## Understanding the 'What-is-F?' Question

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The title of this paper alludes to Benson's 'Misunderstanding the "Whatis-F-ness?" Question',<sup>1</sup> which discusses why Socrates finds Laches', Euthyphro's, Hippias', and Meno's initial responses to his 'What-is-F?' question unsatisfactory. Benson's interpretation of the 'What-is-F?' question (hereafter WF question) employs Belnap and Steel's work on the logic of questions and answers and conveniently treats the WF question as equivalent to what Belnap and Steel call which-questions.<sup>2</sup> Socrates' WF question is actually an identity question, but Belnap and Steel regard identity questions as closely related to which-questions. They characterize which-questions as follows:

Which-questions may be described as *positing* an open formula (matrix)<sup>3</sup> and wanting closed terms (names) as *desiderata*, relying on the

 Benson, Hugh H., 'Misunderstanding the "What-is-F-ness?" Question', in Benson, ed., Essays on the Philosophy of Socrates (Oxford University Press 1992) 123-36; reprinted from Archiv für Geschichte der Philosophie 72 (1990) 125-42

2 Belnap, Jr., Nuel and Steel, Jr., Thomas, *The Logic of Questions and Answers* (Yale University Press 1976). Note that Gerasimos Xenophon Santas was the first Plato scholar to apply this work in *Socrates Philosophy in Plato's Early Dialogues* (Routledge and Kegan Paul 1979).

3 'a ... matrix is a statement form with variables holding the places of names. For example ... "The freezing point of water under standard conditions is x° F" ' (Belnap and Steel, 19). 'Terms without free variables are called names' (8).

APEIRON a journal for ancient philosophy and science 0003-6390/2003/3603 175-188 \$10.50 ©Academic Printing & Publishing natural mode of combining an open formula with a name to form a sentence; i.e., substitution to suggest the sort of alternative wanted.<sup>4</sup>

For example, (Q1) 'Which positive integer is the smallest prime greater than 45?' posits an open formula or matrix of the form *x* is the smallest prime greater than 45, seeks an answer that substitutes for *x* a closed term or name such as '47' or '57', and indicates that the *desideratum* must denote a positive integer. Note that (Q1) could also be expressed as (Q1') 'What is the smallest prime greater than 45?', in which case it would not state, but imply that the *desideratum* must denote a positive integer. Belnap and Steel call this condition for the denotation of the *desideratum* the category condition of the *desideratum*. Category conditions specify the kind of entity that the *desideratum* must denote. So (Q1) and (Q1') demonstrate that category conditions may be explicit or implicit.

The answer to a question may fail because it does not satisfy the category condition. For instance, to (Q2) 'Which two even numbers lie between 10 and 16?' the answer 'triangle and square' fails to satisfy the category condition that x and y be numbers, '11 and 13' that x and y be even. But an answer may fail for other types of reasons. (Q2) specifies a selection size of two from its alternatives.<sup>5</sup> So the answer '12' fails to satisfy the selection size specification of (Q2). Also, some questions make a completeness claim specification, according to which the answer include all true alternatives; for example, 'What are the primes between 12 and 26?'<sup>6</sup>

An answer may fail to satisfy the matrix, selection size, completeness claim, or category condition of a question, or it may satisfy these conditions but nonetheless be incorrect. For instance, compare the answers 'Cuba' and '68' to the question 'What is the sum of 18 and 60?' To distinguish these two types of incorrect answer, Benson suggests the terminology **formal** and **material** incorrectness. A formally incorrect answer fails to satisfy the matrix, selection size specification, completeness claim specification, or category condition. A materially incorrect answer satisfies these formal conditions, but is still wrong.<sup>7</sup>

Benson employs the formal/material distinction to explain different kinds of responses Socrates makes to his interlocutors' responses to his WF question. Specifically, sometimes Socrates responds as though an interlocutor has answered the question that he asked, even though Socrates thinks that the answer is wrong, and sometimes Socrates responds as though an interlocutor has not answered the question that he asked. In the former case, the answer seems to be formally correct, but materially incorrect. In the latter case, the answer seems to be formally incorrect. Examples of this latter kind are Euthyphro's, Meno's, Laches', and Hippias' first responses.<sup>8</sup>

