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Pythagoras Bound: Limit and Unlimited in Plato's *Philebus*

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WHY ARE THINGS the way they are? Plato and Democritus present opposed answers to this question. Not only is one a materialist while the other is not, but further, they employ different ontological strategies to answer the question "why?" Democritus traces the visible features of things, their colors and shapes and habits of movement, back to determinate fundamental entities, the atoms. About the features of the atoms themselves there is nothing more to say than that they are the way they are. We can distinguish here physical atomism from ontological atomism. Physical atomism is a doctrine about the ultimate constituents of matter. Ontological atomism is a doctrine about how entities of whatever kind come to have the features they have, the claim that there are basic entities which just are what they are and which are responsible for the features of other entities by some process of combination. The question "why?" comes to an end at the basic entities and their features plus a description of the process of combination. Democritus is an atomist in both these senses, the material atoms playing the role of ontologically basic units. The same ontological atomist strategy can be found, however, in those who deny the existence of physical atoms. Classical positivists and empiricists who postulate sense data deny physical atoms but keep the strategy of regress to entities whose features have no further explanation.

Plato, as represented in the *Timaeus*, was a physical atomist. But he rejects the ontological ultimacy of physical atoms, generating them out of a formless energy-space and basic mathematical patterns. In this article I argue that Plato is nowhere an ontological atomist, neither in the physical world nor in his psychology nor in the realm of the eternal Forms.

Plato is often interpreted, however, in ways which insert ontological atomism into his views. The most common way is to hold that the Forms are brutely given. Some Democritean atoms are round and others have hooks and there is nothing further to be said about why; so the Forms of courage

and cow-ness just are eternally what they are. After contacting the Forms we should have no more "why" questions. In the later Plato, the doctrine of the communion of the Forms in one another weakens the plausibility of this interpretation, and the "Pythagorean" generation of the Forms described by Aristotle refutes it.[1]

There is a second way ontological atomism can be smuggled into Plato. Empiricist notions of the relation of universal and particular can make us read his discussions of collection and division and of the limit and the unlimited as if what was at stake was the correct classification of a realm of already given atomic particulars. Given what Plato says about the derived status of sensible objects we are not likely to read him as an ontological atomist on that level. His psychological discussions, however, can tempt us to read him as building up experience from atomic units of intellectual or sensible perception.

This article takes up the *Philebus,* where ontological discussions of the mixture of limit and unlimited are applied in ethical discussions of pleasure and pain. My aim is to show that interpreters of the dialogue have been wrong in assuming that Plato is discussing the reclassification of a realm of given atomic experiences. When this psychological atomism is abandoned the dialogue gains in unity and cogency. Standard interpretations of the *Philebus* suggest Plato wishes us to reclassify the set of atomic experiences of pleasure and pain. Judging the better life would then involve finding relevant subsets and comparisons we had not previously noticed. If, however, we avoid psychological atomism, the discussions of pleasure and pain can be seen in a new light. Plato is asking us also to individuate pleasures and pains in new ways, so that in some cases what counts as *a* pleasure changes; as a result of this new individuation and classification we will use new standards of evaluation.

After considering psychological atomism we turn to the Forms, showing that Plato also avoids ontological atomism in this realm. Recalling his clear rejection of the ultimacy of physical atoms, I conclude that for Plato there are no entities whose determinations are merely given, be they Forms or sensible particulars, in being or in knowledge.

When Plato talks in general terms about the limit and the unlimited (*Philebus* 15a–18d) interpreters commonly suggest we are faced with a multitude of distinct particulars which we have to classify. Plato is said to be warning us not to use classifications which are too big or too small, too

[1] This article refers to the "unwritten doctrines" of Plato. The relevant passages from Aristotle, along with many others referring to these doctrines, are translated in J. N. Findlay, *Plato: The Written and Unwritten Doctrines* (New York: Humanities Press, 1974), pp. 413–454.

elaborate or too sketchy. Whether we start with the particulars, build small classes and arrive at the generic class, or start with the genus, divide it into species and arrive at the particulars, we are not to rest content until we have the intermediate classes as well as the extremes. For instance, Hackforth says, apropos of Plato's example about sound, "between 'sound' or 'utterance' as a genus and the infinity of particular sounds we must interpose the species, vowels, sonants, and mutes."[2] We are to articulate the genus-species structure of universals to be applied to a set of fixed individuals.

