

## THE AMBIGUOUS WORLDS OF PLATONISM

Much has been written about Plato's attitudes towards the 'world of perceptible phenomena'. This is often equated with the 'world of becoming' and contrasted with the 'world of being', the 'intelligible world' or the 'world of intelligible reality'. Plato is thereby held to be committed to a two-world ontology, and of the two worlds, only the intelligible one can be properly known, while the world of perceptible phenomena is more or less unstable, subject to change, cognitively unreliable, the object of, at best, true opinion. Thus to quote just one prominent commentator, Guthrie wrote: "only of being can there be certain knowledge: of the natural world, as a world of becoming, we can only have belief",<sup>1</sup> and again, a propos of the *Philebus*, "Plato's two-world scheme, of Being and Becoming, is basically unchanged".<sup>2</sup>

There are, of course, many texts that can be cited in support of such views: I shall be reviewing some of them in due course. However, quite what position is being ascribed to Plato in this talk of a contrast between two worlds, and quite what position *should* be ascribed to him on the basis of the texts so cited, are not as clear as seems sometimes to be assumed. It is my aim, in this paper, to explore some of the ambiguities in these issues.

Let me begin with the contrast between the perceptible and the intelligible, between αἰσθητά and νοητά. Following a distinction much used in the secondary literature,<sup>3</sup> we may note that this contrast can be used or read in at least two fundamentally different ways, depending on whether it is taken as a contrast between tokens and types (I shall call this option 1) or between two different kinds of types (option 2). In option 1, the contrast could be exemplified by that between some red object (a particular, a token) and redness (the type), or again between this (token) beautiful object and beauty itself (the

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<sup>1</sup> W. K. C. Guthrie, *A History of Greek Philosophy*. V. *The Later Plato and the Academy* (Cambridge 1978) 251. From the vast secondary literature on these topics I shall here cite only a few of what I take to be the most influential studies.

<sup>2</sup> Guthrie (n. 1) 237.

<sup>3</sup> See for example J. Gosling, "Republic Book V: τὰ πολλὰ καλὰ etc.", *Phronesis* 5 (1960) 116–128; A. Nehamas, "Plato on the Imperfection of the Sensible World", *American Philosophical Quarterly* 12 (1975) 105–17; T. H. Irwin, "Plato's Heracliteanism", *Philosophical Quarterly* 27 (1977) 1–13; M. M. McKenzie, *Plato's Individuals* (Princeton 1994).

type). Or again it could be exemplified by this particular triangle drawn on the blackboard (a token) and triangularity (the type).

On option 2 on the other hand, the contrast could be exemplified by that between redness and triangularity, that is between two types, one relating to a perceptible quality, the other to an intelligible one.

How did Plato understand the contrast between αἰσθητά and νοητά? Did he have in mind always or usually an option 1 contrast? Or an option 2 one? Is Plato himself, indeed, entirely clear and consistent on this issue? Do his texts always yield a determinate answer to our questions? Or do some ambiguities in the modern scholarship on the issue go back to ambiguities present in the texts of Plato himself?

Before I attempt to answer those questions, it is worthwhile pointing out what is at stake in this issue. The repercussions of the difference between an option 1 and an option 2 reading of the contrast between 'perceptibles' and 'intelligibles' are far-reaching. Take the occasions when Plato may be held to express reservations about the grade of cognition possible in relation to αἰσθητά, for instance that they may be objects of belief rather than of knowledge. On the option 1 construal, all that he *might* be saying is that we cannot have knowledge of particular, token, perceptible objects, that is as the *particulars* they are. We cannot be said to have knowledge of this red patch, that beautiful object, this triangle drawn on the blackboard. But on the other hand (on option 1) redness could be just as good an example of a νοητόν as beauty or triangularity, and so just as good an example of an object of the highest grade of cognition.

On the option 2 construal, by contrast, redness (the type) comes on the αἰσθητόν side of the αἰσθητόν/νοητόν divide, and so would be subject to whatever reservations are expressed about the level of cognition possible of them. On that reading, it would only be in relation to such items as triangularity that we could be said to have knowledge.

Evidently, therefore, if we are to get clear what Plato's attitudes were towards natural phenomena, to physical inquiry and to cosmology, the issue between the two options has to be resolved. Do the reservations he expressed relate merely to particulars as the particulars they are? Or do they extend also to certain types or classes of phenomena, to the (perceptible) properties that particulars instantiate – and if so, what do they include? Similar questions may also be raised with regard to the contrast between being and becoming. When Plato depreciates the latter, should his strictures be taken to relate (just) to particulars, or do they rather (or also) apply to their kinds and properties? Are we justified – how far are we justified – in ascribing to Plato a commitment to two *worlds*, and if so, how is

the contrast between the two to be construed? In what sense, if at all, in other words, can the αἰσθητά as such be said to constitute a *world*?

Much Platonic philosophising revolves around one or other of a series of dichotomies, Forms and particulars, one and many, the intelligible and the perceptible, being and becoming. In an extreme version of the two world interpretation of Plato each of those dichotomies is treated as equivalent to the others, and yet more may be added to the list, notably soul and body. I shall call this the ‘collapsing συστοιχία’ view of Plato, in which, as in a Pythagorean Table of Opposites, each pair of opposites is treated as on a par with every other, in the sense that all exhibit the same analogous relationship. How far, I shall ask in conclusion, did Plato lend himself to such a reading either in the works of his middle period or later?