It was once held that these initial responses fail because they denote particulars (and so do not satisfy the category condition that x be a universal). But Nehamas demonstrated that this was mistaken because Socrates' interlocutors' initial responses describe universals.<sup>9</sup> Given this, Benson suggests the following alternative explanation:

[T]he WF-question presupposes that *there is* one and only one true alternative to be selected which can be substituted in the matrix "x is F-ness"<sup>10</sup> and satisfies the category condition "x is a universal".<sup>11</sup>

## 7 Benson (1992), 128-9

- 8 So, for instance, Socrates responds to Laches' first response: 'I think I am to blame in that I did not speak clearly, for your response did not answer the question as I intended it, but otherwise.' (*La* 190e7-9) An example of the former kind is Socrates' response to Euthyphro's second definition: 'Excellent, Euthyphro, you have now answered as I asked you to answer. However, whether it is true [that τὸ θεοφιλες is ὄσιον] I do not yet know' (*Euthphr* 7a2-4).
- 9 Nehamas, Alexander, 'Confusing Universals and Particulars in Plato's Early Dialogues', Review of Metaphysics 29 (1975) 287-306
- 10 Note that Benson uses the symbol 'F-ness' for 'F'.
- 11 Benson (1992), 131

<sup>4</sup> Ibid., 78

<sup>5</sup> On selection size specification, see ibid., 36-46. Belnap and Steel use the word 'alternative' to describe the *desideratum* for the following reason: 'each question is to be conceived as presenting a range of alternatives as its subject, from among which alternatives the respondent is to make a selection as from a tray of hors d'oeuvres' (ibid., 17).

<sup>6</sup> That not all questions specify a completeness claim can be seen by the following example. The selection size specification of the question 'What are two countries in Africa?' explicitly prohibits the enumeration of more than two countries in Africa — although the selection of many different pairs of alternatives would be correct answers (ibid., 46-60).

Accordingly, it is Socrates' interlocutors' failure to satisfy this conjunction of the selection size and completeness claim specifications that explains the character of Socrates' response to their first responses.

Benson's suggestion certainly is ingenious, but I am not persuaded that Socrates understands his interlocutors' responses as unsatisfactory because the WF question has only one true answer. I propose that Socrates regards Laches', Euthyphro's, Hippias', and Meno's initial responses to the WF question as unsatisfactory because they reflect ignorance of the ontological distinction between *F* and *f* entities, for example, between holiness and holy entities. (Note that throughout the paper I use the symbol '*f*' for the adjective corresponding to the general term '*F*'.<sup>12</sup>) Put differently, I submit that the category condition of the WF question can be redefined to capture why Socrates regards his interlocutors' responses as formally incorrect.

To decide the issue it is necessary to reconsider how Socrates introduces the WF question, his interlocutors' responses, and Socrates' responses to these. But, first, it must be noted that Benson explicitly objects to the approach I am adopting. Benson considers the possibility that 'we simply need to specify other category conditions presented by the WFquestion which Euthyphro's, Laches', and Meno's first answers violate.'<sup>13</sup> For instance, he considers supplementing the category condition, *x* is a universal, with the conditions, *x* is true of all and only *f* entities,<sup>14</sup> and *x* is not a kind of *F*.<sup>15</sup> Benson argues that this approach cannot work:

14 More precisely, this should be expressed as *x* is true of all and only all actual and possible *f* entities.

[I]f the distinction between formal and material correctness is not to become uninteresting, there must be some fairly non-arbitrary constraint on what can count as a category condition. One fairly natural constraint, suggested by the name "category condition" itself, is that the predicate position of a category condition can be filled only by the name of some fairly pre-theoretical kind. A kind is pre-theoretical, in the sense I have in mind here, just in case whether a thing is a member of that kind can be determined without already knowing a great deal about the material correctness of the answer to the question.<sup>16</sup>