Gosling has argued convincingly against the many interpretations which take the discussion of the limit and unlimited as a doctrine about genus-species relations among universals alone.[3] This does not mean that we must take the universals as simply given. Clearly Plato means us to be working out their articulations. It would be a mistake, however, to suppose that we must assume that one factor, either universal or particular, is fixed while the other is indefinite and adjustable. Both achieve definiteness together. Plato's examples point this out. Consider the story of Theuth the Egyptian:

> When one is forced to start with what is indeterminate, one should not immediately look to the unitary aspect, but again note some number embracing every plurality, and from all these end up at the one. Let us take up the present point again in connection with letters—How do you mean?—Well, once, I suppose, some god, or some man very like a god, noticed the indeterminacy of vocal sound. The Egyptians have a story that it was someone called Theuth who first noticed that in this indeterminate variety there were several vocables (vowels), not just one, and then that there were others that could be sounded but were not vowels and that there was a definite number of these, and finally he distinguished a third class of letters that we now call mutes. He then distinguished the soundless ones or mutes down to single letters, and did the same with the vowels and semivowels. When he had the full count he gave them, individually and collectively, the name 'element.' As he realized that none of us

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[2] R. Hackforth, *Plato's Examination of Pleasure* (Cambridge: Cambridge University Press 1945), p. 24. Compare Guthrie: "Plato here uses ἄπειρον numerically, for the uncountable multitude of particulars in a species" (W. K. C. Guthrie, *History of Greek Philosophy*, 6 vols. (Cambridge: Cambridge University Press, 1978), vol. V, p. 209). Crombie's interpretation is more nuanced and refuses to set the unlimited totally on the side of the universals or of particulars, but he too seems to presume that we are dealing at all times with sets of fixed particulars. (Cf. I. M. Crombie, *An Examination of Plato's Doctrines*, 2 vols. (New York: Humanities Press, 1963), vol. II, pp. 365, 425, 428–9, 436–7).

[3] J. C. B. Gosling, *Plato's Philebus* (Oxford: Oxford University Press 1975), pp. 160–165. It is not entirely clear where Gosling stands on the relation of individuation and classification. He carefully distinguishes the limit and unlimited as Plato's Pythagorean technical tools from the internal constitution of the object studied by means of these tools (cf. p. 177). Whether these objects are individuated independently of the use of the tools to classify them seems to vary, perhaps rightly so, since in Gosling's view Plato is discussing the application of *technai* to phenomena, not the constitution of objects. Cf. p. 86 and pp. 177–180 for passages that could be interpreted either way, and p. 172 for an example, discussed below, that presupposes independent psychological givenness of the particulars.

would ever learn about them in isolation from the rest, he concluded that this constituted a single bond that somehow made them a single unit, and pronounced the single skill that covered them 'the art of letters.' (17b–d, Gosling's translation)

What is it that Theuth first notices? He is not creating speech; he is discerning its structure. He notices φονὴν ἄπειρον; Gosling translates this as "the indeterminacy of vocal sound," Hackforth as "unlimited variety of sound." Both these make ἄπειρον the main noun, but it is an adjective: "indeterminate sound." Earlier, Plato has described sound as somehow one (που μία) and indeterminate in its multitude (ἄπειρον πλήθει) (17b). It is tempting to gloss this as hearing a sequence of individual sounds without knowing them in detail, something like seeing a crowd of people without knowing their occupations. But Theuth does not arrive at hearing individual sounds as individuals until the end of his process. Although for Plato things are ontologically definite quite independently of our awareness of them, it does not automatically follow that our awareness is a process working up from clearly individuated but unclassified items. To conclude this one must assume that, on the basic level, criteria of individuation are independent of the natures of the items individuated, which is ontological atomism in its empiricist version. If we reject this assumption then uncertainty about number and about kinds may also be uncertainty about individuation. Hence the phrase ἄπειρον πλήθει should mean "unbounded in its multiplicity," where not only are the number and kinds of items indistinct, but their boundaries from one another as well.[4]

Most discussions of classification use a domain of entities already individuated by some *other* classification. The ubiquitous tradespeople whom Socrates forever reclassifies are already individuated by their bodies. If we regroup them into new classes, we hold stable our ways of individuating them as people. The tables and chairs which fill modern discussions of perception are individuated by their glue and nails and independent movability. These sorts of examples feed the prejudice that classification involves only regrouping. But there are other sorts of examples where it is not so obvious what makes up one individual and where a change in how we classify may be tied to a change in how we individuate. These are cases where there are no independent criteria of individuation available, or those available are mistrusted. Consider a Libertarian converted to Marxism: he will

[4] Gisela Striker (*Peras und Apeiron: Das Problem der Formen in P aaatons Philebus* (Gottingen: Vandenhoeck & Ruprecht, 1970) translates ἄπειρον πλήθει as "unbegrenzt zahlreich." I am suggesting that ἄπειρον need not apply only to the number of particulars involved, but to their individuation and hence to the kind of multiplicity as well. In her discussion of φώνη Striker presupposes that speech comes before Theuth with its items already individuated but not yet classified (p. 25).

now see things as part of the government which he did not before, for instance Citibank. He will see more complex individuals where before he saw simpler ones; a labor union will have more kinds of components and more interrelations among them. Closer to the *Philebus,* there is the difficulty we experience in deciding what counts as one field of knowledge.