Before we turn to the Platonic texts themselves, a digression on Aristotle will serve first to underline the relevance of the distinction I have drawn between option 1 and option 2, and secondly to remind us of his, complex, attitudes towards perceptibles. In the *De Anima* Aristotle sets up a well-known comparison and contrast between perception and reason. Each has its own proper objects, namely what Aristotle terms perceptible forms (such as sounds, colours, tastes) and intelligible ones (essences, expressed in definitions). The point of introducing the idea of perceptible form is partly to allow Aristotle to argue that in perception, the perceiver (or more strictly the sense-organ, αἰσθητήριον) receives the form, but not of course the matter, of the object perceived. However, from the point of view of our present concerns, we can see that when, in Aristotle, we are dealing with perceptible, and intelligible, forms, this corresponds to the contrast I associated with option 2. The contrast is not one between a token and its type, but rather one between different types, where sounds and colours exemplify αἰσθητά, essences νοητά.<sup>4</sup>

However, that is not the only way that Aristotle himself speaks of αἰσθητά. Again in the *De Anima*, for example at 418 a 7 ff., he introduces the well-known, if disputed, contrast between three types of αἰσθητά, the proper objects of perception (ἴδια: as colour of sight), the common ones (κοινά: for example movement and rest which can be perceived by more than one sense) and those he says are perceptible ‘incidentally’ (κατὰ συμβεβηκός). The example in 418 a 20 ff. is ‘the son of Diareis’, whom we perceive ‘incidentally’ –

<sup>4</sup> Cf. the discussion of the different ways in which size and what it is to be size, or flesh and what it is to be flesh, are judged in *De Anima* III 4, 429 b 10 ff. There Aristotle assigns to the perceptive faculty the task of judging hot and cold, but to another that of judging what it is to be flesh.

'for what we perceive belongs [or is incidental] to the white thing'.<sup>5</sup> So individuals such as Diares' son, that horse, this table, can also be said to be perceptible 'incidentally'.

According to Aristotle we perceive the particular, but in the *Posterior Analytics* II 19, 100 a 16 ff., he also makes the elliptical (and again controversial) statement that perception (αἴσθησις, the noun) is of the universal.<sup>6</sup> His example is: perception is of human, not of Callias the human. So we have (at least) a tetrachotomy. From one point of view we see a white patch, and from another (as just explained) Diares' son. But it is not just particulars as particulars that we perceive. At least according to 100 a 16 ff. perception can be said to be of the universal. Similarly at *APo.* 87 b 28 ff. we are told that we perceive a *this* (τόδε τι), even though perception is of what is *such and such* (τοιόνδε), where again Aristotle might be thought to be committed to the claim that while we *perceive* a particular, what *perception* is of is the universal, as it might be of 'white' or of 'human'.

The moral of this complex story is that, in Aristotle, αἴσθητά cannot be straightforwardly identified as *tokens*, nor indeed as tokens of determinate, perceptible, types. Aristotle can be said to use *both* the option 1 contrast *and* the option 2 one. The first option contrast, between tokens and types, or between particulars and universals, is as fundamental to Aristotle's philosophy as to Plato's, and he uses it in many other contexts besides that between this perceptible particular and the universal it exemplifies. Thus the contrast between primary substances and secondary ones, in the *Categories*, is one between particulars, and the species and genera they belong to. Yet he also has a use for the broad distinction between the types of objects that are percep-

<sup>5</sup> Ross (W. D. Ross, *Aristotle De Anima* [Oxford 1961] ad loc.) reads a comma before οὐδὲν at 418 a 23 and takes the antecedent as 'the white thing' (rather than τοῦτο). He paraphrases: "we perceive this *per accidens* because it is incidental to the white object which we perceive". Compare J. Barnes, *Aristotle's Posterior Analytics* (Oxford 1975) 255 ("if X is an incidental object of perception, then I perceive X only if there is some essential object Y such that I perceive Y and Y is X") and see also D. W. Hamlyn, *Aristotle's De Anima, Books II and III* (Oxford 1968) 107–108; A. Graeser, "On Aristotle's framework of sensibilia", in: G. E. R. Lloyd, G. E. L. Owen (edd.), *Aristotle on Mind and the Senses* (Cambridge 1978) 72; C. H. Kahn, "The role of *nous* in the cognition of first principles in *Posterior Analytics* II 19", in: E. Berti (ed.), *Aristotle on Science* (Padua 1981) 402 n. 17. This controversy over the antecedent of οὐδὲν does not affect the main issue I am concerned with, for, on any view, the varieties of perceptibles certainly include more than the proper objects of perception such as colours and sounds.

<sup>6</sup> Kahn (n. 5) 405 n. 21, for instance, remarks that αἴσθησις in this text is to be taken "in a broad sense".

tible and those that are intelligible, in his contrast between perceptible and intelligible forms.

In any given account, how a reference to αἰσθητά is to be taken, in Aristotle, must be analysed with some care. This applies also to occasions when he ascribes to Plato certain beliefs concerning αἰσθητά. Thus in the *Metaphysics*, 987 a 32 ff., Aristotle represents Plato as being familiar with Heraclitean beliefs to the effect that all αἰσθητά are always flowing and there is no ἐπιστήμη (knowledge/understanding) about them (περὶ αὐτῶν). How should αἰσθητά be taken here? The theoretical possibilities are considerable, as we have seen. Does he, Aristotle, have in mind perceptible particulars (either in the sense of the proper objects of perception, e. g. this white patch, or in that of incidental perceptibles, such as Diares' son) or the types they exemplify, maybe the perceptible forms that he contrasts with intelligible ones in the *De Anima*? In the sequel, 987 b 6 ff., he gives Plato an argument: it is impossible for there to be a common definition of any of the αἰσθητά, at least in that they change. And Plato's conclusion is given as being that αἰσθητά are separate from the Forms and called after them.