This claim demands some exegesis of its own. The adjective 'uninteresting' is not well chosen. The formal/material distinction is not merely supposed to arouse interest, it is supposed to be productive, specifically, to be instrumental in clarifying why Socrates responds in one way to some of his interlocutors' definitions and in another way to others. So Benson intends to convey that unless there is some constraint on what can count as a category condition, the formal/material distinction will collapse.<sup>17</sup>

Benson also claims that 'if the distinction between formal and material correctness is to be the least bit interesting, we need to be able to recognize the formal adequacy or inadequacy of an answer long before determining its material adequacy or inadequacy'.<sup>18</sup> Again, the adjective is not well chosen. But here Benson is more specific about the relation of the formal and material distinction: it should be possible to determine whether the answer is formally correct *long before* determining whether it is materially correct. To understand this, it is necessary to consider Benson's suggestion about the character of the category condition.

Benson suggests that the predicate position of a category condition must be filled only by the name of some fairly pre-theoretical kind; that is, the category condition must specify that *x* be some fairly pre-theoreti-

18 Ibid., 129-30

<sup>12</sup> Although both symbols range over the same properties, the distinction is useful because they convey different syntactical information. For instance, I schematize the sentence 'Telling the truth and returning what one takes is δίκαιον' as G is f; and 'Telling the truth and returning what one takes is δικαιοσύνη' as G is F. Of course, the 'is' is not being used identically.

<sup>13</sup> Ibid., 129

<sup>15</sup> Ibid., 129. Benson remarks on this interpretation: 'This is, I believe, the most popular way of resolving our difficulty, insofar as one is aware of the difficulty: Socrates' interlocutors reveal their misunderstanding of the WF-question by giving kinds of F-ness rather than F-ness itself' (1992, 136 n20). Benson cites Santas as an example of such an interpreter: 'It is clear from [Euthyphro's first definition] that Euthyphro is selecting from a set of alternatives that consist of individual actions and types of actions and that he is taking himself to be giving a few examples of actions or types

of action that are holy or possibly a complete list of types of actions that are holy' (Santas, 1979, 78; Benson 1992, 136 n20).

<sup>16</sup> Ibid., 129

<sup>17</sup> This is supported by Benson's statement: 'supplementing the category condition in these ways [i.e., with the conditions suggested above] would serve to spoil the formal/material distinction' (ibid., 130).

•• cal kind. 'A kind is pre-theoretical, in the sense I have in mind here, just in case whether a thing is a member of that kind can be determined without already knowing a great deal about the material correctness of the answer to the question.'<sup>19</sup> So, for instance, in the question 'What is the square root of 17?' the category condition, *x* is a number, informs that 'Havana' is the wrong answer quite independently of any knowledge of the materially correct answer. In short, then, Benson's fundamental point is that the category condition must be such that whether a response satisfies it is determinable *to a significant degree*<sup>20</sup> independently of and so prior to the determination of whether the response is materially correct.

The phrase 'to a significant degree' is important. Benson notes that the satisfaction of the category condition need not be determinable wholly independently of the determination of the material correctness of the response: 'The distinction I am drawing here is a matter of degree (n.b. the "fairly pre-theoretical" and "knowing a great deal about the material correctness"): the less pre-theoretical a kind is, the less appropriate is the category condition that employs it.'

Benson's suggestion is reasonable. It well conjoins our intuitions about the two kinds of responses Socrates makes to his interlocutors' definitions and the application of Belnap and Steel's theoretical apparatus to the description of Socrates' interlocutors' responses to the WF question and Socrates' responses to these. Having clarified Benson's objection, I will now consider whether in fact supplementing or redefining the category condition of the WF question can explain Socrates' distinct responses to his interlocutors' responses without spoiling the formal/material distinction. I will demonstrate that this is possible using slightly amended versions of the very supplements Benson discusses.

Benson specifically criticizes supplementing the category condition (c1) x is a universal with the conditions (c2) x is true of all and only f entities and (c3) x is not a kind of F. He claims that neither (c2) nor (c3) are pre-theoretical categorizations:

This is false, so long as we amend (c2) and (c3) as follows:

(c2') x can plausibly be conceived to be true of all and only f entities

(c3') x can plausibly be conceived to be not a kind of F.

