

# Fragmentation By Contradiction

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## Contraries

Let us call “contraries” two sentences for which the following two inferences are valid (i.e. such that it is not possible that their premise is true and their conclusion false):

$$\frac{p}{\text{it is not true that } q} \qquad \frac{q}{\text{it is not true that } p}$$

Examples are:

(1)	$p$	it is not the case that $p$
(2)	$a$ is $F$	it is not the case that $a$ is $F$
(3)	the unique $F$ is $G$	the unique $F$ is not $G$
(4)	$a$ is coloured	$a$ is not extended
(5)	$a$ is 5 m long	$a$ is 10 m long
(6)	$a$ fancies $b$	$a$ is bored by $b$

The contrariety of our pairs of possible truthbearers may have different sources: how truth works (1), how the world is (2, 4), how it is described (3), the ‘structure’ of the properties involved (5), the psychology of the describers (6). Other cases are more controversial:

(7)	it is false that $p$	it is false that $\neg p$
(8)	it is not true that $p$	it is not true that $\neg p$
(9)	$a$ believes that $p$	$a$ believes that $\neg p$

If we accept (7) as contraries, we have something like the excluded middle:  $p$  and  $\neg p$  cannot both be false. Others may prefer (8) as the right formulation, accepting double negation elimination in the meta-language, claiming not just that  $p$  and  $\neg p$  are not both false, but also that one of them is true. (9) may be motivated in very different ways: attributions of contradictory beliefs may be held to be contraries because we have an instrumentalist metaphysics of beliefs (evidence for the attribution of the belief that  $p$  is *ipso facto* evidence against the attribution of the belief that  $\neg p$ ), or because there are no contradictory objects of belief or in some other way.

## Perspectival facts

Fine’s argument for non-standard tense realism is a special case of a more general argument against the existence of incompatible perspectival facts. The argument is that the following four are inconsistent with there being incompatible perspectival facts:

**Realism** There are perspectival facts.

**Neutrality** No standpoint is privileged.

**Absolutism** Reality is not relative to a perspective.

**Coherence** Reality is coherent.

They are inconsistent because, if the facts *a* and *b* are incompatible and perspectival,

- if they belong to reality (Realism) in the same way (Neutrality) and unqualifiedly (Absolutism), reality is incoherent;
- if they belong to reality (Realism) in the same way (Neutrality) and reality is coherent, reality is relative to a perspective (or rather perspectives?);
- if they belong to reality (Realism) unqualifiedly (Absolutism) and reality is coherent, the standpoint of one of them is privileged;
- if reality does not privilege a standpoint, is not relative and is coherent, then they do not belong to it (or do not belong to it both), in the sense that saying that *a* and that *b* obtain is not “in the business of stating how things really are” (Fine, 2006, 267).

If there are two perspectival facts *a* and *b* that differ in the way they are perspectival, this difference must be compatible with their joint existence without this compatibility being explainable in terms of anyone of the three following:

**Inegalitarianism** Some standpoints are privileged (in questions about what composes reality).

**Relativism** Reality is relative to a perspective.

**Fragmentalism** Reality is incoherent.

In the first place, perspectives are things you ‘adopt’ or ‘take up’, ways of representing / describing / evaluating things. Realism, I presume, is supposed to exclude this interpretation. What are the alternatives? Talk about ‘pointing to’ and ‘being oriented towards’ suggests one: that perspectival properties are extrinsic (but not therefore relational, or only ‘implicitly’ so). It is not clear to me, however, that we have a grip on the conditions that make differently extrinsic properties incompatible. Here are some examples of extrinsic, non-relational properties that may plausibly be said to be attributed against some background, and vary with it:

- a particular speck of colour may be ugly if evaluated in its immediate spatial surroundings, e.g. the paining of which it is part, but beautiful if evaluated as part of a bigger visual environment (e.g. the entire wall on which the painting hangs);
- a particular event (e.g. a sound) may be surprising in its immediate temporal surroundings, e.g. as part of a particular movement, but unsurprising as part of an entire musical work;
- a particular item may be cheap if compared to similar items sold in the same store, but expensive overall;
- Theatetus is a good cobbler, but neither good nor a good man;
- these are all the beer there are, but of course there are also others somewhere else;
- honey is bitter if eaten just after a lemon but sweet otherwise;
- the dress is blue and black; the dress is gold and white;

In these examples, it is the incompatibility that has to be argued for (e.g. by arguing for the ontological ‘monadicity’ of the properties involved). In other examples, it is their co-attribution that appears more doubtful:

- the soldiers are both 1 (regiment) and 100 (men);
- Medea both loves and hates her children;
- Superman has superpowers, Clark Kent has not;
- the sequence of picture frames is not moving, the represented car is;
- I see the appearance of the apple, but not the apple.

