How coincidence bears on persistence.[1]

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The 'paradoxes of coincidence' are generally taken as an important factor for deciding between rival views on persistence through time. In particular, the ability to deal with apparent cases of temporary coincidence is usually regarded as a good reason for favouring perdurantism (or 'four-dimensionalism') over endurantism (or 'three-dimensionalism'). However, the recent work of C. Gilmore (2007) and M. McGrath (2007) challenges this standard view. For different reasons, both Gilmore and McGrath conclude that perdurantism does not really obtain support from the puzzles of temporary coincidence. In this paper, I will evaluate their arguments and defend the opposite view: that the paradoxes of coincidence do give some support to perdurantism. However, the way in which they do so is rather unexpected. As we will see, there are different ways in which coincidence scenarios may be thought to support perdurantism, some of which have not been yet sufficiently explored. Thus, my immediate goal is to explore one of those directions, bringing into focus a new

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argument from coincidence to perdurantism. And although I motivate my discussion by examining the arguments in the work of Gilmore and McGrath, the merits of this argument can be independently assessed. More generally, my overall purpose is to contribute to our general understanding of how the topics of coincidence and persistence bear on each other.

I will proceed as follows: in section 1, I briefly describe one of the puzzles and the typical way in which perdurantists react to it. In section 2, I inspect more closely the debate on persistence, identifying two different issues that are at stake between endurantism and perdurantism. Next, I discuss Gilmore's argument, pointing out a dialectical move whereby perdurantists can resist it. This will take us to McGrath, whose central argument blocks that dialectical move. Finally, in section 3, I argue that even granting Gilmore and McGrath their criticisms of the perdurantist argument they consider, there is a second, independent coincidence-based consideration favouring perdurantism that they do not address. I spell out this consideration in some detail and conclude that cases of temporary coincidence still provide good reasons for preferring perdurantism over endurantism.

1. Gilmore: 'old' and 'new' puzzles of coincidence.

Ordinary objects persist through time – i.e., they exist at different times. Endurantism and perdurantism are usually presented as alternative views about

how exactly this happens, i.e. as answers to the question of *how objects persist.* For instance, Gilmore characterizes perdurantism as the view that material objects persist by 'being temporally extended and having different *temporal parts* located at different times', and endurantism as the view that objects persist 'by being *wholly present* at each moment of their careers'.[2] This is a very common way of characterizing the endurantism-perdurantism debate, which I will provisionally adopt in this section.

It is also a common view that the debate between perdurantism and endurantism is in part to be decided by considering how well the views deal with the 'puzzles of coincidence'. Following Gilmore, let us say that a coincidence puzzle is an 'apparent counterexample to following, widely accepted *anti-coincidence principle:*

> [AC] It is impossible for numerically distinct material objects to coincide – i.e., to be […] wholly present in exactly the same location […]'. (p. 177-8)

By 'being wholly present' Gilmore means a relation of location partially elucidated by the following principle: necessarily, if object *O* is wholly present at spacetime region *R*, then *O* has, at *R*, the same shape and size as *R*, and *O* stands, at *R*, in the same spatiotemporal relations to things as does *R*.[3] Given this set-up, solving a

[2] Gilmore (2007), p. 177. In what follows, all page references correspond to this article, unless otherwise stated.

[3] The proper understanding of the locution 'being wholly present at *R*' has been the object of much recent discussion, especially in the context of the proper characterization of endurantism. But Gilmore uses the locution in a relatively unproblematic way, as equivalent to 'being exactly located at *R*' or 'being an exact occupant of *R*' – all of them understood as

coincidence puzzle consists in showing that the case in question does not constitute a genuine counterexample to the principle (AC).

I will argue later that we should revise this understanding of the debate on persistence, and also the idea that the puzzles of coincidence arise from an apparent conflict with the anti-coincidence principle (AC). But let us provisionally follow Gilmore in thinking of the puzzles in this way. Gilmore points out, as is also commonly assumed, that the 'old puzzles' of coincidence may be grouped in two sorts: (A) those apparently involving objects that coincide during only part of their careers (i.e., cases of *temporary* coincidence); (B) those apparently involving objects that coincide throughout their careers (i.e., cases of *permanent* coincidence). It is puzzles of type A that are generally thought to be relevant for the choice between endurantism and perdurantism. Puzzles of type B are regarded as equally problematic for endurantists and perdurantists and hence as irrelevant for deciding between the two views. Puzzles of type A, on the other hand, are generally regarded as especially problematic for endurantism and not for perdurantism, which constitutes a reason for preferring the latter. In Gilmore's terms, 'puzzles of the first type (involving temporary spatial co-location) can be solved simply by abandoning endurantism in favour of perdurantism' (p. 178). To see why this is so, let us briefly recall a puzzle case of type A:

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indicated in the text. I will follow Gilmore in using these three locutions interchangeably. I will also follow his use of the term 'coincidence' as defined by (AC). It should be noticed that Gilmore's unabridged statement of (AC) also requires that entities be composed of the same matter at *t* in order to count as coincident at *t*. I omit this second requirement, which as Gilmore himself notes, is irrelevant to his arguments, and also to mine.

A case of type A: the statue and the clay.

At time t_1, an artist buys a piece of clay and moulds it into a statue, which is finished at t_2. The statue did not exist at t_1 (it was *created* later), and the piece of clay exists at t_2 (it was not *destroyed* by the creation of the statue). It follows by Leibniz's Law that the statue and the clay are distinct objects. But then we seem to have two coincident objects at t_2.

In order to see how this puzzle can be solved 'simply by abandoning endurantism in favour of perdurantism', consider first what endurantists say about the case: the statue and the clay are three-dimensional objects, each of them wholly present at many different spatiotemporal regions. But the spatial region they occupy at t_2 is exactly the same. They are thus wholly present at exactly the same spatiotemporal region, thereby falsifying the anti-coincidence principle. Things appear differently to perdurantists: if perdurantism is true, the statue and the clay are four-dimensional objects, each of them wholly present only at the four-dimensional region corresponding to its career. There is no single region at which both are wholly present and therefore they do not coincide in the sense precluded by the anti-coincidence principle. This is why, as Gilmore puts it, the adoption of perdurantism over endurantism is by itself a solution to puzzles of type A. Since this argument for perdurantism is based on the principle (AC), I will refer to it as the 'AC-argument for perdurantism'.

Gilmore's main purpose in the paper I am discussing is to balance the score by

presenting a set of 'new puzzles' – a third type of coincidence puzzle that does just the opposite of what the 'old' puzzles of type A do. In the same way as puzzles of type A constitute a reason for preferring perdurantism over endurantism, Gilmore's new cases are supposed to provide a reason for preferring endurantism over perdurantism. I will describe one of his new puzzles in a moment. Before that, I would like mention a cause of concern about the AC-argument for perdurantism that I have just presented following Gilmore. I do not regard this cause of concern as a full-fledged objection to Gilmore's general argument, but as an indicator that something is not right with it.

The observation is this: in Gilmore's AC-argument no role at all is played by the notion of *temporal part*. This is surprising. One might have thought that the fundamental disagreement between endurantists and perdurantists was precisely on whether objects have proper temporal parts, and therefore that an argument for perdurantism would have to consist precisely in showing that temporal parts are needed for some reason or other. Not so in Gilmore's presentation. In his AC-argument, the perdurantist's advantage comes from her view about what the *locations* of the statue and the clay really are – it is this view that allows her to maintain the principle (AC). This contrasts with the way in which self-described perdurantists think of the argument from coincidence. Consider what I take to be a typical *perdurantist speech* about our case of the statue and the clay:

> The statue and the clay are no more mysterious than two overlapping roads.

> Just as overlapping roads may occupy the same region in virtue of sharing a segment, the statue and the clay can occupy the same place at t_2 in virtue of sharing their t_2-temporal part. It is because they share this temporal part that they do not crowd each other out.