Moreover, there is no need to imagine a pertinent situation; the dialogues provide concrete evidence that one may be in a position to determine that answers to the WF question fail to satisfy (c2') and (c3') without knowing a great deal about the material correctness of the answer.

In granting that (c1) is a category condition of the WF question, Benson grants that a formally correct answer to the WF question demands that x, the *definiens*, be a universal. Since the WF question seeks an identity, it demands that the response be of the form x = F, or if not, that x = F be straightforwardly derivable from the response.<sup>22</sup> The combination of the category condition (c1) and the matrix condition x =F implies (c2) and (c3) — which are of course stronger than (c2') and (c3'). In other words, if x is a universal and x = F, then x is true of all and only f entities, and x is not a kind of F.

Now, whether x is a universal is undoubtedly determinable independently of knowing the materially correct answer to the WF question. Thus, Benson grants that this is an acceptable category condition of the WF question. So, the problem here is that x = F does not seem to be determinable rather independently of knowing the materially correct answer to the WF question. But, actually, in some cases it is reasonable to conceive of x and F as not identical rather independently of knowing

20 Ibid., 136 n19

It is difficult to imagine that one could be in any position to determine that an answer failed to satisfy (c2) or (c3), without knowing a great deal about the material correctness of the answer to the relevant WF-question.<sup>21</sup>

<sup>19</sup> Ibid., 129

<sup>21</sup> Ibid., 129

<sup>22</sup> Benson explicitly states that the matrix of the WF question is of the form x = F: 'The subject of the WF-question presents its alternatives by means of the matrix (m) is F-ness' (ibid., 129); 'I can be content with the very general matrix 'x is F-ness' (ibid., 135 n17).

the materially correct answer to the WF question. Consider Meno's response to the question 'What is virtue?':

First, if you want a man's virtue, it is easy to say: that he be competent to manage the affairs of the city ... If you want a woman's virtue ... it is necessary for her to manage her household well ... And a child's virtue is distinct from these ...<sup>23</sup>.

Meno's response has the form  $G = F_1$ ,  $H = F_2$ ,  $I = F_3$ , etc. Clearly this is not of the form x = F, nor is x = F straightforwardly derivable from it.<sup>24</sup> Thus, independently of knowing whether  $G = F_1$ ,  $H = F_2$ ,  $I = F_3$ , etc., one can know that Meno has described different kinds of F, rather than what F is. In this case, then, one can determine whether the response is formally correct rather independently of whether it is materially correct.

Laches', Euthyphro's, and Hippias' responses have or imply the form G is f. For example, Hippias claims that a beautiful young woman (G) is beautiful (f).<sup>25</sup> But only in rare instances is it the case that G = F and G is f. Far more often, if G is f, then G and F are not identical. So, since being the universal F is a condition of the WF question, an answer of the form G is f may be judged as failing to make the ontological distinction between F and f entities, again, without knowing a great deal about the material correctness of the response. I emphasize 'a great deal', because in this case one must know more about the material correctness of the response than in the previous case — but still, I suggest, not so much so as to 'spoil' the formal/material distinction.

Consider Euthyphro's first and second responses. Both have the form x is f. But in response to Euthyphro's second response Socrates says that Euthyphro has answered the WF question as he intended, whereas in the case of the first response he does not. Euthyphro's first response claims that prosecuting one who commits sacrilege is holy. It is clear to

Socrates that Euthyphro will admit that many other act-types are holy and that these will not be identical to prosecuting one who commits sacrilege. Thus, it is clearly not being suggested that prosecuting one who commits sacrilege is true of all holy acts. The second response claims that the god-beloved is holy. This may or may not be true of all holy acts. But at least this can reasonably be entertained as true of all holy acts, for it is conceivable that the gods have pro- or con-attitudes toward all acts.

A similar example is Hippias' first response. To determine that Hippias' response is formally incorrect Socrates merely needs to be sure that Hippias does not believe that beautiful young women are the only kind of beautiful entity. And, quite independently of knowing what beauty is, Socrates can be confident that Hippias does not believe that.