Now Aristotle himself shares the view that no definition is possible of the concrete whole, that is the particular composed of both form and matter. At least there is a clear statement to that effect at *Metaphysics* 1037 a 27, though unlike Plato he has no qualms about the possibility of definition with regard to the types of things that change, the substances of the sublunary world, namely of their forms.<sup>7</sup> Moreover, insofar as the terms used of αἰσθητά are here said to be terms derived from the Forms, this too may point towards taking αἰσθητά as particulars. The tokens are indeed (generally) called after their types: this patch of red is named from the colour red, and similarly with this human. When the implicit contrast between αἰσθητά and νοητά is not one between token and type, but between two different types, the idea that the one type is called after the other is absurd. My original example for the option 2 contrast was that between redness and triangularity.

In Aristotle's reports about Plato, αἰσθητά, as what changes, what is indefinable, and what is called after the Forms, may be better taken as perceptible particulars. But when Plato himself employs the contrast between

<sup>7</sup> M. Frede ("The definition of sensible substances in *Metaphysics Z*", in: D. T. Devereux, P. Pellegrin [edd.], *Biologie, logique et métaphysique chez Aristote* [Paris 1990] 113–29) distinguishes between the thought that definition of the concrete whole is possible, to wit of its form, and the thought that it is impossible, and possible *only* of the form.

'perceptibles' and 'intelligibles', can we determine whether he has an option 1 contrast or an option 2 one primarily in mind? At first sight, three types of evidence point strongly to an option 1 interpretation, where the contrast is between tokens and types. These are first the homonymy argument, secondly texts that unambiguously exemplify αἰσθητά with concrete particulars, and thirdly the evidence that Plato postulated Forms of certain perceptibles.

The homonymy argument corresponds closely to the consideration that Aristotle refers to in his report on Plato in *Metaphysics* A, the text I have just cited. In a number of contexts in dialogues of different periods, Plato suggests that the many particulars are homonyms of – that is, they share the same name as – the Forms. Thus in the *Phaedo* 78 d–79 a, the beautiful itself is contrasted with the many beautifuls, such as humans, horses, cloaks. They have the same name, beautiful, καλόν, as the beautiful itself, but while they can be perceived, the beautiful itself is to be apprehended by reasoning alone.

Similarly in the *Timaeus* 52 a, for instance, a contrast is drawn between what is unchanging, imperceptible and intelligible, on the one hand, and what has the same name as it, but is always changing, and perceptible, on the other. Again in the *Phaedrus* 250 e there is a contrast between the beautiful itself and what is named after it.

Texts such as these, when the perceptibles are said to have the same name as the corresponding intelligible Form, fit the token-type interpretation better than the type-type one, for the reasons I have already given. If the contrast between perceptible and intelligible is taken (as in option 2) as one between two distinct kinds of types, as in my examples of redness and triangularity, there is and can be no 'homonymy' between the two. By contrast there certainly can be, and is, on the token-type option, where this red patch shares the same name as the colour red, and indeed this perceptible triangle on the blackboard is called after its type, triangularity.

A second set of evidences points in the same direction. On some occasions when the 'many' are explained, the examples given are clearly of concrete particulars, and insofar as the many are, in turn, equated with perceptibles, this too may be held to point to an option 1 reading of the perceptible/intelligible contrast. We find the 'many' equated with perceptibles in such texts as *Phaedo* 78 d–79 a, already mentioned. There the many are exemplified by means of the plural expressions 'humans, horses, cloaks and suchlike', and that locution by itself is ambiguous as between the classes in question and particular

members of them.<sup>8</sup> However, when they are said to be constantly changing, we are presumably to understand that it is not the classes, but rather their members, that he has in mind. He is thinking of individual horses that grow old and die, not to changes to the species horse.

On other occasions the reference to particulars is unmistakable. Thus the philosopher's progression to a recognition of αὐτὸ τὸ καλόν, the beautiful itself, in the *Symposium*, starts from the perception of a single beautiful body (211 c 3).<sup>9</sup> More directly, in discussing how we may be stimulated to abstract thought, νόησις, in the *Republic* VII, 523 c ff., Socrates takes the example of three fingers, the little finger, the one next to it, and the middle finger. Here each of the three perceptibles in question is evidently a concrete particular. Whether at this point Plato is committed to there being a Form of finger is disputed: Socrates is more interested in examining such qualities as large and small, thick and thin, hard and soft. Given that we see the same finger (the one in the middle) as both large and small, the soul is stimulated to investigate those qualities themselves. In the case of seeing a finger (as such), the soul is not similarly stimulated to ask *what* a finger is, since sight does not indicate that the finger is at the same time not a finger. Yet the perceptibles in this instance are clearly the individual fingers that Socrates holds up (523 c 4). Equally, we may add, the large and small, thick and thin, objects seen are here concrete particulars.

The third type of evidence that may be adduced for a similar line of interpretation relates to the postulation of Forms that correspond to certain perceptibles. Of course the question of the extent of the world of Forms – of what items there are Forms – is unclear in the middle period dialogues and is raised as an explicit problem in the *Parmenides*. Is he, for example, committed to Forms of natural kinds, or of artefacts? There can be no doubt that if he has Forms at all, there will be Forms of such items as Justice and Beauty. But what about negative terms or privations, injustice and ugliness? Nor is it clear, when we are dealing with such an item as justice, whether or in what sense the many particulars are visible or otherwise perceptible.