Even if this can be made to work, it is not immediately clear that (and if so, how) the three positions bear on the acceptability of incompatible perspectival facts, in the sense of either:

- (i) explaining how they may be incompatible;
- (i) explaining why they make reality perspectival;
- (i) explaining how they depend on, determine or are determined by perspectives or standpoints.

Inegalitarianism does best, especially if it does not have to explain (i), perhaps because it gives an absolute privilege to just one standpoint or perspective,. In this case, however, it does have problems

with (ii) and (iii). If the privilege of the present, for example, consists in its determining what there is, we do not have facts that are incompatible in virtue of having different A-properties, but we need further claims to make (ii) and (iii) plausible, e.g. that it is their being present that *makes* these (and not other) facts exist, that all facts are oriented towards one specific time (if “the present” in the presentists’ usage of this word does indeed stand for a time among others)

## A vs. B

A-theory: stating the facts will tell you what time it is.

My argument against fragmentalism: a-temporal truths are not true at any time (eg that I am sitting and I am standing); if they are not always true then they are surplus structure of the model (akin to Lewis’ necessities), but if they are always true, then they must be true at all times.

## Back to the temporary intrinsics

In contemporary metaphysics, the problem of change is usually presented in the form of the so-called “problem of temporary intrinsics”. We may present it as a supposedly inconsistent quatuor:

1. If there is change, it is in respect to one and the same thing.
2. If there is change, it is in respect to one and the same property.
3. There is
4. Nothing both has and lacks the same property.

Denying each one of the premisses has been said to come at a considerable price: denying (1) violates what some call “the proper subject condition”, denying (2) seems to make all change extrinsic, denying (3) implies commitment to a certain kind of Parmenideanism, while denying (4) violates the principle of non-contradiction.<sup>1</sup>

In this section, I discuss, and reject, the first two options, whereas the next section is devoted to the more plausible, but still ultimately unsatisfactory third option. The rest of the paper then defends the fourth.

So-called ‘perdurantists’ deny (1), holding that when I stand up and change from being bent at  $t_1$  to being straight at  $t_2$ , there are temporal parts of me, at  $t_1$  and at  $t_2$  respectively, that are bent and straight. I count as undergoing the change either by being identical with (some) sum of such temporal parts (so-called ‘worm view’) or by being identical with one of my parts and somehow related to the other (so-called ‘stage view’). Many have objected to the existence of temporal parts, or balked at the reduction of alteration to coming-into-existence and ceasing-to-be. Another and in my view stronger objection to this ‘solution’ of the problem is that it is not an account of *change*:

“...different entities differing in their properties do not amount to change even when, as here, one is later than the other and both are parts of something else ...” (Mellor, 1981, 111)

“The perdurer has properties which are significantly correlated with [the property of being bent and the property of being straight], e.g. the property of having a part which is bent (and one which is straight), but these properties involve a relation between the perdurer and one of its momentary parts. Even if one were to hold that a perdurer’s relations to its distinct parts are intrinsic (which is not obviously correct), at any rate such properties of the perdurer are not temporary. So what persists is not what has the relevant temporary intrinsic.” (Haslanger, 1989, 120)

“The perdurance theorist may seek to account for our intuition in terms of the candle’s having parts which have the shapes, but alteration requires the candle to have the shapes not derivatively but directly. If the candle never has the shapes itself, it cannot change *its* shape.” (Hinchliff, 1996, 120)

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1. Wasserman (2006, 49) calls (1) the “sameness” and (2) the “difference condition”.