In sum, then, I suggest that we can supplement the category condition of the WF question without jeopardizing the formal/material distinction. In other words, we can explain Socrates' responses to Laches', Euthyphro's, Hippias', and Meno's first responses as reflecting the fact that these responses fail to satisfy the category condition of the WF question. Having cleared the way for this interpretation of the failure of Laches', Euthyphro's, Hippias', and Meno's first responses against Benson's criticism, it remains to clarify the category condition(s) Socrates' WF question presupposes.

Consider *Laches*. In response to the question 'What is courage?' Laches claims that a person who acts in a particular way is courageous.<sup>26</sup> That is, the form of Laches' response is  $\forall x \ (Gx \supset Fx)$  or, more precisely in my idiosyncratic notation,  $\forall x \ (x \text{ is } g \supset x \text{ is } f)$ . It may be inferred from this that Laches is committed to G is f, where G is the act-type remaining in rank, defending against the enemy, and not fleeing. Even so, Socrates does not infer from Laches' response that Laches is claiming that F = G. This is surely because Socrates believes that Laches believes that other act-types are courageous. Furthermore, I suggest that if Socrates were to ask Laches whether by G is f he means G is F,<sup>27</sup> Laches might be confused by Socrates' suggestion that the two propositions had different meanings.

<sup>23</sup> Meno 71e1-8

<sup>24</sup> It is clear that a proposition of the form x = F is not straightforwardly derivable from Meno's response, because G, H, and I are not identical. If they were, then one might claim that G or H or I was identical to F. Moreover, one can know that G, H, and I are not identical independently of knowing whether any of them is identical to virtue.

<sup>25</sup> Strictly speaking, only Hippias' response is of this form. However, as I discuss below, Euthyphro and Laches are committed to responses of this form.

<sup>26 &#</sup>x27;If anyone should be willing to remain in rank, defend himself against the enemy, and not flee, know well that he would be courageous' (*La* 190e5-6).

<sup>27</sup> The second 'is' of course describes identity.

Hippias' initial response exhibits such a confusion. In response to the question 'What is this thing,  $\tau \delta \kappa \alpha \lambda \delta v$ ?' Socrates and Hippias exchange the following dialogue:

Well, Socrates, does he who asks this question want to find out anything else than what is  $\kappa \alpha \lambda \delta v$ ? — I do not think that is what he wants to find out, but what to  $\kappa \alpha \lambda \delta v$  is, Hippias. — And what difference is there between them? — Does it not seem to you that there is a difference between them? — No difference at all. — Well, surely you know better than I. But still consider closely, my friend, for he is not asking you what is  $\kappa \alpha \lambda \delta v$ , but what is to  $\kappa \alpha \lambda \delta v$ .<sup>28</sup>

Clearly Hippias is unable to appreciate the semantic distinction between the propositions G is f and G is F.<sup>29</sup>

The form of Euthyphro's initial response is the f (= F) is G and not-G is not-f<sup>30</sup> and I suggest that he too fails to appreciate the semantic distinction between the propositions G is F and G is f. Consider Socrates' response to Euthyphro's response and Euthyphro's response to this:

You told me that this is holy, what you are doing now, prosecuting your father for murder. — And I spoke the truth, Socrates.<sup>31</sup>

Euthyphro agrees to a description of his response as *G* is *f*.

Furthermore, compare Socrates' actual response with the sort of response we would expect Socrates to give if the interpretation that I am suggesting were correct:

Do you recall that I did not ask you to teach me some one or two of the many holy things, but that Form itself because of which all holy things are holy?<sup>32</sup>

Socrates believes that Euthyphro's answer to his WF question describes something that is holy. But Socrates did not ask, 'What is *f*?' he asked, 'What is *F*?'

Compare this also with Socrates' response to Laches. Socrates draws Laches' attention to the fact that people who perform other sorts of acts are courageous and that people may be courageous in a variety of circumstances. However, all courageous people have acquired one and the same possession, courage, and Socrates wants to know what this is. In other words, Socrates' response to Laches is the sort we would expect if Socrates had interpreted the response as having the form G is f. We would expect Socrates to agree that various entities are f, but that these entities are distinct from F, and that in posing his WF question he did not want to know what is f, but what F is.