At the same time there are some undisputed cases. Certainly *Phaedo* 65 d–e commits Plato to Forms not just of justice, beauty and goodness, but also of largeness, greatness, μέγεθος. While some things that may be said to

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<sup>8</sup> Gosling (n. 3), Irwin (n. 3) 9 n. 13 and others have taken it that the 'many beautifuls' in *Republic* V, 479 a, refer to types. In the matter of change, however, it is because the tokens change that the many can be said to.

<sup>9</sup> Cf. the reference to a face at *Symposium* 211 a 6.

be μέγας in Greek are not *seen* as large (the Great King of Persia for instance) others certainly are. The *Republic* VII passage that speaks of seeing fingers as large or small and being stimulated by that experience to reflect on largeness and smallness themselves makes this abundantly clear. Indeed the conclusion drawn at 524 c 13 is that they should distinguish, when speaking about the large and the small, between τὸ νοητόν and τὸ ὄρατόν. In such cases the Forms in question are, as always, intelligible: but the many they correspond to are, or at least include, perceptible particulars.

Once again the *Timaeus* yields a particularly good example, the Form of fire. At 51 b Timaeus raises the question of whether there is an intelligible Form in such cases and he casts his vote at 51 d 3 ff. by affirming that there is. The Forms are there said – as I noted – to be unities, ungenerated, imperishable, invisible and indeed imperceptible (52 a). But besides the intelligible fire there are, of course, visible fires, that come to be and pass away and that we perceive by means of the body (51 c 2, d 7). Timaeus here introduces a third kind, the place in which coming-to-be occurs, but the contrast between the first two is what we are concerned with here and is sufficiently clear. On the one side there is an intelligible, imperceptible Form of fire: on the other, there are perceptible particulars, the fires that are kindled and extinguished.

At this point the arguments in favour of construing the contrast between perceptibles and intelligibles along the line of option 1, as a token-type contrast, may look overwhelming. It might seem that we should conclude, without further ado, that by perceptibles Plato means tokens, that is particulars. Insofar as that is the case, then his dismissive and depreciatory remarks about the instability and unknowability of perceptibles should be taken to relate to token particulars, not to their kinds or types. Insofar as he postulates Forms corresponding to perceptible particulars, that would seem to guarantee the knowability of the properties in question – that is, the properties themselves, such as largeness, even though not what Crombie<sup>10</sup> labelled, on the basis of *Phaedo* 102 d, the property-instances, that is the largeness that is instantiated in a given individual. So far from our being justified in seeing Plato as downgrading natural phenomena, as mere objects of opinion, the theory of Forms might be seen, on the contrary, as guaranteeing the possibility of knowledge in their regard as well – that is, of their kinds and properties. Fire and largeness, as well as beauty and justice, are proper objects of true understanding, even though visible fires, and large objects, the perceptible particulars, are not.

<sup>10</sup> I. M. Crombie, *An Examination of Plato's Doctrines*. II. *Plato on Knowledge and Reality* (London 1963) 311 ff.

But to reach those conclusions is to go too far, too fast. Two main types of objection, one specific and the other more general, must give one pause and introduce complexities that substantially modify the picture. First it is clear that, in certain texts at least, Plato is concerned with a distinction not between tokens and types, but between different types themselves. One such passage is in the *Theaetetus*, 185 e ff., where Plato contrasts what the soul apprehends by itself, and what by means of the faculties of the body.<sup>11</sup> There, at 186 b 2 ff., the soul is said to perceive the hardness of the hard by touch – whereas in the case of the beautiful or the ugly, the like and the unlike, it reaches out after and apprehends these on its own.<sup>12</sup> This certainly shows that Plato can and does draw distinctions between different types of qualities, roughly, we might say, perceptible ones and intelligible ones, and we may note a contrast between what is said here, in the *Theaetetus*, about hardness and what we learnt in *Republic* VII.

Thus hardness, in the *Theaetetus*, is something the soul is said to perceive (αἰσθῆσεται, 186 b 3). But in the *Republic* Socrates first says that *sight* does not adequately *see* the greatness and smallness (viz of the fingers, αὐτῶν, 523 e 2) and then says that touch is similarly inadequate with regard to thickness, thinness, softness and hardness.<sup>13</sup> Perception an-

<sup>11</sup> M. F. Burnyeat, *The Theaetetus of Plato* (Indianapolis 2000) pointed out the importance of distinguishing between two alternative readings of the refutation of the identification of perception with knowledge in the *Theaetetus*. On the first Plato bases that refutation on an endorsement of Heraclitean flux: but on the second the analysis of Heraclitean flux should be seen as part of a complex *reductio* argument and not a position Plato subscribed to himself.

<sup>12</sup> Following Burnyeat (M. F. Burnyeat, "Plato on the Grammar of Perceiving", *ClQ* NS 26 [1976] 29–51), Y. Kanayama ("Perceiving, Considering and Attaining Being [*Theaetetus* 184–186]", *Oxford Studies in Ancient Philosophy* 5 [1987] 29–81) gives the most sophisticated analysis of this passage which has exercised many commentators: but cf. e. g. J. M. Cooper, "Plato on Sense-Perception and Knowledge: *Theaetetus* 184–186", *Phronesis* 15 (1970) 123–146; A. J. Holland, "An Argument in Plato's *Theaetetus*: 184–6", *Philosophical Quarterly* 23 (1973) 97–116; D. K. Modrak, "Perception and Judgement in the *Theaetetus*", *Phronesis* 26 (1981) 35–54.