In this speech, no advantage is claimed from the fact that there is a sense (the one relevant for the anti-coincidence principle) in which the statue and clay do not coincide. Instead, the notion of *temporal part* plays a crucial role. This strongly suggests that the AC-argument fails to capture something important about how perdurantists think that cases of coincidence support their view. This is most clear if we focus on the metaphor of *overcrowding* that perdurantists typically use. Here it is clearly the existence of a shared temporal part that is thought to prevent the clay and the statue from 'crowding each other out'. That is to say, it is a shared temporal part that makes it possible for the two objects to fit together in the same region. Moreover, consider the following thought: if we are worried about how the statue and the clay can fit together in a single region, then it is of no help to be told that the region in question is only a proper sub-region of the one that the objects *really* occupy. (Analogously, if we are worried about how a 1 m^3 box can contain two solid objects of apparently 1 m^3 each, it is of no help to be told that one of the objects *really* measures 1.5 m^3 and that it is partially outside the box). But this is precisely what happens in Gilmore's AC-argument: the perdurantist solution to the 'old puzzles' consists merely in noting that the statue and the clay are in fact exactly located at different regions – one of which is a proper sub-region of the other. Thus,

as long as the metaphor of overcrowding – and the rest of the *perdurantist speech* – is representative of how perdurantists think that the puzzles of coincidence support their view, we should conclude that the AC-argument is leaving something out.

I will discuss how this observation affects Gilmore's overall argument in the next section. Before that let us briefly present one of Gilmore's 'new puzzles':

A case of type C: Tubman and Cell.

A cell (called 'Cell') is created at the beginning of year 2000 and continues to exist until the end of 2002. At that point, Cell travels backward in time until the time of its creation and again continues to exist until the end of 2002. This process is repeated numerous times, always in such a way that Cell never progresses beyond the end of 2002. Cell never leaves the vicinity of a bathtub and its trips in time are numerous enough and structured in such a way that at the end of its career, Cell composes something with the appearance of a conscious human being lying in the bathtub during the three years. Let us call it 'Tubman'. Cell and Tubman seem to be different objects: the former travels in time, the latter does not.

As we mentioned, puzzles of type C are intended to compensate for the effect that puzzles of type A have in the endurance–perdurance debate. Gilmore argues that if perdurantism is true, Cell and Tubman exactly occupy the same four-dimensional region and thus violate the anti-coincidence principle.[4] If endurantism is true, on the

[4] For discussion of this diagnosis, see Eagle (2010).

other hand, Cell and Tubman have different locations: Cell is located at many three-dimensional cell-shaped regions, and Tubman at many human-shaped regions. Thus, no single region is exactly occupied by both Cell and Tubman, and the anti-coincidence principle is therefore preserved. Gilmore concludes that puzzles of type C can be solved simply by shifting from perdurantism to endurantism. As a result, the perdurantist attempt to support her view on cases of coincidence is unsuccessful, since the endurantist can reply with a symmetric argument for her view. The puzzles of coincidence are thus irrelevant for making a choice between endurantism and perdurantism.

As suggested above, it is questionable whether Gilmore's construal of the argument from the 'old puzzles' (the AC-argument) really captures the perdurantist's insight about coincidence. As a result, it is also questionable that a symmetrical argument for endurance will affect the dialectic in the proposed way. I will discuss this issue in the next two sections. But since my main goal is to offer a more detailed picture of how the puzzles of coincidence relate to the endurance-perdurance debate, it will be helpful to start by clarifying what this debate involves.

2. A closer look at the debate on persistence.

I have been assuming that endurantism and perdurantism are competing answers to the question: *how do ordinary objects persist through time?* But so framed, the debate

conflates two arguably different issues, one about location and the other about temporal parts:

(i) What kind of regions are occupied by ordinary persisting objects?

(ii) Do ordinary persisting objects have proper temporal parts? [5]

Two important answers to (i) are what I will call *topological endurantism (TE)* and *topological perdurantism (TP)*. According to *TE*, ordinary persisting objects exactly occupy many different regions that are spatially but not temporally extended (these regions are thus 'three-dimensional'). According to *TP*, on the other hand, ordinary objects exactly occupy just one four-dimensional region – a region that is temporally as well as spatially extended. There are also two salient views regarding question (ii), which I call *mereological endurantism (ME)* and *mereological perdurantism (MP)*. According to *ME,* ordinary persisting objects have no proper temporal parts.[6] According to *MP*, on the other hand, an ordinary persisting object has a proper temporal part at each of the times included in its lifespan. Questions (i) and (ii) cross-cut each other, and their different answers can be combined in more than one way. In particular, it seems prima facie possible to combine *TP* with *ME*: on this view, persisting objects exactly occupy a temporally extended region *R* but lack proper

[5] The distinction between these two questions and the different views that emerge as answers to them are relatively familiar. With different terminological choices, the distinction is drawn by Gilmore (2006, 2008), McGrath (2007), and Parsons (2007), among others.