In such cases we do not have a crowd of particulars which need only to be classified. *Nor* do we have an undifferentiated continuum, some pure potential to be cut as we choose. We have something already differentiated as to its generic character but still indeterminate in more specific ways. Theuth starts with speech sound indeterminate in its multiplicity. This is neither a blank continuum nor a crowd of individual sounds but an indeterminately multiple and various stretch of speech sound. He has already distinguished this generically from sights, smells, etc. He discovers stretches of sound which contrast with other stretches. He classifies more and more finely, creating more precisely bounded and contrasting species until he arrives at firm particulars arranged in the lowest species as well as at the articulated genus. He classifies and individuates; he arrives at his universals and his particulars together. There is no sharp separation between recognizing an individual sound *as* individual, and knowledge of what sort of individual it is.[5]

In the Theuth example (as earlier in 17a–b) Plato evokes the experience of learning to read and write. We moderns should remember that in his time this involved analyzing heard sound by taking dictation and reading aloud. One did not learn to read silently while facing letters which were already spatially distinct; there was always the flowing indeterminacy of vocal sound.[6] Nor were there neat packets of sound just waiting to be assigned to distinct letters. The sound equivalents of one letter are frequently quite varied allophones of the same phoneme. One must learn to segment the sound stream. Are the "p" of "pin" and that of "spin" the same sound? The answer varies in English and in Greek. The same articulation can be part of different phonemes.

Gosling seems to miss the point when he discusses learning one's letters in

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[5] Cf. J. Stenzel, *Plato's Method ofDDialectic,* tr. D. Allen (Oxford: OxfordUniversity Press, 1940), p. 142 and p. 125: "The particular only *is* in so far as it is *this;* and to be *this* means to have, or to fall under, this εἶδος. Otherwise it is quite impossible to grasp the object, and even αἴσθησις can only do so in a spurious way. Until we have grasped how the εἶδος and the sensible particular are correlated, the latter remains unknowable; it is not 'one' but 'indefinite' (ἄπειρον)." Stenzel assumes, however, that "one" and "ἄπειρον" apply here only to the particulars, which seems unlikely. On this cf. A. E. Lloyd, "Plato's Description of Division," in R. Allen, *Studies in Plato's Metaphysics* (New York: Humanities Press, 1965), p. 225.

[6] In his *Confessions* (VI, 3) Augustine records his puzzled astonishment at discovering Ambrose reading silently to himself. Augustine's forced explanations of why Ambrose would read in this unusual way testify to the opposite custom.

terms of a visual example. "The letter C can be *recognized*, but *knowing* it is knowing it is a consonant, not a vowel, and what kind of consonant it is, and so on" (172, my emphasis). He is right, the printed *letter* "C" can be recognized, but this is because we already have another classification individuating written letters by spatial separation. Would it be so easy to recognize in a strange-flowing script? But the *sound* "C" cannot even be *recognized* except by learning the relevant contrasts and classification. In Plato's example there is no place for Gosling's sharp separation between recognition of the letter as an individual and knowledge of what sort of individual it is. Theuth realized we could not learn letters in isolation from one another, because their identity comes through the contrasts in which they stand. Individuation and classification occur together.[7]

It might seem that the point I have been making concerns our knowledge of entities and not the entities themselves. But sounds are experiences and experiences are entities. The *Philebus* is concerned with our experience since its main subject, pleasure, resides there. It is particularly appropriate to his ethical discussion that Plato discuss the classification and individuation of experiences. "Experience," however, is a dangerous word to use since it is a modern notion with connotations from Descartes and Kant. We must remember that, for the Greeks the subject-object division was not the fundamental cleft in the world it later became. When Plato talks of sensations or pleasures he is talking of them ontologically as items on a par with trees and tradespeople, not as items in some prior epistemological realm. Experiences are entities like any other. Insofar as all entities have measure and limit in their constitution, so will experiences. It may sound paradoxical to say that we can be unsure about the complexity of the individuation of our experiences, but this betrays how deeply we are influenced by an atomistic psychology that builds up experience from bits which are unclassified but already individuated as one sensation or one experience each.

