discussion of Plato's flux doctrine(s) is probably compatible with both sides of the controversy over whether the overt absence of Platonic Forms from the *Theaetetus* proves that they are present by implication, or whether their absence simply proves their absence.<sup>19</sup> The following, however, seems to me to fit best with the total evidence.

Whether or not it is helpful to think of Plato as *having* a theory of Forms, it is surely not helpful to think of him as being "in the grip of" a theory--or if one does so, it should be done only as a last resort. I suspect that one reason philosophers are skeptical that PH\* represents Plato's own view is that a world without individual material substances, in which the possibility of discourse depends on something like a theory of Forms, is philosophically repugnant: it's the sort of view that only someone in the grip of a theory could possibly maintain. It is therefore a kindness to Plato to relieve him of this theory as soon as the text permits. The considerations raised in this paper, though not by any means the only ones relevant, provide little aid and comfort to this rescue operation. I have argued that Plato endorses a relatively robust flux in the *Timaeus*, and that he endorses a similar position in the *Theaetetus*. If this is correct, the Forms are still necessary--just as necessary as they are in the *Timaeus*. Form and flux go together for Plato (Aristotle understood this better than the critics who doubt his testimony about Plato's life-long Heracliteanism).

Both dialogues are in agreement that *knowledge* is undermined by flux. In the *Theaetetus*, which is devoted to understanding knowledge per se, this disqualifies the sensible world (the arena of flux) from providing the answer to Plato's search. But in the *Timaeus*, which is devoted to seeing how far the sensible world may nevertheless be cognized, the flux simply constitutes (a principal part of) the problem that needs to be solved. Can Plato do any better than Cratylus, who abandoned rational discourse in favor of pointing? The whole *Timaeus* is premised on an affirmative answer. What makes *possible* the affirmative answer is the availability of the Forms, a resource deliberately excluded from the *Theaetetus*. In both dialogues it is only with reference to something (stable) outside the flux that knowledge (and its approximations--e.g., opinion) is possible. This is as much the lesson of the *Theaetetus*'s final refutation as it is the basis for the *Timaeus*'s claims about what can (and cannot) be said about the phenomenal world.

In reading the *Theaetetus*, it is hard not to be influenced by what one believes to be the direction Plato is heading after the *Parmenides*, a belief that will almost certainly be reflected in the relative date assigned to the *Timaeus*. Some scholars see in the Demiurge or Receptacle resources useful in addressing difficulties that the *Parmenides* had turned up for the theory of Forms. This may be so, but I don't believe that a late date for the *Timaeus* depends on whether these or any other Timaeian innovations help with the problems identified in the *Parmenides*. The *Timaeus* is about *applying* the theory of Forms to cosmology, and about extending the theory so as to address specific

problems that arise in this specific (cosmological) context. It is not about outstanding theoretical difficulties internal to the theory itself, which may well be unresolved for Plato at the time that he writes the *Timaeus* (and indeed may never have been solved by him).

All that is required for the coherence of this view is that Plato continues to think that something like or in the neighborhood of the theory of Forms is right (because without it discourse is impossible), despite the difficulties that have been raised against it. He continues to work on those difficulties in later dialogues like the *Sophist*, but he has sufficient confidence that something in the neighborhood is correct that he also pursues his interest in seeing how far the theory can go in giving the sensible cosmos its due. The *Theaetetus*, by showing what happens to the possibility of discourse and knowledge when the perceptible world is treated as the whole of reality, underscores for Plato the importance of the Forms as he undertakes his cosmological inquiry in the *Timaeus*.

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<sup>1</sup> All quotations from the *Theaetetus* are taken from the translation by M. J. Levett, revised by Myles Burnyeat, used in Burnyeat's *The Theaetetus of Plato* (Indianapolis: Hackett Publishing Co., 1990).

<sup>2</sup> Francis M. Cornford, *Plato's Theory of Knowledge* (London: Routledge & Kegan Paul, 1935).

<sup>3</sup> Burnyeat, p. 8.

<sup>4</sup> Burnyeat, p. 9.

<sup>5</sup> Ronald M. Polansky, *Philosophy and Knowledge: A Commentary on Plato's Theaetetus* (London & Toronto: Associated University Presses, 1992), p. 73.

<sup>6</sup> See, e.g., Burnyeat, p. 53.

<sup>7</sup> These schemata for Reading A and Reading B leave out a lot of detail that is characteristic of each reading. But the schemata capture the essential difference between the readings.

<sup>8</sup> Cf. Cornford: "Plato intends to refute the claim of perception . . . to be knowledge on the ground that its objects have no real being . . . For that purpose he is bound to give us what he believes to be a true account of the nature of those objects. It would be futile to prove that what some other individual or school, perhaps wrongly, supposed to be the nature of perception was inconsistent with its claim to yield knowledge." (p. 49)

<sup>9</sup> Met. A, 987a, trans. Terence Irwin and Gail Fine.

<sup>10</sup> See, e.g., T. H. Irwin, "Plato's Heracliteanism," *Philosophical Quarterly* 27 (Jan. 1977), pp. 1-13; and Charles Kahn, "Plato and Heraclitus," in John J. Cleary, ed., *Proceedings of the Boston Area Colloquium in Ancient Philosophy*, vol. 1 (Lanham, MD: University Press of American, 1986), pp. 241-58.

<sup>11</sup> A valuable discussion may be found in Lloyd P. Gerson, "Imagery and Demiurgic Activity in Plato's *Timaeus*," *Journal of Neoplatonic Studies* 4 (1996), pp. 29-66.

<sup>12</sup> The logic of "terminal flux" suggests that there could not even be a "trace" of white. But it's hard to say for sure, since it's hard to know how we are supposed to think about such traces.

<sup>13</sup> One exception is Naomi Reshotko, who interprets the "Heraclitean" flux from its initial to its terminal phase as moderate: see her "Heraclitean Flux in Plato's *Theaetetus*," *History of Philosophy Quarterly* 11 (April 1994), pp. 139-61.

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<sup>14</sup> See my "The 'Problem of Fire': Referring to Phenomena in Plato's *Timaeus*," *Ancient Philosophy* 18 (1998), pp. 69-80.

<sup>15</sup> I argue this at greater length in the article cited above.

<sup>16</sup> Burnyeat, p. 9.

<sup>17</sup> Cornford, whom I have taken as representative of Reading A, is quite careful on this point: "Plato has given an account of the nature of perception which involves elements taken from Protagoras and Heraclitus--elements that Plato himself accepts as true *when they are guarded and limited with the necessary qualifications*" [emphasis added] (p. 31).

<sup>18</sup> The fact that Plato does this to Heraclitus, despite knowing full well (presumably better than we do!) how one-sided it is, should make it less surprising that he is doing the same thing to himself and his own flux doctrine.

<sup>19</sup> Let Cornford again represent the latter: "Plato is determined to make us feel the need of his Forms without mentioning them" (p. 99).