[6] Object *x* is a temporal part of *y* at *t* iff (i) *x* is part of *y*; (ii) *x* is located at, but only at, *t*; and (iii) *x* overlaps every part of *y* that is located at *t*. Cf. Sider (2001), p. 59.

temporal parts corresponding to the spatially maximal sub-regions of *R*.

Let us now re-consider the 'old puzzles' of coincidence. Gilmore's AC-argument for perdurantism is in fact an argument for *topological* perdurantism and against *topological* endurantism. As a result, the argument does not preclude the view that results from combining *TP* with *ME*. In the same way, the argument from the 'new puzzles' targets *TP*, not *MP*. The principle AC that generates Gilmore's puzzles (old and new) imposes constraints on what kind of *locations* objects can and cannot have, and tells us nothing on which *parts* they must or must not have. As we already noticed, this construal fails to take into account the thought, attested by the *perdurantist speech* considered above, that cases of temporary coincidence directly support existence of temporal parts. That is to say, the perdurantist speech speaks directly in favour of *mereological* perdurantism.

However, in order to evaluate Gilmore's general argument, let us focus on only one kind of opponent: those who hold *both TP* and *MP* (let's call this package of views 'classical perdurantism'). Focusing on classical perdurantism in this way is charitable to Gilmore (who actually describes his opponent as someone holding both *TE* and *MP*) and important in its own right (since most self-described perdurantists are indeed classical perdurantists). How good is Gilmore's argument from the 'new puzzles' against classical perdurantism? Our discussion so far suggests that there is a way out for the classical perdurantist: she may well avoid Gilmore's challenge by *denying* the anti-coincidence principle. This looks now as a live option for the

classical perdurantist because, as we have seen above, her 'perdurantist speech' does not really commit her to the anti-coincidence principle.

Let us reflect on this a bit further. Why should the classical perdurantist accept the anti-coincidence principle? One natural answer would be: because there are compelling reasons for believing it is true. (We will consider some such reasons in a moment). But surprisingly, this is not Gilmore's answer – indeed, he does not mention any reason why the anti-coincidence principle is so 'widely accepted'. His answer is, instead, that perdurantists are dialectically committed to the anti-coincidence principle: they cannot reject it because they use it in arguing from temporary coincidence for their view (and against endurantism). (p. 190). But do they? The anti-coincidence principle certainly plays a role in the AC-argument for perdurantism. But as we have already noticed, the AC-argument is not what one typically finds in perdurantist speech about cases of temporary coincidence. In particular, that speech does not appeal to the anti-coincidence principle and does not take pride in avoiding coincidence in the sense precluded by it. So as far as the *perdurantist speech* is concerned, there is nothing dialectically inappropriate in the classical perdurantist's denial of the anti-coincidence principle. The classical perdurantist may well be committed to it for independent reasons, but not in virtue of her *perdurantist speech* about cases of type A.

Thus, if Gilmore is to achieve his overall goal (i.e. to present a coincidence-based argument for endurantism and against perdurantism), we need positive reasons to

believe the anti-coincidence principle. These reasons can be found in what is often called the 'supervenience argument' or 'grounding argument' against coincident entities – a detailed version of which is powerfully advanced by McGrath (2007). Very roughly, and far from doing full justice to McGrath's careful defence, the argument is this. First, notice that if there were coincident entities (like the statue and the clay from our case A under the assumption of *TE*), they would be alike in many important respects: they would be composed of the same parts, they would have the same shape, the same spatiotemporal relations to other objects, etc. Now, McGrath argues for the truth of a *supervenience principle* according to which it is impossible for two objects to be alike in these 'basic' respects while differing in their historical and futural properties. If the arguments for this supervenience principle are sound, then it is impossible that the statue and the clay coincide at t_2 and, more generally, the anti-coincidence principle must be true.