Plato's physiology does not suggest an atomist psychology. Plato correlates pleasures to processes of buildup and breakdown within the organism (*Philebus* 33ff). Some of these may reach the soul. There are many such rhythmic processes going on at any one time; many of them reach the soul together. In addition, the soul has its own rhythmic processes. These

[7]Plato's other example, musical notes (17b–e), can be read in a way consonant with that of Theuth. One starts with indeterminately multiple sound, with areas of differing pitch, then distinguishes intervals as phenomena repeatable at different pitches, then tones as the ends of intervals, then arrives at scales as species containing rules for individuating sound into notes related by contrasts and measures. The music example is less convincing, perhaps because we have easily available *other* ways of individuating musical sounds (by strings on a lyre, holes in a flute, etc.).

rhythms are all superposed upon each other. The superposition of varying frequencies does not obligingly sort itself out into a linear series of discrete atomic stimuli to be correlated with a parallel linear series of discrete atomic experiences.

If we reject psychological atomism we obtain a stronger interpretation of the ethical argument in the dialogue. Consider the passage where Plato discusses a life of pure pleasure without intelligence. Protarchus suggests a life of complete pleasure would be just fine. Socrates replies:

> But if you lacked thought, memory, knowledge, and true opinion, surely to begin with, you couldn't know even whether you were enjoying yourself or not, since you would lack all intelligence.—True.—What is more, in the same way, as you would lack memory, you would be unable to remember that you did enjoy yourself on any occasion, and no recollection at all of pleasure at one moment would survive to the next. Since you would lack the capacity for true judgment you would not judge that you were enjoying yourself when you were, and lacking the ability to predict you would be unable to predict your future pleasures. It wouldn't be a human life at all, but a jelly-fish existence, or the life of one of those sea-things that live in shells. Aren't I right? (*Philebus* 21c, Gosling's Translation.)

Gosling reads this passage with an atomist psychology. A life of pure pleasure would be a stream of constant pleasure-experiences, but the experiencer would be unable to reflectively judge (or remember or predict) that he was enjoying. The stream of experiences would lack intellectual and reflective additions to the pleasure experiences. Thus it would be a mere animal stream of life. Gosling shows that this fails to prove that the pleasures of such a being would not be more pleasurable, and concludes

> Socrates' point gets its pull, of course, as an appeal to the individual honestly to declare his preferences. Doubtless most of us would show some opposition to a proposal to reduce us to the condition of contented jelly-fishes, at least at the level of declared preference. It may be that Socrates should be read as conducting an ad hominem examination of Protarchus, which Plato hopes will elicit the same admission from any honest reader (182).

There may be more to the argument than Gosling sees. His interpretation presupposes that the stream of pleasure-experiences without intelligence is in itself unified and distinct and that intelligence would enter the stream of experiences simply as a new kind of experience, like a new color bead on a string. If we question these presuppositions we see the role of intelligence as more complex. That few humans would choose it does not prove the life of an oyster or jelly-fish inhuman; it might be one of those precious things that are as difficult as they are rare. Rather Plato claims we need intelligence in order to have anything that could be called *one* temporally unified *life* of enjoyment. Gosling suggests that Plato is trying to prove that "realizing one is enjoying oneself is preferred to just enjoying oneself"

(183). But perhaps Plato's point is that one *cannot* "enjoy oneself" *without* realizing one is enjoying oneself.

Plato has argued in the earlier examples that we need the limit and the unlimited to have knowledge. It is striking that the modes of knowledge Plato suggests to avoid the fate of the oyster are explicitly correlated to the three parts of time. Without memory you would not know that you have enjoyed (ἔχαιρες—past). Without true opinion about yourself you would not know you were enjoying (χαίροντα—present). Without calculated expectations about the future you would not expect future pleasure (χαιρήσεις—future). A human life, as opposed to any oyster's, demands temporal unity. This time-binding demands knowledge which will make a one out of indefinitely multiple temporal flux. Applying Theuth's method, we can only divide the moments from one another ("*I* am experiencing *this* pleasure *now*") when we have intermediate contrasting unities for the parts of time. It is only because we can unify time into a one and divide it into the intermediates of the three temporal dimensions that we can experience the present pleasure as one individual pleasure among many, as *a* pleasure, and as our own. Without this temporal one-and-many the stream of experiences is neither a stream nor experience.