<sup>13</sup> We should distinguish between three possible ways of understanding why perception, for example touch, is inadequate, namely (1) because it has no right to be judging hardness (the quality) at all: that is the province of reason. So the inadequate perception of hardness would be just another way of indicating that hardness is intelligible, not perceptible as such at all. (2) Or it might be because it is inexact (cf. *Phaedo* 65 b, which I discuss below). (3) Thirdly it might be because the objects it has to deal with manifest opposite qualities which are co-present in them. That last view does not rule out the possibility that perception of each of such a pair of opposites is adequate enough in itself.

nounces or reports to the soul that it perceives the same thing as hard and soft.<sup>14</sup> This is the type of experience that, in the *Republic*, is said to prompt us to reflect on greatness and smallness themselves and thereby to reach the intelligible. Presumably the same point should be held to apply also to hardness and softness. If so, just as the end result of reflection on problems to do with greatness and smallness is to get to grasp those Forms, so the same will be true in the case of hardness and softness.

Thus from one point of view it appears that hardness may be the name of the intelligible Form: but from another it may be the name of a perceptible quality. If Plato's strictures on αἰσθητὰ relate not to this or that token hard object, but to such qualities as hardness – as perceived – then they are of far greater scope than the provisional conclusions I suggested just now allowed.

The second more general type of objection to those conclusions confronts the issue of the kind of account possible in relation to natural phenomena, where we have the fullest, even if still at points opaque, evidence on the question in the *Timaeus*. Here the whole account of becoming is said to be no more than a likely one – though inferior to none in likelihood. The shortcomings of that account, and at the same time its superiority to all its rivals, are captured in a series of balanced negative and positive points. The Demiurge is good, he consults the best model and he brings about order as far as possible. But what he has to work with is initially in disorderly motion. Cosmology involves investigating not only the works of reason, but also the factor of necessity (47 e), the effects of what is called the wandering cause (48 a–b).<sup>15</sup> Such factors as heating and cooling are often taken (by others) to be primary causes, but they are, in reality, only subsidiary ones (46 c): yet they have to be included nevertheless. The cosmos is a visible copy of an intelligible model, so the account appropriate to it is only a likely, not a certain one. However, it is the best cosmos possible (92 c), the work of a benevolent and providential Craftsman, even though he has to work with necessity.

We come to the heart of the matter. Plato has, he believes, strong arguments to suggest that knowledge is not possible of what changes. The pri-

<sup>14</sup> Contrast Irwin (n. 3) 8, who interprets this as saying that the same thing is hardness and softness.

<sup>15</sup> Zeyl (D. J. Zeyl, "Plato and Talk of a World in Flux: *Timaeus* 49 a 6–50 b 5", *Harvard Studies in Classical Philology* 79 [1975] 125–148) and Silverman (A Silverman, "Timaeian Particulars", *CIQ* NS 42 [1992] 87–113), among others, have discussed the implications that stem from Plato's saying (at *Timaeus* 49 d) that we can only use the term 'suchlike' (τοιοῦτον), not 'this' (τοῦτο) of the things that change.

mary elements are in constant – though not, to be sure, incoherent – change: they lack stability and keep passing into and interacting with one another, forming the different ‘isotopes’ of 55 a–b and producing the various changes of 56 d–e. So the conclusion seems forced on us that they cannot be known, not at least insofar as they undergo change. And similar conclusions apply, with equal or greater force, to their varieties and compounds, to the flame and light of 58 c, the gold and bronze of 59 b–c, the hail, ice, snow and hoarfrost of 59 e. The language used of their creation suggests that it is not just this or that particular flash of light or occurrence of hoarfrost that belongs to becoming, but light, and hoarfrost, the types, themselves, thereby seeming to vindicate those commentators who hold that natural phenomena in general belong to a realm of becoming that is the object of no more than at best true opinion. Yet my earlier arguments had suggested that one of the effects of postulating Forms was to secure the *intelligibility* of the types in question, including such types as fire.

That the whole account of the creation of the corporeal cosmos in the *Timaeus* is couched in the language of becoming must be acknowledged.<sup>16</sup> But we had better be careful, and not just because of the well-known problem associated with whether the coming-to-be of the cosmos itself is to be taken literally. When *Timaeus* asks at 28 b whether the cosmos “was always and had no beginning of becoming, or it came to be” and answers, firmly, “it came to be”, already in antiquity there were those who claimed that this was just for the sake of the exposition. However, as I have argued elsewhere,<sup>17</sup> I see no reason *not* to take both the positive assertion “it came to be” and the corresponding denial that it is eternal, at full force. The physical cosmos is an individual, a visible living creature modelled on the intelligible one (92 c).

But what are we to make of the various becomings of the different types of natural substances that we are then given? When a species of earth is compressed by air so as to be indissoluble in water, it is said (60 b–c) to constitute (σύνισταται) stone, and this is how stone comes to be (γίγνεται). Clearly this is meant to offer an analysis of the physical structure or the composition of stone that should apply generally to all examples of stones.

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<sup>16</sup> The multiple possibilities of taking the language of γίγνεσθαι in Plato are explored by Frede: M. Frede “Being and Becoming in Plato”, *Oxford Studies in Ancient Philosophy* Suppl. (1988) 37–52.