Thus, the supervenience argument is a positive reason for ruling out coincident entities. If the perdurantist accepts it, as she must if the argument is sound, then she may advance the AC-argument against endurantism. But then she also faces the challenge from Gilmore's 'new puzzles'. Moreover, the supervenience argument is independently problematic for perdurantists and in a much more direct way, as McGrath rightly emphasizes. The supervenience principle rules out not only coinciding three-dimensional objects (thus generating trouble for topological endurantists), but also partially overlapping perduring objects. If the supervenience principle is true, it is of no help that the statue and the clay share a temporal part at

t_2. The two objects are nevertheless alike in the relevant basic respects at t_2 and therefore they must be also alike in their historical properties. That is to say, although the perduring statue and the perduring clay do not coincide in our sense (because they exactly occupy different regions), they are an apparent counterexample to the supervenience principle: they are alike in the relevant respects at t_2 while differing in how they were at t_1. As McGrath points out, insisting on the "familiar mantra 'partial overlap is not coincidence'" is of no help. Such insistence merely amounts to rejecting the supervenience principle as false, without offering any illuminating reason why it is false. (p. 164). Thus, McGrath's main conclusion is that the puzzles of coincidence are 'every bit as challenging' for both endurantists and perdurantists. (p. 143). So like Gilmore, McGrath rejects the widespread view that these puzzles provide some reason to prefer perdurantism over endurantism.

There are of course reasons for being sceptical about the supervenience argument.[7] In what follows, however, I will just grant that it is successful and therefore a good reason for believing Gilmore's anti-coincidence principle. I will also grant that, supplemented with the supervenience argument as a positive reason for holding the anti-coincidence principle, Gilmore's attempt to alter the endurance-perdurance score may well succeed. But what I will argue for instead is that there is a *different* argument from coincidence to perdurantism, one that does not depend at all on the anti-coincidence principle. Furthermore, this alternative argument is, unlike the AC-

[7] See for instance Sider (2007).

argument, completely aligned with the perdurantist speech in taking the existence of proper temporal parts (rather than absence of co-location) as the key feature of the perdurantist description of the cases.

3. The argument from 'the monist intuition'.

Let's grant McGrath and Gilmore most of what they argue for. Let's grant McGrath that the supervenience principle is true, and that this makes cases of temporary coincidence equally troubling for perdurantists and endurantists. And let's grant Gilmore that the perdurantist is committed to the anti-coincidence principle and therefore faces the challenge from type-C scenarios. What I want to argue in this section is that, having granted all this, the perdurantist is still in a better position than the endurantist when it comes to dealing with temporary coincidence. There is a different argument, not based on supervenience-based considerations, that goes from temporary coincidence to perdurantism.

The argument in question hinges on what I call 'the monist intuition' that many of us have about cases of type A. We have the feeling, when confronted with cases of temporary coincidence, that the Leibniz Law argument is somehow illegitimately multiplying the number of entities. The monist intuition tells us that at t_2 there is just one statue-shaped object before us – not two. This intuition directly concerns number and identity: it is an intuition about how many statue-shaped objects we are

confronted with. Of course, that we have this monist intuition is compatible with feeling the pull of the Leibniz Law argument for distinctness. Like other puzzles in philosophy, the puzzles of coincidence arise from conflicting intuitions: the monist intuition on the one hand, and the 'pluralist' intuition exploited by the Leibniz Law argument on the other.

Although I think it obvious that we have the monist intuition, let me insist on this point. One way of noting that we have this intuition (and how strong it is) is by considering the theory that most directly relies on it: the 'temporary identity' account of the puzzles. This theory is initially attractive because it allows us to say straightforwardly what our monist intuition dictates: that at t_2 there is only one statue-shaped object before us, and therefore that the statue *just is* the clay (one and the same object) even if at t_1 the statue and clay are different. And this is, I think, precisely what we are initially inclined to say about the case, even if we eventually refrain from saying it. That is to say, even if we are not in the end prepared to adopt the temporary identity view, it seems that, as Sider puts it, 'there is something very right' about this view.[8] What seems right, to me at least, is that it clearly preserves the monist intuition that at t_2, there is only one statue-shaped object before us – not two. If we didn't have this intuition, the temporary identity view would not be even initially attractive. But it is.