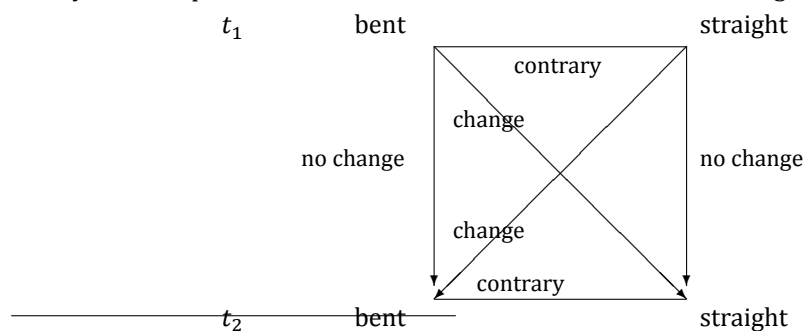
The main worry, in my view, expressed here is not just that (1) is violated,<sup>2</sup> but the one expressed by McTaggart (1927, sct. 33): having different parts with different properties does not generally suffice for change.<sup>3</sup> The problem is a very general one for perdurantism: not only is it unclear if perdurantists explain change (and if they do, in what sense), but the same unclarity surrounds their purported explanation of persistence itself. To persist, according to the perdurantist, is a matter of either having or successively being identical to a temporal series of temporal parts, instantaneous or short-lived (and qualitatively unchanging) entities. Why should the having of parts or successive identities add up to persistence? We will come back to this problem below.

Endurantists typically deny (2). Endurantist ‘relationalists’, as I will call them, say that the property I lose and the property I gain are not quite the same – the first is somehow ‘indexed’ to  $t_1$ , the second to  $t_2$ , and this in a way such that their exemplification by the very same thing is compatible with (4). The most common objection, it seems to me, against this ‘solution’ is that indexing the properties in the way required is incompatible with their intrinsicness which is supposed to be important for the problem to arise in the first place (hence its name). Another and in my view stronger objection is that it is not an account of *change*. How are we to understand properties like *being bent at t*? There seem to be three possibilities:

- (i) *being bent at t* is a relation between an object and a time;
- (ii) *being bent at t* is a relational property of an object, derived from a relation of that thing to a time;
- (iii) *being bent at t* is a monadic property of objects.

For both (i) and (ii), we need to know what times are supposed to be. In particular, we need to know why *times* (and not, e.g., perceptual points of view) are the kind of things  $x$  and  $y$  such that having one relation  $R$  to  $x$  and lacking the same relation to  $y$  constitutes change (whereas, e.g., being visible from here but not from there does not).<sup>4</sup> In the absence of such an explanation we have no reason to consider the relational difference as a case of change. The problem with (iii), apart from its air of mystery, is that it does away with contrary properties altogether: we just have two properties, had by the same object, and no justification for taking this multiplicity of properties to be a case of change.

Both the relationalist and the perdurantist ‘solutions’ share a common problem, which I take to be the most serious: they overgeneralise, predicting change even for cases where there is none. Every theory has to explain the differences and similarities in the following diagram:



2. Sider normally (cf. e.g. 2000, 86) subsumes the ‘no change’ objection under the Humphrey objection that there is no change in  $a$  if it is not  $a$  that both has and lacks the relevant property, to which he replies that, even so, “ $a$  is now  $F$  and will not be  $F$ ” is true.

3. Sider (1996, 447) conceded that his view does not provide an analysis of change, but claimed that this defect was outweighed by other attractive features. He only later became dogmatic: “Change does occur in virtue of unchanging facts about temporal parts. There are no good arguments to the contrary.” (2001, 214). Heller (1992, 704) agrees that there is a problem, but thinks it also turns on perdurantists making the analogy between space and time too close.

4. More precisely, the worry concerns not primarily the at-relation, nor its times-relata, but their interaction: bearing the same relation to different times does not always make for change; nor does bearing different relations to the same time; so why should bearing different relations to different times amount to change?

The perdurantist ‘solution’ predicts that there is change along the diagonal because it postulates two different entities, *a* and *b* existing at  $t_1$  but not  $t_2$  and at  $t_2$  but not  $t_1$  respectively and takes these entities to differ *simpliciter*, i.e. to exemplify (a-temporarily) contrary intrinsic properties. But they do so anyway, whether there is change or not! For *a* exists at  $t_1$  but not at  $t_2$  and *b* exists at  $t_2$  but not at  $t_1$ . It difference in properties which are intrinsic and a-temporarily exemplified will make for change whether or not there is any variation in other properties as well. So the perdurantist, predicting change along the diagonal, will also predict change along the vertical sides.