<sup>17</sup> G. E. R. Lloyd, “Plato on Mathematics and Nature, Myth and Science” (originally published in *Humanities* 17 [1983] 11–30), in: idem, *Methods and Problems in Greek Science* (Cambridge 1991) ch. 14.

Any given stone we encounter may then be presumed to have just that composition. But does *the kind itself* get to be generated? In *the cosmological narrative* it does, for sure, but how are we to understand this?

First, cosmic events should not be confused with ordinary coming-to-be. In some cases this is clear. We are told that women come to be from cowardly males (90 e–91 a), but that is hardly the way ordinary women are born. Secondly, when the Craftsman, or reason, or reason acting with necessity, produces a kind, we should distinguish the created kind from the kind that it is modelled on. The Craftsman, especially, brings about certain effects in the physical world by producing as good a copy as he can of the intelligible model. But insofar as any given kind *exists in the model* he consults, *that* clearly does not come to be, even if the Craftsman's replica is said to. His work, we are told, unlike that of the lesser gods, is indissoluble (ἄλυτα, 41 a 8) unless he so wishes, though so to wish would be the work of an evil being.

Yet the existence of ungenerated and indestructible, intelligible, kinds is emphasised in the specific case of fire alone, in the text I discussed earlier, 51 b ff., even though, in raising the question there, Timaeus asks whether the same applies with respect to “all those things about which we always say that they are self-subsistent” (51 b–c) without specifying *which* those things are. Even in the case of fire, where the belief in the existence of the eternal intelligible kind is put beyond doubt, the actual account we are offered is undercut – and this despite the earlier insistence (29 b–c) that so far as unchanging being goes, we should have stable and incontrovertible arguments concerning *that*. Where that leads us to expect a stable and incontrovertible account of the Form of fire, what we are given is an account of the primary triangles where, first, the highest principles according to which they are associated with fire, air, water and earth are said to be known only to god and some men dear to him (53 d), and secondly, the selection of the half equilateral as the fairest right-angled scalene triangle is undercut by the remark that, if anyone should discover a fairer triangle, his would be the victory of a friend not an enemy (54 a–b), before, at 56 b, it is asserted more firmly that the pyramid is the seed of fire according to the *correct* as well as the probable account.

In part, this undercutting of the account of fire might be put down to a very natural diffidence Plato might feel in the face of the difficulties of doing physics – a diffidence all the more laudable, one might add, given the dogmatic, not to say arrogant, solutions frequently offered to the problems of the fundamental elements by pre-Platonic philosophers. One might argue, further, that while to postulate a Form of fire is the essential step to

guarantee its *intelligibility*, it is another task altogether to give a fully satisfactory account of that Form. The knowability of the Forms is one thing, but as Timaeus reminds us, it is only a small group of humans who can be said to have reason (51 e).

Yet the puzzle remains. Becoming is subject merely to a likely account, and that is the refrain that Timaeus keeps coming back to, as he discusses the various natural substances, their combinations and interactions, their causes and affections, all the way to the long and elaborate account of the different types of diseases (81 e–89 d). Yet the eternal model that the Craftsman refers to, as he goes about *his* part of the proceedings (at least), *receives much less attention in practice* than Plato's insistence on the importance of this factor might warrant or lead one to expect. Yet it is the eternal model that offers the possibility of more than a merely likely account, not of what becomes insofar as it becomes, but of the being that what becomes imitates.

The case of hardness, or rather the hard, discussed at 62 b–c, brings the point out clearly. The *Republic* text we considered earlier would lead one to infer that the confused reports about hard and soft that the sense of touch delivers (523 e 3 ff.) would stimulate reflection on the nature of the hard itself, the intelligible Form. Yet when hard and soft are discussed in the *Timaeus*, 62 b–c, we are given an account in terms of the theory there offered of the structures of the four primary bodies. 'Hard' is 'that to which our flesh yields', 'soft' 'what yields to flesh', and this is then explicated: "a thing is yielding when it has a small base, and the figure composed of square bases, having a firm standing, is most resistant". The various affections and qualities we speak of can all be accounted for – sticking to the probable account of the workings of necessity – in terms of the structures of the elementary triangles and of the solids they form, and in terms of the various interactions between them, including especially the interactions between what is perceived and the percipient organ.

It is clear that the *Timaeus* account of the hard does not *deny* the Form of hardness. But neither does it assert, nor use it, either. Indeed one might add that in the description of the simple bodies, not even the Form of fire can be said to be *put to use*, though it is certainly postulated. The account of the kinds of fire and their effects similarly stays at the level of the geometry of the elementary triangles and the figures they constitute. Of course the elementary structures themselves share one characteristic with the Forms, that they are invisible. But the *Timaeus* makes absolutely clear that the invisibility in question in the two cases is quite different. The elementary bodies are invisible because they are so small (56 b–c, cf. 43 a), a contingent matter, while the Forms are invisible because intelligible (52 a).

Plato thus shows a certain ambivalence towards physical inquiry, even though he emphasises so clearly the principles on which it is to be based. Diffidence with regard to any claim to have a true and definitive account already available, and in his pocket as it were, is one thing. Yet the question of how far any such true account is possible, how far it stretches, is left, at points, opaque.

A similar ambivalence may be detected also in texts that do not so much merely compare and contrast reason and perception, as proceed to the extolling of the former *via* the downgrading of the latter. If that reading is correct, then some of the ambiguities of the positions that the commentators have ascribed to Plato may go back to Plato himself.