Now, what seems right about the temporary identity view is also captured by

[8] Sider (2001), p. 166.

classical perdurantism, in a way that does not require us to go all the way with the temporary identity theorist. And this is of course the point of the coincidence-based argument for perdurantism that I want to highlight in this section. According to the perdurantist, both the statue and the clay are present before us at t_2. So at t_2 we are confronted with at least two statue-shaped objects. But given the classical perdurantist picture, and in contrast to what happens if endurantism is true, we can also make sense of the monist intuition: there is an important sense in which it is true that there is *just one* statue-shaped object before us at t_2. This is the right thing to say if we restrict our attention to the things that are *exactly located a*t t_2 – that is, at the relevant t_2-, three-dimensional region. If classical perdurantism is true, there is just one statue-shaped thing that is exactly located at that region: the temporal part shared by the statue and clay. This is not so if endurantism (in any of its varieties considered above) is true. First, if *TE* is true, *both* the statue and the clay are exactly located at t_2. Second, if the package *ME+TP* is true instead, no object at all is exactly located at t_2. Both the statue and the clay are located at different four-dimensional regions. Notice that it is the postulation of a single shared temporal part that gives classical perdurantism an advantage over endurantism in capturing the monist intuition. And it is because of this ability to capture the monist intuition that classical perdurantism receives support from the puzzles of coincidence.

The argument that I have just presented on behalf of classical perdurantists is based on the observation that they, unlike endurantists, acknowledge the existence of a kind of things such that, if we restrict our attention to them, it is true that at t_2 there

is only one statue-shaped object before us. It should be noticed, though, that this is an unusual way of restricting our attention. Classical perdurantists typically think that ordinary speakers normally restrict their domains of quantification to *perduring* objects –things that are statues and lumps of clay, and not merely instantaneous temporal parts thereof.[9] So in the *usual* way of restricting our quantifiers, it is *not* true that at t_2 there is only one statue-shaped object before us. In order to render this claim true, the perdurantist is forced to offer a peculiar, non-standard interpretation of it. Moreover, the *unusual* restriction to which perdurantists need to appeal is one that seems to require competence with concepts that do not belong to the ordinary speaker's repertoire, like the concept of being exactly located at a three-dimensional instantaneous region. Therefore, although it is perfectly admissible for the perdurantist *in the philosophy room* to restrict her attention to whatever objects she finds convenient, it is hard to see how ordinary speakers can restrict their attention in the required way. But then it is doubtful that existence of a temporal part exactly located at the t_2-three dimensional region is relevant for explaining the *intuition* that there is only one statue shaped thing before us.

I agree that the argument from the monist intuition requires the perdurantist to

[9] Stage theorists disagree with perdurantists about this. Stage theorists think that ordinary speakers normally restrict their quantifiers to things that are exactly located at three-dimensional instantaneous regions, and that it is those things that are statues and lumps of clay. So stage theorists do not face the difficulty discussed in this paragraph and are therefore the party most directly benefited by the argument from the monist intuition. As I am about to point out, I think classical perdurantists do also benefit from the argument. But if I were wrong about this, the upshot would be that these coincidence-based considerations favour stage theory over classical perdurantism and endurantism.

postulate an unusual restriction in the domain of ordinary quantifiers. But I deny that this restriction requires competence with philosophical concepts, and that it is therefore unavailable to ordinary speakers. This denial is plausible given certain metaphysical and meta-semantic assumptions that I will now make explicit. The first assumption is that instantaneous temporal parts of material objects enjoy a particular metaphysical status: they constitute a highly natural kind of things, even if not a *perfectly* natural one.[10] They are very much alike not only in their temporal extent (which is part of their intrinsic nature), but also in that they exemplify relatively fundamental properties. In fact, instantaneous temporal parts may be regarded as the 'basic constituents' of the world, the properties of which constitute the minimal supervenience base on which everything else supervenes. Of course, perdurantists are not as such committed to this metaphysical picture, but it is not an unnatural one for them to have. The second assumption, the meta-semantic one, is that naturalness matters for interpretation. Lewis (1984) famously defends the idea that natural properties are 'easier to be meant' than non-natural ones: the more natural a property is, the more intrinsically eligible it is as the meaning of a predicate. Lewis' idea easily extends to domains of reference and quantification: things that exemplify highly natural properties are also highly eligible as objects of singular reference, and constitute highly eligible domains of quantification. In the same sense in which *greeness* is 'easier to be meant' than *grueness*, a more natural set of things is intrinsically more eligible than a gerrymandered one to be a domain of ordinary quantification. Thus, with the metaphysical assumption in place, this

[10] See Lewis (1983) for the idea of naturalness employed here.

meta-sematic view implies that there is a reason (albeit not always a decisive one) to understand ordinary quantifiers as restricted to instantaneous things. And in some circumstances, when there is no conflict with other constraints in interpretation, this reason may be decisive. The important thing to notice here is that ordinary speakers do not need to *do* anything special to have their quantifiers restricted according to the naturalness constraint, just as they do not have to do anything special to mean *greeness* rather than *grueness*. In particular, they need not be competent with the philosophical concepts that would be required to make the restriction explicit. Therefore, the unusual kind of quantifier domain restriction required by the argument from the monist intuition is one that ordinary speakers *can* make, and it is not implausible to understand them as making it in particular cases, as when they claim that there is only one statue-shaped object before us.