The perdurantists may, of course, not take properties such as “exists at  $t_1$ ”, even if a-temporally exemplified, to be intrinsic and be a perdurantist only with respect to qualitative, but not existential change.<sup>5</sup> This would, however, make their position devoid of interest: it was thought to be the *point* of perdurantism to ‘reduce’ qualitative to existential change, or at least to explain the former by the latter.

Relationalists, including relationalists only for existential change, also lack a complete explanation of the diagram. This is most obvious for strategy (iii), postulating four different monadic properties at the edges of the square. This position quite obviously lacks any resources to explain why the diagonal movement constitutes change while the vertical does not. The problem for strategies (i) and (ii) is the following: they want to explain the coherence of change (along the diagonal) by construing the temporal properties as different relations (or relational properties) the object has to (or with respect to) different times. But if the relations are different, then why can the object not have these different relations to the same time? The contrariness of *being bent-at- $t_1$*  and *being straight-at- $t_1$*  has to be accepted as a brute fact. If it is not the difference in the relations, but rather the difference in the relata that makes the relational properties different, then why is there no change if the object passes from *being bent-at- $t_1$*  to *being bent-at- $t_2$* ? The properties are different, but the constancy of the object has to be accepted as a brute fact.

## Variants of Parmenideanism

Another solution is to deny (3): there is no change, neither of the qualitative nor of the existential sort – everything always has been, is and always will be the same. There are serious doubts about the coherence of such a Parmenidean view. Let me just sketch three. First of all, it is not clear how it can be an account of *temporal* ontology at all. The thing that is always the same (“everything”), let us call it the world, even if perhaps eternal, is certainly a temporal entity, i.e. persists and ages. Even if time does not analytically presuppose change, it is very difficult to see how persistence in time could fail to give rise to change. Some thing’s *a* persisting from  $t_1$  to  $t_2$  seems to entail, analytically in virtue of “persists”, that, at  $t_1$ , *a will persist to  $t_2$* , but is not such that it (already) *has persisted from  $t_1$* , a property it nevertheless has at  $t_2$ , when it lacks the property of (yet) *going to be to persist to  $t_2$* . Parmenideans could of course deny that anything persists, taking an even more radical step away from common sense.<sup>6</sup>

The second problem for the Parmenidean is to account for our impression of change: in virtue of what relation(s) does unchanging reality give rise to changing appearance? How is the impression of change generated in unchanging observers of an unchanging world? Like other error theorists, they could attribute such systematic mismatch to our nature, practical concerns or the convenience of some ‘fiction of temporality’. Some such argument, however, is needed and it is not clear what its shape could be.<sup>7</sup>

5. Only part of the worry expounded above can, perhaps, be somewhat alleviated by taking the temporal parts in question not to be instantaneous: as long as *a* does not change, between  $t_1$  and  $t_2$ , in any of its intrinsic properties, “*a-at- $t_1$* ” and “*a-at- $t_2$* ” may be taken to be coreferential. But it remains the case that such a theory, whenever there is change with respect to *G*, will also falsely predict change with respect *F*.

6. Another way out for Parmenideans could be a construal of temporal passage in terms of (unchanging) qualitative features of *pastness*, *presentness* and *futurity*. McTaggart’s paradox makes me doubt this can succeed.

7. A popular option is to make a distinction between macroscopic, mereologically complex entities and atoms, and claim that while the latter persist, but do not change, the former change, but do not persist: their identity over time is mere ‘geniden-

The last, and perhaps most difficult, problem for the Parmenidean is to account for the changes in the appearances themselves: not only is our view of the world as of a changing one, but it is so in virtue of being itself a changing one. One, perhaps paradigmatic, way for me to register a change in some spatio-temporal region I'm in cognitive contact with is to first represent it veridically one way and then to represent it veridically another way. Parmenideans have to claim not only that our mistaken belief in the temporality of the world may be explained, but furthermore must explain it in terms that do not themselves presuppose change. A formidable difficulty indeed.

## Finean non-standard realism

Kit Fine, in his monumental paper "Tense and Reality", motivates his own account of temporal ontology by his version of yet another famous puzzle, McTaggart's argument against the reality of time, which for our purposes we may state as follows, using Fine's primitive operator  $\mathcal{R}$ , "it is the case in reality that":

**Realism**  $\mathcal{R}(\text{I am sitting})$ .

**Neutrality**  $\mathcal{R}(\text{I am standing})$ .

**Absolutism**  $\mathcal{R}(\text{I am sitting}) \rightarrow \mathcal{R}\mathcal{R}(\text{I am sitting}) \wedge \mathcal{R}(\text{I am standing}) \rightarrow \mathcal{R}\mathcal{R}(\text{I am standing})$ .