In sum, the question 'What is f?' has many true alternatives within its subject, whereas the question 'What is F?' has only one. Therefore, an interpretation of the WF question, such as Laches', Hippias', Euthyphro's, and Meno's, according to which the question allows multiple true alternatives, is a misinterpretation. However, this is not why Socrates believes that his interlocutors have misinterpreted the WF question. Rather, Socrates understands that his interlocutors fail to grasp the correct ontological kind; they describe entities that are f, whereas the WF question seeks the identity of F.

Consequently, in order to explain why Socrates finds these interlocutors' responses formally unsatisfactory we must redefine the category condition of the WF question. In *Laches, Euthyphro, Hippias Major*, and *Meno*, either when he poses his WF question or in response to his interlocutor's response to the WF question, Socrates explicitly characterizes *F* as follows. In *Laches F* is said to be the common possession of all *f* people<sup>33</sup> and identical in all *f* cases.<sup>34</sup> In *Euthyphro F* is said to

- 32 Euthphr 6d9-11
- 33 La 191e4-6
- 34 La 191e10-11

<sup>28</sup> Hp Ma 287d4-e1

<sup>29</sup> Note that Hippias' eventual response to the WF question is of the form G is f: 'I understand, my friend, I will respond to his question about what τὸ καλόν is, and I will never be refuted. Rest assured, Socrates, the truth is that a beautiful young woman is καλόν' (Hp Ma 287e2-4).

<sup>30 &#</sup>x27;Well, then, I say that τὸ ὅσιον is what I am doing now, prosecuting one who has done wrong either in regard to murder or theft of sacred objects ... and not to prosecute is ἀνόσιον' (*Euthphr* 5d4-e2).

<sup>31</sup> Euthphr 6d2-5

be identical in all f actions,<sup>35</sup> having one Form in all f actions,<sup>36</sup> and that because of which all f entities are f.<sup>37</sup> In *Hippias Major F* is said to be that because of which all f entities are f.<sup>88</sup> and not identical to everything that is f.<sup>39</sup> In *Meno F* is said to be that because of which all f entities are alike,<sup>40</sup> that because of which all f entities are f.<sup>41</sup> and identical in all f cases.<sup>42</sup>

These claims suggest the following category conditions for the WF question:

(i1) *x* is identical in all *f* cases

(i2) *x* is that because of which all *f* entities are *f*.

Furthermore, (i1), taken with the commonsensical assumption that f entities are not all identical, implies that

(i3) *x* is not identical to *f* entities (that are *f* because of *x*).

Two final points about this redefinition of the category conditions of the WF question. First, (i1) and (i2) imply that x is a universal, but there is no need to specify, in addition to (i1) and (i2), that it is part of the category condition of the WF question that x is a universal. Second, in *Laches* Socrates does not explicitly claim that courage is that because of which all courageous entities are courageous. Consequently, it is prudent to suggest that the category condition of the WF question in *Laches* is narrower than that in *Euthyphro*, *Hippias Major*, and *Meno*. In *Laches* the category condition is limited to (i1) and (i3). Furthermore, in *Euthyphro*, *Hippias Major*, and *Meno* Socrates describes F as a Form, but in *Laches* the words 'eloog' and 'loéa' do not occur as descriptions of F. So, it is unreasonable to assume that in *Laches* (i1) and (i3) imply that x is a Form.

35 Euthphr 5d1-2

36 Euthphr 5d3-4

37 Euthphr 6d10-e1

- 38 Hp Ma 287c8-d1
- 39 Hp Ma 287d3-e1
- 40 Meno 72c6-d1
- 41 Ibid.

42 Meno 73a1-3

Precisely, it is theoretically possible to maintain (i1) and (i3) without having a term such as ' $\hat{\epsilon}i\delta_{0\zeta}$ ' to characterize *F* as a universal.

In sum, the matrix condition of the WF question expects an answer of the form x = F or one from which a proposition of the form x = F can be straightforwardly derived. But we have seen that none of Socrates' interlocutors' initial responses in *Laches, Euthyphro, Hippias Major*, and *Meno* has this form. Hippias' response has the form G is f, and, I have suggested, Euthyphro's and Hippias' responses imply a response of the form G is f. Meno's response has the form,  $G = F_1$ ,  $H = F_2$ ,  $I = F_3$ , etc.

