
PRESENTISM AND PERSISTENCE

BY

JIRI BENOVSKY

Abstract: In this paper, I examine various theories of persistence through time under presentism. In Part I, I argue that both perdurantist views (namely, the worm view and the stage view) suffer, in combination with presentism, from serious difficulties and should be rejected. In Part II, I discuss the presentist endurantist view, to see that it does avoid the difficulties of the perdurantist views, and consequently that it does work, but at a price that some may consider as being very high: its ontological commitments to platonic universals and to the substratum theory, that as we shall see follow from the combination of endurantism with presentism, will perhaps not be to everyone's taste.

1.

Presentism claims that only presently existing objects are real – ‘to exist’, then, amounts to ‘to exist now’. Typically, presentists are also ‘serious tenses’ drawing an important distinction between saying that past objects once *existed* and future objects *will exist* but only current objects *exist*. One could think, at a first glance, that presentism, thus formulated, is a non-starter – for how is one to understand the presentist’s central claim ‘The only things that exist are those that exist at present’? It seems there are two possibilities: either the first occurrence of ‘exist’ in this claim is tensed or it is not. If it is, then it seems that presentism is an uninteresting truth (‘The only things that exist now are those that exist at present’), and if it is not – that is, if ‘exist’ is to be taken as a tenseless form of the verb meaning something like ‘existed, exist, or will exist’ – then presentism seems to be obviously false. But even if it is perhaps not easy to formulate the presentist view in a non-controversial way, it certainly is not a ‘non-starter’ – what the view wants to claim is simply that there are fewer objects than those recognized by the eternalist. Thus, presentism is a thesis about what there is, as for instance Dean Zimmerman puts it: ‘[T]here is only one largest class of all real things, and this class contains nothing that

lies in the past or future. Presentism is, in fact, a thesis about the range of things to which one should be ontologically committed' (Zimmerman, 1998, p. 210).

In this paper, I will be interested in presentism, but not for its own sake; rather, I will be interested in examining what consequences presentism has when it is combined with theories of *persistence* through time – namely, the perdurantist worm view, the perdurantist stage view, and endurantism. I will argue that, under presentism (*unlike* under eternalism) both perdurantist views fail, and that the only good option is endurantism but that even there a price must be paid, a price that perhaps will not be of everybody's taste.

I shall start with an example: a case of a photograph. When looking at an ordinary photograph, one who is not familiar with photography may have the naïve impression that it depicts¹ an *instantaneous* part of reality – a 'frozen' moment of the world. But of course, this is not so, since taking a photograph takes time, even if often a very short one, and a photograph thus depicts not an instant but an *interval* of time. While the naïve mistake is an easy one to make with respect to, for instance, holiday landscape photographs that are usually taken at a high shutter speed, the error becomes easily apparent on photographs that include moving subjects where the exposure time is longer, such as on the photograph below (2.5 second shutter speed):



On photographs such as this one, the point appears obvious: it depicts a temporally bigger portion of reality than just an instant of it. In this

paper, I will use the case of photographs to raise a discussion about some general points (independent on photography) concerning presentist theories of persistence through time, and I will start by asking: ‘what kind of entities are depicted by photographs?’. Plausibly enough, they depict events, but they *also* depict objects (a person, a train, a bench . . .), and it is the latter that I am interested in here. Given that the objects depicted by photographs, which I will call the ‘depicta’, are represented as something that persists (and changes!) through the whole interval of time depicted by the photograph, a discussion of theories of persistence through time is indeed relevant here, and as we shall see the case of the depicta of photographs is an illuminating case that will shed some light on certain interesting features of these theories. Due to concerns about the length of this paper, I will limit myself here to the case of *presentist* theories of persistence. I will start with the presentist perdurantist worm view, and the stage view.

Part I: Presentist perdurantism

2.

Let us start with the perdurantist worm view, and for expository reasons, let me first introduce it under the eternalist framework. One way to present it is to see how it handles the phenomenon of intrinsic change through time. Take the case portrayed on the photograph above of a man, Sam, sitting on a bench and reading a book from t_1 to t_3 and then, at t_4 , standing up and walking away. Sam, then, not only persists through the times from t_1 to, say, t_6 but he also undergoes intrinsic change – he is first bent (since he is sitting) and then straight (when he stands up), as illustrated on the figure below:

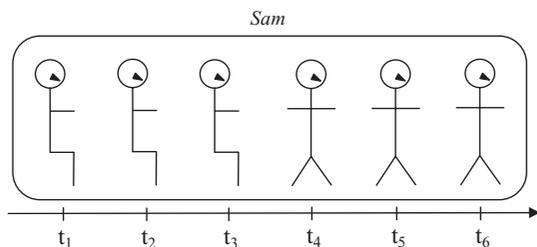


Figure 1

Worm view theorists claim that Sam is a ‘space-time worm’, that is, a temporally extended entity that has temporal parts at every time at which

it exists, and that his having different incompatible properties at different times is a matter of him having different temporal parts at different times that have *simpliciter* the incompatible properties.