Thus in the *Phaedo*, in the admittedly exceptional circumstances of Socrates' last conversation, the senses perceive nothing exactly nor clearly (65 b), indeed they positively confuse the soul (79 c) – and that despite the fact that in that dialogue, recollection (of the equal itself, for instance) is said to be initially stimulated *by* perception (74 b ff.), even though the equals that are perceived 'fall short' of being as the equal itself (75 a–b).

Again in a notorious text in the *Republic* where Plato recommends astronomy as part of the education of the guardians, they are told to "leave the things in the heavens alone" (530 b 7). There is no knowledge, ἐπιστήμη, of perceptibles (529 b–c) – and of course these could be taken, according to the option 1 contrast, as the particulars in question. But as regards the heavenly bodies, we are warned, it is absurd to think one can get truth in them (ἐν αὐτοῖς, 529 e 4 f.), indeed absurd to try to get truth from them or of them (αὐτῶν, 530 b 4). While the former expression rules out their having the truth, the ambiguous genitive in the latter may further rule out their being a source of truth, or even of there being any truth in their regard.<sup>18</sup>

In the *Philebus*, too, anyone who tries to investigate how the cosmos came to be, directing his attention not to what is, but to what comes to be, is said to be wasting his labour (59 a–b), and Socrates goes on: "concerning what has not obtained the slightest stability, how could any stability ever

<sup>18</sup> The text is notoriously controversial: see for example G. Vlastos, "The Role of Observation in Plato's Conception of Astronomy", in: J. P. Anton (ed.), *Science and the Sciences in Plato* (New York 1980) 1–31; I. Mueller, "Ascending to Problems: Astronomy and Harmonics in *Republic* VII", in: *ibid.*, 103–122; A. P. D. Mourelatos, "Plato's 'Real Astronomy', *Republic* 527 D–531 D", in: *ibid.*, 33–73; idem, "Astronomy and Kinematics in Plato's Project of Rationalist Explanation", *Studies in History and Philosophy of Science* 12 (1981) 1–32; A. Gregory, *Plato's Philosophy of Science* (London 2000).

accrue to us?" (59 b 4 f.).<sup>19</sup> While that could be read merely as stating that *insofar* as there is no stability in the subject-matter of cosmology, we can get no stable knowledge, it further invites a much stronger reading to the effect that *since* there is no stability in cosmology, there is no stable knowledge to be had in its regard. Yet earlier in the *Philebus* we were given a careful account of how to conduct a dialectical inquiry to reveal the elements of the determinate (limit) in a variety of subjects, where the examples range from music and phonetics (17 b–18 d, 26 a) to understanding health, beauty and strength, and even the elements of limit in fine weather (25 a–26 e). That does not, interestingly, ensure intelligibility by means of postulating a transcendent Form – indeed the limit, on my view, represents a different solution to the problem of intelligibility from any in any other dialogue, though I appreciate that that is controversial.<sup>20</sup> But what is clear, on any view, is that understanding, in a variety of subject-areas, including health and even meteorology, is secured, in that dialogue, through what is there called the dialectical method (17 a 4). This establishes in any original unity, how it is one and many and a definite number, before it “lets it go out to the indefinite” (16 d–e) – that last being a reminder that there are, of course, limits to the comprehensibility of any subject-matter, limits to the limit. Yet as I pointed out, at 59 a, there is that brusque dismissal of the work of those who busy themselves with cosmology.<sup>21</sup>

One can detect an element of rhetorical exaggeration in some of the texts I have cited. At *Philebus* 59 a, in particular, he certainly wants to score critical points against the way the inquiry concerning nature had generally been pursued in the past. Yet to say rhetorical exaggeration is just to say that Plato *does nothing to rule out* the most extreme reading of the position he states. If we patiently piece together what else Plato says about perception, about astronomy, about cosmology, we can see that he is nothing like as negative as some of his more extreme statements might be taken to imply, and indeed *have* been taken to do so. Perception is not useless:

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<sup>19</sup> R. Bolton, “Plato’s distinction between Being and Becoming”, *Review of Metaphysics* 29 (1975–1976) 84 ff. argued that the statement that things which come to be “do not possess permanence in any respect whatever” does not require that none of the entities in question can keep any characteristic over any time.

<sup>20</sup> See G. E. R. Lloyd, *The Revolutions of Wisdom* (Berkeley 1987) 138 n. 126; *idem*, *Methods and Problems* (n. 17) 335–337.

<sup>21</sup> Whether in this passage Plato commits himself to transcendent Forms was discussed by Shiner (R. A. Shiner, “Must *Philebus* 59 a–c Refer to Transcendent Forms?”, *Journal of the History of Philosophy* 17 [1979] 71–77); cf. D. Frede, *The Philebus of Plato* (Indianapolis 1993).

indeed sight is often praised, in the *Timaeus*, for instance, 47 a–b as a stimulus to philosophy, when we contemplate day and night and the periods of months and years.<sup>22</sup> It *need* not positively confuse the soul. The revolutions of the Same and the Other are the works of reason (*Timaeus* 35 a ff.) and so far from there being no stable knowledge attainable in the realm of the study of nature, Timaeus is confident that there is an unchanging intelligible Form of fire. It is just that in such texts as I have cited from the *Phaedo*, *Republic* and *Philebus*, such positive points as these are not allowed to obtrude.