In sum, the postulation of temporal parts enables the perdurantist to vindicate the monist intuition about the case of the statue and the clay. And this is why the cases of temporary coincidence constitute a reason for preferring perdurantism over endurantism. It may be interesting to compare this 'argument from the monist intuition' with the AC-argument discussed by Gilmore. The outstanding difference is that the present argument supports perdurantism in virtue of supporting the existence of temporal parts (it is the existence of a proper temporal part shared by the statue and the clay that accounts for the monist intuition about the case). The AC-argument, as we saw, makes no appeal to temporal parts. It is true, as Gilmore emphasizes, that for the perdurantist there is no single region at which both the

statue and the clay are wholly present, and that this is a difference with respect to the endurantist description of the case. But this is not the moving cog of the argument that I am presenting. The feature of the perdurantist description of the case that is relevant for the present argument is not that the statue and the clay exactly occupy different four-dimensional regions, but rather that there is a *third thing* that is the only statue-shaped thing exactly occupying the relevant three-dimensional t_2-region. Supra-regions of this t_2-region (and what objects occupy them) are completely irrelevant to the argument from the monist intuition.

It is worth emphasizing that the argument from the monist intuition exploits the specific ontological thesis that classical perdurantists hold against their opponents: the thesis that there exist at t_2 an instantaneous temporal part that the statue and the lump share. Because of this, it is prima facie unlikely that endurantists will have at their disposal a relatively parallel strategy to accommodate the monist intuition. As we have seen above, the basic complaint of Gilmore and McGrath was that once we are clear on what perdurantists say about coincidence scenarios, it is less clear that endurantists cannot say something analogous. But even if this is true about the AC-argument and other coincidence-based considerations for perdurantism, it seems that the argument from the monist intuition cannot be replicated by the endurantist, given her rejection of instantaneous temporal parts.[11]

[11] Thanks to an anonymous referee for urging me to make this point fully explicit. The rough characterization provided in this paragraph for Gilmore's and McGrath's argumentative strategy applies also to Wasserman (2002) p. 209.

Of course there are other, very different sorts of moves that endurantists can attempt in order to capture the monist intuition themselves. One of them has already been mentioned: an endurantist can adopt the temporary identity view. Other such moves consist in denying that the clay survives re-shaping (as in Burke's dominance account), or denying that something is created through re-shaping (as some strong version of mereological essentialism may have it). All these moves are open, and their merits and costs have to be assessed and compared with those of adopting perdurantism. My interest here is not in adjudicating perdurantism the victory in this cost-benefit analysis, but merely in clarifying what its benefits are.

Let us summarize the dialectics. We started in section 1 by considering an argument from coincidence to perdurantism in which the anti-coincidence principle AC featured a crucial premise – the AC-argument. But as we saw, Gilmore offers an analogous argument, which also has AC as a crucial premise, from coincidence to *endurantism* – the argument from the 'new puzzles'. I mentioned in section 2 that perdurantists could react to this second argument by *denying* the anti-coincidence principle. Doing so will certainly forestall the AC-argument for perdurantism. But we can now see that even in this case the score would not be 0-0: even if the perdurantist loses the AC-argument for her view, she still has up her sleeve the argument from the monist intuition that I presented in this section. Suppose, however, that the perdurantist *accepts* the anti-coincidence principle, perhaps because she is convinced by the supervenience argument presented by McGrath. Then the two symmetric arguments considered by Gilmore are restored, levelling

the score at 1-1. But in this case, the argument from the monist intuition considered in this section is an additional and independent argument from temporary coincidence to perdurantism. The final score is then 2-1 in favour of perdurantism. It is therefore not true that, as both Gilmore and McGrath claim, cases of temporary coincidence provide no reason for preferring perdurantism over endurantism.

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