Plato has two "Kantian" insights: the need of a conceptual structure for there to be experience of individuals, and the need of temporal synthesis for there to be experience at all. Plato links these by making the temporal synthesis one sort of conceptual synthesis. None of this turns Plato into Kant. Plato does not make the distinctively Kantian move of reversing the dependence and holding temporal synthesis essential to our possessing concepts. Nor does he in the *Philebus* separate "transcendental categories" from "empirical concepts" except by generality. Plato also differs from Kant in subordinating discussion of experience to the more general ontological discussion of limit and unlimited; the examination of knowledge has no special privilege. Plato is not doing epistemology but ontology; he gives necessary ontological conditions for entities, including experiences, but not transcendental conditions for experience as such.

This reading of the oyster passage does not make it a fully convincing argument. It remains to be shown that the human life is better than the oyster's existence. This value judgment is implied since human life contains more complex unity, but such a criterion would not convince Philebus. Still, on this reading Plato is making more than an ad hominem argument. It is more than men's preferences which keep them from choosing the life of pure pleasure without intelligence. Plato is trying to show the inconsistency of the picture of a life containing nothing but pleasures which can still be called *my life* in any meaningful sense.

Theuth has taught us that we need differentiated concepts if we are to know individuals. No knowledge without number. The oyster teaches us that we need knowledge to achieve the temporal unity of a life of pleasure. No pleasure without knowledge. The further conclusion Plato draws throughout the dialogue: no pleasure without number. What may seem the greatest pleasures, great just because they go beyond number and moderation, by that very excess threaten to disorganize life so that the experience of pleasure is destroyed.

It is not surprising, then, that at the end of the dialogue it is the family of knowledge that is allowed to exclude some of the family of pleasures which will "prevent us [knowledge] from ever coming into existence" (63d). To exist at all in a world where beings are mixtures of limit and unlimited demands constant care for balance and proportion, lest we lose reality. If pleasures become immoderate they will disrupt the time-binding and determining mixture of limit and umlimited; human experience will stop. As always in Plato, the full opposite of an ordered life is no life at all.

In the course of his arguments for measure Plato not only reclassifies but reindividuates pleasures.[8] If what was said earlier about the connection of classification and individuation is true, then the new species into which Socrates divides the genus of pleasures carry the possibility of new modes of individuation. We cannot suppose we are dealing with a fixed domain of experiences already clearly identified as one pleasure or one pain each. In fact, Plato tries to show that not all pleasures are simple felt states; he changes the kinds of individuality some pleasures possess.

Philebus's original description (11b) suggests pleasures are unit experiences to be evaluated by criteria of intensity and quantity. By the end of the dialogue Plato has arrived at a variety of kinds of pleasures on many different levels of individuality: simple true pleasures, mixed pleasures, pleasure at desires of pleasure, pleasurable comparative judgments of pleasure, pleasurable memories of pleasures, pleasurable anticipations, pleasures at the relations of pleasures, not to mention all the varieties of pain and the mixtures of pleasure and pain. Seemingly simple pleasures, such as enjoying a glass of water or laughing at a comedy, are shown to be complexes of many kinds of interlocking experience. We do not just reclassify our pleasure at the comedy; we analyze it and discover it has internal complexity. One pleasure or pain can be a component of another. Our amusement at the comedy is *a* pleasure, but it is a complex of other experiences as well.

If it is true that pleasures must be individuated in this more varied way,

[8] Plato also re-individuates fields of knowledge, as is clear from the discussion of the two arithmetics and the summary at 57D.

that pleasures do not all have the same kinds of individuality, then it is difficult to apply the simple criterion of quantity to their evaluation. Truth and falsity, mixture and purity, will assume a new importance in our evaluations.

This reading might also open an approach to Plato's notion of true and false pleasures. When pleasures are taken as atomic experiences their "falsity" can only mean the falsity of a related judgment which leaves the pleasure itself unchanged. If, however, pleasures can be individuated in other ways, if something can be a compound experience and still be *a* pleasure, then judgment can be built into pleasures more intimately and pleasures may be false in a stronger sense. "True" pleasures, on the other hand, are not true by virtue of any related judgment. Their truth is that of "true reality." Their internal structure is simple; in themselves, in their φύσις (52b3) they require no reference to another temporal moment to complete them or to make them harmoniously pleasurable. This would seem to pose problems for my interpretation since true pleasures look suspiciously like psychological atoms. True pleasures might, however, be thought of as the pleasure-equivalents of prime numbers and harmonious ratios, not psychological atoms so much as self-contained units like those musical chords that imply no build-up and demand no resolution. In his physiological section Plato does not speak of a series of discrete bodily states but of superposed rhythms; analogously, the true pleasures might be thought of as the experienced correlates of harmoniously bound body or soul rhythms, as the physical atoms of the *Timaeus* are mathematically bound flux.