**Coherence**  $\neg\mathcal{R}(\text{I am sitting} \wedge \text{I am standing})$ .

We derive an inconsistency by the additional two principles:

**Factivity**  $\forall p(\mathcal{R}(p) \rightarrow p)$

**Aggregation**  $\forall p, y(\mathcal{R}\mathcal{R}(p) \wedge \mathcal{R}\mathcal{R}(q) \rightarrow \mathcal{R}\mathcal{R}(p \wedge q))$

A crucial question concerns how to spell out the notion of 'incoherent facts'. For Fine (2005, 272, 2006, 400), two facts are incoherent if they have incompatible 'contents'. It has been justly remarked by ? that Fine's notion is non-standard insofar as he denies that fragmentalism – the denial of coherence – implies that there are true contradictions (2005, 282, 2006, 402). Fragmentalism holds that while the constitution of reality is standpoint-independent (Absolutism), reality is not "of a piece" (2005, 262, 2006, 413), but is fragmented into mutually incoherent classes of mutually coherent facts we may identify with times (2005, 281).

Realism, coupled with Neutrality, says that reality is constituted by both the fact that I am standing and the fact that I am sitting. Absolutism says that these constitution facts are themselves absolute, i.e. not standpoint relative and thus really the case. By aggregation, we can conjoin absolute constitution facts, and by Factivity we derive the denial of Coherence from the conjunction of our two tensed facts.

It is a point in favour of Finean fragmentalism, perhaps the best variant of Parmenideanism, that it addresses the third problem for Parmenideanism head-on. Fragmentalists think that temporal reality is disunified, i.e. that there are space-time regions or events that bear no temporal relations to one another.

It thus seems attractive to explore ways in which (3) can be read so as not to produce an inconsistency with (1), (2) and (4).

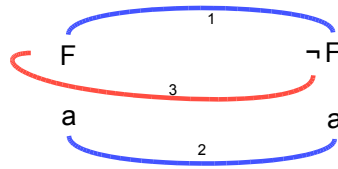
## The problem of change

Change is problematic because it both seems real and impossible. It seems real because if there were no change, you could not convince anyone that there is no change, so we would all already believe it, which we don't. It seems impossible because to say that there is change is to say that some thing has a property [...<sub>1</sub>] and also lacks it [...<sub>2</sub>], which is a contradiction, hence not possibly true (and to understand why inserting "at one moment" for "...<sub>1</sub>" and "at another moment" for "...<sub>2</sub>" should do away with the contradiction just is the problem of change).

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tity'. The identity in question is a weaker relation, of genidentity This view has recently been rediscovered by Jacek Brokovic.  
NOT THE RIGHT SPELLING fn

The ordinary concept of change seems to be internally inconsistent, or, at least, pulls us in different directions: for change, we need both constancy, of both objects and properties (blue lines), and variation, of being had and being lacked of the very same property by the very same thing (red line):



The problem of change is that the same pattern of sameness and difference is exhibited by the scenarios ruled out by the principle of non-contradiction, i.e. something's both having and not having the very same property.

### Aristotelian Change and Object Constancy

Whenever there is qualitative change, such as the acquisition, by Socrates, of musicality, there is also substantial change: for something (Socrates, the man, the ignorant of music) comes to be a thing that was not there before (musical man). In any change, there is something composite (*suntheton*) that comes to be:

ὥστε δῆλον ἐκ τῶν εἰρημένων ὅτι τὸ γιγνόμενον ἅπαν ἀεὶ συνθετὸν ἐστὶ, καὶ ἔστι μὲν τι γιγνόμενον, ἔστι δὲ τι ὃ τοῦτο γίγνεται, καὶ τοῦτο διττὸν· ἢ γὰρ τὸ ὑποκείμενον ἢ τὸ ἀντικείμενον. (190b10-13)

Thus, from what has been said, whatever comes to be is always complex. There is, on the one hand, something which comes to be, and again something which becomes that – the latter in two senses, either the subject or the opposite. (Aristotle, 2014, 721)

From what has been said, then, it is clear that that which comes to be is always composite, and there is one thing which comes to be, and another which comes to be this, and the latter is twofold: either the underlying thing, or the thing which is opposed. (Aristotle, 1992, 17)

What comes to be is *anthropos musikos*, what comes to be and underlies is *man* (the man comes to be musical) and what comes to be and is opposed is *amusical* (the ignorance of music comes to be a case of knowledge of music).