I noted at the outset the ascription to Plato of an extreme version of a two-world view in which each of a series of dichotomies is treated as equivalent to the others, Forms : particulars, one : many, intelligible : perceptible, being : becoming. How far, I may now ask briefly in conclusion, does Plato lend himself to such an interpretation, the collapsing συστοιχία view as I called it? Is he not committed to such by such passages as *Phaedo* 80 b, where a contrast is drawn between, on the one hand, the divine, immortal, intelligible, unique, indissoluble, and ever unchanging, and, on the other, the human, mortal, manifold, non-intelligible, dissoluble and never unchanging, the former being that to which the soul is most like, the latter the body? Yet any tendency to collapse these oppositions into one another should, I believe, be resisted, if we reflect both on the consequences of doing so, and on what Plato himself tells us on the subject in other texts.

To begin with soul : body, each is said, in any case, only to be ‘most like’ the divine and the human respectively at *Phaedo* 80 b. The souls of humans, Socrates included, and not just their bodies, cannot fail to be in some sense human, in some sense particular, and there are well known difficulties in trying to equate souls with Forms.<sup>23</sup>

Then we are twice explicitly warned, in the *Parmenides*, 129 c, and at *Philebus* 14 c–d, that the one : many dichotomy is ambiguous. The same one may also be said to be many, and there need be nothing puzzling about that. You can treat a person, for instance, as both one, and many, in that he or she has different parts (front/back, right/left and so on) and may exhibit different, even opposite, qualities, being both big and small, for instance, in relation to different objects.

Again the complications that Plato may have eventually come to recognise with mathematical relations to items that are *both* intelligible and

<sup>22</sup> Cf. T. K. Johansen, *Plato's Natural Philosophy* (Cambridge 2004) ch. 8.

<sup>23</sup> Cf. also *Sophist* 248 e ff.

plural. Triangles would be an example, not the ones drawn on blackboards, but the intelligible ones we use in geometrical reasoning, not perceptible but also not unique.

Again there are famous texts that show that what is visible, and what becomes, also *is*. Already in the *Phaedo*, 79 a, he had spoken of the two kinds of things that are (ὄντα), the visible and the invisible, and later the *Philebus*, for instance, 26 d, allows γένεσις εἰς οὐσίαν.

If we take the first in each pair of opposites in that συστοιχία, the Forms are, in a special way, unities, they are intelligible, they constitute the highest kind of being, and they do not change (though even here, if the logical antonym of particulars is universals, there are obvious problems in equating Forms with universals). But the equation of the second items in each pair soon breaks down – and with it, maybe, the whole notion that we have distinct *worlds*.

This is not just a matter of the multiple ambiguities of plurality – where the *Philebus* pointed out that each one that you start with is *also* a many in the text I cited before, 16 d. There are further difficulties in identifying what becomes with what is perceptible, if we think first of the changes that the invisible elementary triangles of the *Timaeus* are said to undergo, and secondly of other domains besides the physical where becoming occurs without being perceived to become (we do not exactly *see* Socrates becoming good or just). And we have seen that ‘perceptibles’ themselves have to be cashed out in different ways in different contexts.

The moral for some talk of two worlds is clear. Plato has a massive task of persuasion on his hands in advocating the postulation of Forms. To secure their acceptance he tries now one, now another, in a set of contrasts. But not only are there potential ambiguities in each, their *combination* compounds the problem. So we had better be on our guard.

It is small wonder that the question of Plato’s attitude towards the natural world is so tricky to answer. If by natural phenomena we mean the changing particulars we encounter in everyday experience, the tokens, these are, for Plato, the objects of opinion, *as the particulars they are*. As for their types, Plato has a story about their becoming as the outcome of reason and necessity in the *Timaeus*. But in that story he makes clear where unchanging being is also involved, in the model the Craftsman uses. If this or that token visible fire is not a proper object of full understanding, fire, the intelligible Form, certainly is. The very terms in which he speaks of nature reflect this deep-seated ambivalence. He can write with stinging contempt of the investigation περὶ φύσεως, where he has conventional natural philosophy as his target (*Philebus* 59 a). Yet elsewhere, in the *Phaedo* even, 103 b 5, what exists ἐν

φύσει is contrasted with what exists ἐν ἡμῖν, where *nature* consists of the Forms themselves.

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Существует потенциальная двусмысленность в интерпретации платоновского различия между умопостигаемым и чувственно воспринимаемым применительно к двум сферам бытия. Можно противопоставлять (а) конкретную вещь (этот красивый предмет) и тип, к которому она принадлежит (красота) или же (б) два разных рода самих типов (например, краснота и треугольность). Выбор чреват далеко идущими последствиями. В первом варианте оговорки Платона относятся к познаваемости отдельных вещей, во втором — распространяются на чувственно воспринимаемые типы вещей. Аристотель ограничивается первым вариантом, приписывая Платону довод на основании омонимии — что чувственно воспринимаемые вещи именуется в соответствии с Идеями (например, эта красная вещь — в соответствии с Идеей красноты). Между тем в текстах самого Платона обнаруживается определенная амбивалентность, за которой, скорее всего, кроется не путаница, а риторическое преувеличение. Таковы, как кажется, известные пассажи из “Государства” (529 b–c) и “Филеба” (59 a–b), на основании которых многие читатели Платона сделали вывод о его безоговорочно негативном подходе к чувственно воспринимаемым явлениям. Лучшим свидетельством против такого вывода является, разумеется, “Тимей”, где постулирование умопостигаемой Идеи огня соединяется в платоновской космологии с рассмотрением форм, которые должны быть свойственны огню и другим простым телам.