I have tried to purge a residual empiricism from the interpretation of the *Philebus* by removing psychological atomism from Plato's examples and ethical argument. It is a familiar theme in Plato's writings that complex entities like cities or personalities are built from components whose mixture is correct when it approaches a norm given by the Form of the object or quality in question. Joining the rejection of psychological atomism with the account of physical atoms given in the *Timaeus* we see that the physical and psychological components themselves contain measure and limit rather than brutely given qualities.

What of the Forms? Most interpretations of Plato treat the Forms much as the myth in the *Timaeus* presents them, as given eternal exemplars, with all questions terminated in the claim that a certain form *just does* contain a certain quality in its definition.

The *Philebus,* however, speaks of our arriving at proper classifications and proper divisions of genera by a process of finding measure. Theuth works at making his classifications. In so doing he not only determines the indefinite plurality of speech sound into individual units, he determines the generic universal "speech sound" into species in a harmonious and complete manner. As he encounters the indefinitely multiple sound already distinguished

in some way (from smells and sights), so he encounters unity as a definite genus needing further specification. These are not two encounters, but two sides of the same process. We encounter neither indefiniteness nor unity by themselves, nor can we encounter either in a pure state.

To come to know a Form is to grasp the structured modulation of unity in some appropriate field. Theuth's active specifying of the generic universal represents our arriving at knowledge of the Forms. There is a notable absence here of the appeals to intuition made in earlier dialogues. Also absent is a process of abstraction from already given determinate particulars. The universal is specified and the particulars determined together. This process seems to mirror, in our knowing, the "generation" of the Forms themselves.

Aristotle speaks of the generation of the forms out of the one and the indefinite dyad (*Metaphysics* I, 6; XIV, 1, etc.). While the details of this doctrine are far from clear, enough can be made out to show that the picture of Plato positing brutely given Forms is wrong. It is not enough to claim that the Forms are interrelated and mixed with one another in the fashion described in the *Sophist*. There is an order of generation involved as well. It is true that the Forms are eternally what they are. Yet this is not a brute fact. The Forms are as they are because they are the harmonious modulations of unity into multiplicity. They could no more be different than thirteen could cease to be a prime number. But thirteen is not a brute fact; it arises from the generation of the numbers by the mixing of unity and the indefinite dyad.[9]

It seems likely Plato hoped that all the Forms, their qualities and interrelationships, could be derived as harmonious sets of ratios, natural points of unity in the combining of limit and unlimited. The proposal hoped for a system of necessary truths about the natures of all things, derived from the fundamental relations of unity and multiplicity. Though never realized, this program could have inspired many research projects at the Academy.

Assuming that Aristotle is not totally misrepresenting Plato, there is the problem of relating the "unwritten doctrines" with the ontological discussions in the *Philebus*. Enough of the unwritten doctrines can be related to the *Philebus* to show that Plato is not there an ontological atomist concerning the Forms. The claim at 16c that all entities are composed of limit and unlimited fits with, though it need not express directly, the unwritten doctrines.[10] The question is more obscure in connection with the fourfold division of entities

[9] Cf. Findlay's intriguing conjectures on how this might have been envisaged, and the special role played by the prime numbers (*Plato*, pp. 67–70).

[10] As is clear from the general movement of this essay, I accept the traditional translation of 16c9 as referring to all entities, rather than Striker's revised translation referring only to the Forms. The arguments used by Pamela Huby in her review of Striker's book (*Classical Review* XXII (1972), p. 333) and Gosling (*Plato's Philebus*, p. 84) seem convincing.

into "limited," "unlimited," "mixed," and "cause" (23c–26d). Explaining this division, Plato states that the mixture of limit and unlimited is carried out by *nous,* with reference to both our souls and the world soul. This mixing activity is also connected to wisdom and knowledge, which are said not to exist except in souls. This poses no problem for the mixture of limit and unlimited relevant to the ethical topics discussed. But were we to apply this description to the Forms themselves we would be blocked. For there is no sense of "cause" acceptable to Plato in which one could say that soul is the cause of the generation of the Forms from the one and the indefinite dyad. To read the unwritten doctrines straight into the fourfold classification of the *Philebus* requires serious reinterpretation. With Jackson, one could turn Plato's doctrine into idealism, but this seems anachronistic in the extreme.[11] With the Neoplatonists and Findlay one could read the cause, *nous,* not as single souls but as the Form of soul, an eternal Intellect which both is a Form and contains the Forms.[12] This, however, would be to read the entire Neoplatonic hierarchy into the *Philebus,* a move which, I argue below, goes against Plato's intent. In a similar vein one could interpret wisdom and knowledge as referring to Forms from which others could be derived. While this could be made congruent with Plato's overall doctrine, it is expressly excluded as a meaning for this text.