If Socrates thought that his interlocutors' responses were formally correct, then one would expect him to respond to their responses with the following sort of criticism. It has been suggested that G = F, but it will also be agreed that H = F (because it will be agreed that H is f) and I = F(because it will be agreed that *I* is *f*). However, it will not be agreed that G = H, H = I, or  $G = \overline{I}$ . Yet this follows from the previous admissions. So either G = H = I, or none is identical to *F*. Socrates does not respond in this way because he does not regard their responses as proper definitions of F at all. Rather, Socrates recognizes that his interlocutors have merely described a salient kind of F; and so their responses reflect a failure to distinguish F and f entities. In his responses to his interlocutors' responses Socrates attempts to clarify this distinction. One way he does this is by distinguishing the multitude of *f* entities from the single entity F. But this does not imply that Socrates believes that his interlocutors' responses are formally unsatisfactory because the WF question only has one answer.

Finally, it remains briefly to comment on the significance of my results. First, the WF question is intellectually-historically momentous. In composing texts that pose it, Plato was attempting to introduce and clarify an ontological kind that hitherto was not, at least in any distinct and lucid way, a part of the conceptual framework of his intended audience. The way that Socrates frames and poses the WF question and especially the way that he responds to his interlocutors' initial responses serves this pedagogical function. This is rather uncontroversial, and conformity to it corroborates my results.

In contrast, it is remarkable that in *Charmides* and *Republic I*, Socrates does not respond to his interlocutors' initial definitions as though they were formally incorrect. In *Republic I*, in particular, the extension of 'truth telling and returning what one takes' is clearly much narrower than that of 'justice' (conventionally conceived). This indicates that in these texts Plato is not interested in metaphysical distinctions between F and f entities or kinds of F. Rather, the investigations in both dialogues focus

only on the ethical and psychological aspects of F.<sup>43</sup> This provokes the question why Plato focuses on metaphysical aspects of F in certain standardly conceived early definitional dialogues, but not in others.

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## **Celestial Circles in the Timaeus**

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A brisk reading of Plato's Timaeus paints a portrait of a solitary, everlastingly secure, and extraordinarily beautiful universe, ultimately rational even if to the untrained eye it might not seem so. In this picture the ultimate constituents of the cosmos, namely Soul and Body, or, as they are subsequently termed, Reason and Necessity, are designed in exquisite and occasionally baffling detail by the divine craftsman himself and used to assemble the most valuable of things, namely the animating mixture of soul, and the four pure physical kinds of fire, air, water, and earth. Having taken care of the really tough things himself, he then delegates the grunt work — including the assembly of human beings to the initial inhabitants of the universe, the star-gods. A more detailed investigation of this dialogue, however, soon reveals difficulty after difficulty, and it is not surprising that students of Plato have largely preferred to expend their interpretive efforts upon dialogues more amenable to comprehension. There is a good deal of poetry in the Timaeus, but it is also an early work in natural philosophy. The specific conceptual blur I aim to shed light on concerns the right interpretation of a single detail in Plato's astronomical theory. This astronomical theory is itself a part of his larger cosmological theory, and his cosmological theory is itself a part of his larger metaphysical theory.

Timaeus introduces us to two great celestial circles, the 'Circle of the Same' and the 'Circle of the Different', which refer to the orbits of the fixed stars and of the 'wandering' stars (planets), respectively. A debate has recently arisen over just how many species of natural motion Timaeus held to be sufficient to account for the celestial phenomenon which we now refer to as planetary retrogradation: Cornford says 'three'; Dicks and Vlastos say 'two'. In this paper I offer an argument which supports the position taken by Dicks and Vlastos; while they defend their position correctly but inadequately, in my estimation, by observing that nothing in the Greek text warrants Cornford's introduction of a third

<sup>43</sup> In fact, even in *Laches*, the metaphysical distinction between F and f entities plays only a small part. It is in *Euthyphro*, *Hippias Major*, and *Meno* that Plato introduces the metaphysics of F in a substantial way.