This analysis, according to Aristotle, applies to all change: everything that comes to be is composite and composed of and coming out of the underlying thing (*hupokeimenon*) and the form (*morphē*), in the way *musical man* is composed of *man* and *knowing music* and its analysis (*dialysis*) is complex, in terms of these two.

In line with his endoxic method, Aristotle proceeds to perform what Hegelians like to call the three-fold 'Aufhebung' of the thesis-antithesis structure by the synthesis: its annihilation, its preservation and its lifting to a 'next level'. Concretely, this requires showing (i) that they were wrong, (ii) why they were wrong and (iii) what they got right (what they 'dimly saw' but did not manage to correctly articulate).

The Parmenideans criticised in I.8 were wrong in thinking that there is no change and they thought this because they reasoned from a false dilemma: if something *y* comes to be, it comes to be out of something, *x*. Now either it is the case that *x* is or it is the case that *x* is not. If *x* is, then *y* *already* is and does not come to be. If *x* is not, then *y* cannot come to be out of it, because *ex nihilo nihil fit*.

Aristotle denies both horns of the dilemma, using his distinction between (i) coming-out-of (true of the simple things) and (ii) coming-to-be-something (true of the compound thing):

- The form, *musical*, comes-out-of something which is not: it comes out of the lack (*steresis*) of musicality, which is something which is not (i.e. is the absence of musicality), but it does not come out of it *as something which is*, but *as something which is not*.
- The matter, *man*, comes to be something which is, namely *musical man*



How should we understand the claim [(i)] that the form comes out of its lack-as-something-which-is-not (*hoti to ē mē on*)? Aristotle also uses two other expressions to talk about this: (ii) that things “come to be in a certain way out of what is not, sc. by virtue of concurrence” (*kata sumbebekos*) and (iii) that the lack is not a constituent (*enuparchontos*) of the thing that comes to be. I understand him as saying that the lack of musicality before the change, while it is a qualification of Socrates and the *terminus a quo* of the change of his becoming musical, is not an essential property of him and is to be understood not as his *having* the lack of musicality but rather as his *lacking* musicality: the lack is logically posterior to the form, even though it is temporally prior.

In I.9, Aristotle criticises the Platonists for not distinguishing between matter and form and between actuality and possibility. The starting-point of the change, *unmusical man*, according to Aristotle, is “one in number” (*arithmo*, but “two in possibility” (*dunamei*). *Unmusical* and *man* are one and the same thing, i.e. Socrates, but while *man* essentially characterises him and underlies the change, *unmusical* – the lack of musicality – is a potentiality for the opposite, musicality. The man has the lack only *kata sumbebekos*, by accident, for he has the potentiality to become musical. *Musical man* comes to be out of these two, but in different ways: it comes out of the lack of musicality, which is destroyed by the change. It also comes out of the matter in the sense that it *happens to* the matter (or perhaps rather: *happens in* the matter) that has the potentiality for it.

We have seen that Aristotle analyses the change of Socrates acquiring a musical ability (by, e.g., learning how to play the flute) as a process that is describable as all of the following:

- (i) from *anthropon* to *musikon*;
- (ii) from *mē musikon* to *musikon*; and
- (iii) from *mē musikon anthropon* to *musikon anthropon*

He says that *mē musikon* and *musikon* are opposites and that they are the forms of the thing that comes to be, *musikon anthropon*. We have translated “*musikon*” as all of: “musical”, “musician”, “having musical knowledge” and “musicality” – these four correspond to four different views on the ontology of forms, *none* of which seems to be Aristotle’s:

“**musical**” – the bare adjective – is perhaps the best, but it misleadingly suggests that forms are qualitative features in-abstracto, especially when used, as “*musikon*” is in Greek, with the definitive article: “*ton musikon*” then becomes “the musical”, which is too close to “musicality” to be acceptable.