We should conclude that the unwritten doctrines are not expressed directly in the fourfold classification, though the doctrines are not excluded either. In addition, as Striker argues, both some Forms (e.g., Heat) and some concrete objects (e.g., impure pleasures) are included in the genus of the unlimited. The ethical application of the fourfold classification suggests that "unlimited" or "indefinite" includes those Forms and those particulars which lack a definite ratio or number that makes them perfect of their kind, and are always relative to a more-and-less and to contrasting items. There is no highest heat nor any definite temperature which is perfect heat, while there are such rules and ratios for Forms such as horse or man.[13] These points suggest that the unwritten doctrines be seen in the background. Had the

[11] Henry Jackson, in a series of articles in the *Journal of Philology* which appeared from 1882 through 1886 (vols. X through XV) argued that after the self-criticism found in the *Parmenides,* Plato modified his theory in a way which eliminated the presence of the Forms in sensible particulars and made of the theory a "thoroughgoing idealism" in which each Form is "a thought which is eternally present in the universal mind (or which would be eternally present in the universal mind, if in passing into time and space it retained its universality). Particulars are the same thought imperfectly actualized by finite minds in [perceived] time and space" (Vol. XIII, p. 243). The phenomenalistic use to which the concept of mind is put in this theory is more nineteenth-century than Greek.

[12] Cf. Findlay, pp. 281–295 for an account in this spirit.

[13] Striker, pp. 41–68.

program which Aristotle reports been capable of being carried out, it would have provided an explanation why the ratios that determine a horse are what they are, and why some Forms need further determination, given their place in the generative scheme.

Striker also wishes to argue, however, that the "unlimited" cannot be seen as an element in entities.[14] This conclusion seems unnecessarily strict. The term ἄπειρον can be applied on a variety of levels. Striker herself shows several: the generic universal, the multiplicity of particulars, particular individual pleasures. These all have in common that in themselves or in their context they demand or allow further determination. While we cannot make any simple equation of the "unlimited" with *one* constant element in all entities, we can see it describing many different levels of indetermination. The need of measure and determination holds equally and with no special primacy for atoms of fire, pleasures, politics, perceptions, and personalities, with all their differing kinds of components and of indefiniteness. This is not so different from Aristotle's flexibility with "matter" and "potentiality."

When Theuth is inventing letters, he faces indeterminately multiple sound, already distinguished in a generic way from other kinds of experience. Presumably we never face the simply indeterminate, for to do so would be to lack any experience. In so far as we can experience the indeterminate it is already de-scribed or de-limited in some generic way. So too whenever entities, be they Forms or particulars, are described as indeterminate the entities will be already determinate in some other way. Thus the fact that the "unlimited" of the fourfold classification is a genus of entities and not some pure potential like Aristotle's primary matter need not force us to deny that determinate entities can be composed, on various different levels, of the indeterminate plus measure or limit.[15]

The unwritten doctrines again stand in the background, uniting this flexible use of the term "unlimited" into a generative series of specifications of the indeterminate dyad. The dyad would "be" a purely indeterminate principle, but it is not an entity. To make such a generative series plausible it

[14] Striker, pp. 45–50. I do not deal with all of Striker's arguments on this question nor with her overly restrictive hermeneutic principle about what it means to take the text "on its own." Striker (and Gosling's) various other arguments against seeing limit and unlimited as elements in things can be met, I think, by a position which (a) refuses to separate knowing particulars from knowing universals, (b) links classification and individuation, (c) has more flexible and multi-leveled notions of the limit and unlimited, and (d) makes unifying background reference to the unwritten doctrines. The interpretation still has difficulties with 16e1–2 (dismissing units into the indeterminate).

[15] I am bypassing the question whether the *Philebus* does or does not presuppose the distinction drawn in the *Statesman* between limit in general and normative measure (283–285).

would be necessary to link the indefinite dyad and the Receptacle discussed in the *Timaeus*. The Receptacle can be seen as a specification of the indefinite dyad into the realm of space.[16] The two are related as a generically determined to a simply indefinite principle. Plato seems to have thought that the progressive limitation of the dyad described in geometrical terms eventually produced the spatio-temporal indeterminate, which by the fact of its spatiality is generically determinate. Aristotle indicates in his criticism of Plato in *Metaphysics* 1090a 23–9 that there is one indefinite principle, which "cries out at the way it gets dragged about" into what Aristotle thinks are too many different generative processes.

The unwritten doctrines stand behind the *Philebus*, not as necessary presuppositions but as a fuller story which, had Plato been able to complete it, would have unified the discussion of limit and unlimited and would have explained the details of their application to Forms and particulars. This means that the *Philebus* suggests and the unwritten doctrines confirm that Plato is nowhere an ontological atomist. There are no beings which are brutely given as what they are. All determinations are generated by processes which are ideally those of harmonious measure; the question "why?" is in principle answerable for any determination, based only on the notions of unity and indefinite miltiplicity and their combination into a set of necessary structures.[17]

Plato could have reconciled his dualisms more easily had he asserted the unchallenged primacy of the principle of unity and made it the source of the principle of indetermination, as do the Neoplatonists. Plato himself has little or nothing to say about the basic principles of unity and indefiniteness themselves. This is not coyness; as the ontological conditions of possibility for any definite entity, the limit and the unlimited are not themselves definite entities to be spoken about. The Neoplatoists do ask and answer questions about the ultimate principles in themselves. Emanation and ἐπιστροφή, the power of the One which by its being makes a counterspace as it over-

[16] "According to Plato the one and the indefinite dyad, which he spoke of as the great and small, are the principles of all things and even of the Forms themselves. So Aristotle reports in his work On the Good" (Alexander, quoted by Simplicius in his commentary on *Physics* 187a12, translated by Findlay, *Plato*, p. 414). Cf. also the passages translated on p. 441 concerning the *Timaeus*, and Aristotle, *Metaphysics* 1085a7–14 for the series "number, line, surface, volume" and the reference to "species" of the indefinite dyad.

[17] This is not *quite* true. Plato, like Aristotle, seems to dismiss accidental determinations as not knowable by a science of dialectic such as he proposes. The doctrine of *infimae species* implies this conclusion for both thinkers; cf. *Posterior Analytics* I, 4(73b15ff). The problem whether (and if so where) to draw the line between determinations which are accidental and those which can be necessarily known plagues thinkers who reject ontological atomism.

flows and turns back receptively towards its origin,[18] these make a story Plato never tells. Whether he would approve of it we do not know. I am inclined to think he would not, for it gives complete primacy to the principle of unity, turning Plato's carefully maintained tension into an episode in the story of the return to the One. Plato never makes the principle of unity the source of the principle of indetermination.[19] Unlike the Neoplatonists, Plato does not make mystical union the express goal of philosophy. In the middle dialogues, approaches to final unity (in the *Republic* and the *Symposium*) are immediately linked with generativity and measure here below, though the need to force philosophers back into the cave indicates Plato knew there was a problem about this. Still, the activities of the philosophers who have escaped the cave look more like discussions in the Academy than Plotinian rapture. They are exploring the world of Forms, not staring at the sun. In the ethical discussions of the *Philebus* it is balance we are to maintain, not transcendence. The judgment of lives sketched at *Philebus* 66 does not rank as first any mystical union. Plato emphasizes measure, which is unity always involved with the unlimited. Given the way Plato links his ethics to his ontology, this suggests that he had no ontological theory that the principle of unity was somehow *the* ultimate principle, as do the Neoplatonists.[20]

This article has shown that Plato is not an ontological atomist on any level. Plato in the *Philebus* tells us to maintain ourselves in the tension between a unity which is never complete and a disunity which is never total.

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[18] Cf. Plotinus, *Enneads*, II, 4; VI, 4. Plato employes dualities derived both from Parmenides and from Pythagoras. While the Parmenidean dualities (true being vs. illusion, intelligible vs. sensible) are exclusive, dividing the world or denying it, the Pythagorean duality (limit and unlimited) is complementary, co-present everywhere uniting the levels of being into a generative series. Parmenidean separatism and Pythagorean continuity of generation are never completely reconciled in Plato's text, and their tense interplay makes much that is provocative and profound in his thought. Plotinus was himself caught between a Parmenidean-descended dualism, and a continuity of generation even stronger than Plato's. S. E. Gersh, *Kinēsis Akinētos, A Study of Spiritual Motion in the Philosophy of Proclus* (Leiden: Brill, 1973), discusses the problems of this eternal generation.

[19] Though Findlay would argue against this claim (*Plato*, p. 778) he does not seem to be finding the full doctrines of emanation and ἐπιστροφή in Plato. Cf. also Philip Merlan, *From Platonism to Neoplatonism* (The Hague: Nijhoff, 1968) on the complications added to the problems of generation by the mathematicals.

[20] It has become fashionable lately, following claims of Nietzsche and Heidegger, to see in Plato the distant origin of modern nihilism. While it is true that Plato wants life to be lived under the thought of unity, and the reality of things to be made fully present, which is deemed to be the fatal move, would the results Nietzsche and Heidegger complain of exist if the Neoplatonists had not made the principle of unity dominant and actively infinite?