“**musician**” is better insofar as it may be used to designate, as expressions for forms can in Aristotle’s Greek, the man over there who possess musical abilities, Socrates. It also matches with “man”, avoiding the very misleading connotation that in change (i) Socrates changes into a quality. The problem is that it is not generally available: there is no expression in English that stands to “white” or “pale” (i.e. not sunburnt, one of Aristotle’s favourite examples) in the way “musician” stands to “musical”.

“**having musical knowledge**” or, more generally, expressings of the form “being *F*”, “having the property of being *F*” are generally available, but they are not things that can be destroyed and can come into being in the way Aristotelian forms can.

“**musicality**” has the advantage that it allows for two readings, as universal and as trope as we would say nowadays, and that it may cease to be and come into being when read in the latter way (as it is in “Socrates’ musicality”); but it has the important disadvantage that we must settle on one reading and thereby prejudge the difficult question how to interpret *Metaphysics Z*, where Aristotle discusses the question in what ways forms are not only universal but also particular, a question he does not take to be decided by their verbal expressions alone.

An additional problem is the following: it has been widely discussed, especially in the medieval commentary tradition, whether Aristotelian forms are individuating, whether the form of Socrates is ‘specific’ enough to individuate him, i.e. whether it is such that no other thing does, or even could, share with Socrates its form. All of the proposed translations decide this question, the first three and the first version of the fourth positively, the second, trope, version of the fourth negatively. The ques-



tion, however, should be left open: it is questionable whether it can be answered by what Aristotle says about forms at all, but it should certainly not already be answered by his official introduction of the term.

An adequate interpretation of Aristotelian forms will have to make sense of the following claims he makes about them (Charlton, 1992, 70–73):

- The most important of these claims, even though the details are difficult and extremely controversial, is made in *Metaphysics* 1028b36-1029a9: “forms are the entities with the best claim to be called realities” (Charlton, 1994, 70).
- At *Met.* H, 2043b5-6, Aristotle says that compositions (or arrangements, which he elsewhere calls forms) are not constituents of syllables and houses, even though he also says that houses and syllables *are* arrangements or compositions (*Phys.* I, 188b20-21).
- At *Phys.* I.7 191a8-12, Aristotle says that the relation between the *hupokeimenon* and the *ousia* is like the relation of (i) bronze to statue, (ii) wood to bed, (iii) the formless to “anything which has a form”, thereby at least suggesting that STATUE and BED are forms *and* realities.
- At *Phys.* II.3 195a16-21, Aristotle says that the while (i) letters, (ii) matter, (iii) fire and the like, (iv) the parts of the whole and (v) the hypotheses are the material causes, the corresponding formal causes (“that out of which”) – that are also final causes (“causes as what he being would be”) are (i’) syllables, (ii’) artefacts, (iii’) bodies, (iv’) wholes and (v’) the conclusion, thereby suggesting that the primed things are forms.
- At *Met.* Theta 1048a36-b6, Aristotle introduces the distinction actuality vs. potentiality by analogy to actually building vs. capable of building, awake vs. asleep, seeing vs. having the power of sight, that which is differentiated out of matter vs. matter, the finished article vs. the raw material. At *Met.* H 1045b17-19, he says: “The last matter and the form are one and the same thing, the one in possibility and the other in actuality.” Together, these again strongly suggest that BUILDING, AWAKE, SEEING etc. are forms.
- At *Met.* A 1069b36-1070a2, Aristotle says that that to which something changes is the form and at 1032a13-19 that “which comes to be is a man or plant or the like”.
- At *De Gen. et Corr.* I 321b19-34, Aristotle says that when a living thing grows, it is the form, not the matter, which gets larger.

For the time being, I will refer to Aristotelian forms with small caps: “MUSICAL” / “MUSIKOS” / “to MUSIKOS” are thus supposed to stand for the simple thing that comes into being out of its opposite in a change of the above kind, i.e. the Aristotelian form, whatever it is. Introducing ‘form-quotation’ in this way, I hope, allows us, at least temporarily, to reconcile two interpretative desiderata: (i) to make Aristotle’s sentences grammatical (as they are, I am told, in Greek),<sup>8</sup> and, at the same time, (ii) not to prejudge the exegetical and systematic questions outlined above.

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8. This, I surmise, is the main motivation of translators to introduce ordinary mention-quotes, though it is clear (and important!) that Aristotle is not talking about words or their meaning when he is discussing forms.

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