Now, suppose that the photograph of Sam above, taken at a low shutter speed, depicts him during the interval from t_2 to t_5 . What is then the depictum of the photograph? Easily enough, the worm view theorist can say that the photograph depicts a sub-worm of Sam, that is, a space-time worm that is just temporally smaller than Sam – a non-instantaneous temporal part of Sam:

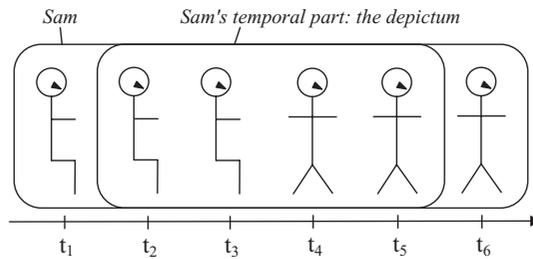


Figure 2

On the photograph, Sam appears blurred, fuzzy, and partially transparent, this is because, roughly, the first half of his temporal part depicted by the photograph, the sitting one, only occupies a half of the interval and, thus, only a half of the total exposure time, which makes it then appear half-transparent on the resulting photograph; and similarly for his other temporal half.

None of the above yields any difficulties as far as the worm view under the eternalist hypothesis is concerned. According to this view, people are temporally extended worms that have temporal parts, and qualitative intrinsic change over time is handled in terms of the having of qualitatively different temporal parts at different times. An entity to play the role of the depictum of a photograph such as the one of Sam is thus easily provided by the worm view's ontology: a space-time worm, as Sam is, just temporally smaller. (I am not saying, of course, that the worm view is objection-free; all I am saying is that *given* the worm view, there are no worries with respect to the nature of the depicta of photographs.)

What happens now, if instead of appealing to the eternalist framework, one tries to defend the worm view under presentism? Such a view claims that an object that exists at the present time doesn't exist at that time in its entirety but exists there by having a present temporal part. Its other temporal parts, following perdurantism, exist at other times but, here

comes the presentist's claim, those other times don't exist. But why claim that objects have temporal parts at other times than the present if these parts don't exist? According to Berit Brogaard (Brogaard, 2000), this is the best way for perdurantism to avoid what is, according to her, the main charge against it in its non-presentist form: that it entails a changeless world. Indeed, it is considered by many as a serious objection to the non-presentist version of perdurantism (sometimes called 'four-dimensionalism') that it entails the denial of change in the world. The objection goes as follows.

Sam at t_1 is bent; at a later time t_4 , he is straight. What this amounts to, according to the four-dimensionalist, is that one of Sam's temporal parts is bent, and another is straight. Thus, four-dimensionalists often take change to be very much like spatial variation since change is accounted for as the having of different properties by different parts. But when considering this account of change, some object to it² by claiming that what we want to give an account of is how a single object, a single individual like Sam, can change, and the four-dimensionalist is telling us a story about different objects (different temporal parts) having different properties, and this is not the story we wanted to be told. What we have is not change of an individual, but replacement of one changeless object (one temporal part) by another changeless one. Instead of saying that Sam changed from t_1 to t_4 from being bent to being straight, the four-dimensionalist says that the t_1 -part of Sam has changelessly the property of being bent and the t_4 -part of Sam has changelessly the property of being straight. Since Sam himself is unable to lose or gain any such properties, this is why there is no room for genuine change in the four-dimensionalist's world. So, no concrete particular can ever genuinely change.

Brogaard claims that the presentist variant of perdurantism is capable of avoiding this objection: the t_1 -part of Sam comes out of existence, by the passage of time, while the t_4 -part comes into existence, and is then, in turn, replaced by another temporal part, and so on – thus the four-dimensionalist view that '[a perduring object like Sam] has temporal parts with different properties, just as a multicoloured strip of paper has spatial parts with different properties, and neither case involves change in the sense in which this word is commonly understood' (Brogaard, 2000, p. 342) is avoided because there is no such 'strip'. And since only one temporal part of Sam exists, namely the present one, the only properties instantiated are the properties instantiated by it now – there is no having tenselessly any property and there is genuine change in the world, for, as she puts it '[. . .] the coming into existence of a new stage [i.e. temporal part] with a different non-relational property is a real change – and this in a way that captures our most basic intuitions according to which a change has taken place if the object stage that presently exists has different properties from those that existed previously' (Brogaard, 2000, p. 348).

I do not see the force of this answer to the objection. Suppose that the ‘no-change objection’ succeeds against four-dimensionalism. The core idea of the objection is that instead of having a case where an object genuinely changes in its intrinsic properties, we have a case where one object (one temporal part) is replaced by another. Peter Simons, for instance, makes this claim when he says that the ‘four-dimensional alternative is not an explanation of change but an elimination of it, since nothing survives the change which has the contrary properties’ (Simons, 2000, p. 65). Now, if this objection applies to four-dimensionalism, it obviously applies to presentist perdurantism as well – what we have, in the situation as described by Brogaard, is not one and the same object that would change any of its intrinsic properties, but a series of numerically distinct objects coming into and going out of existence, when one of them is continuously replaced by *another*. The objection, then, applies here with as much force as before.

But perhaps the presentist perdurantist could claim that her view, but not the four-dimensionalist’s, can accommodate the claim that there is change in what exists – and this is perhaps why Brogaard thinks that it can answer the no-change objection. Indeed, the four-dimensionalist’s ontology is a static one since all times, past, present and future, equally exist, while the presentist component of presentist perdurantism allows for a world where what exists changes, since only the present time is real. But let us be careful about what such a claim is about: what we have here is that there is a difference in what exists, since the reality’s stock contains, for example, Sam being bent at some time, and does not contain such an entity at a later time. But how does such a claim answer the no-change objection? It doesn’t. It is true that the total reality’s stock is different from time to time – but *such* a claim turns out to be true even under four-dimensionalism, since the reality’s stock *at some time* is different from the reality’s stock *at some other time*. The only difference is that under presentist perdurantism the reality’s stock at a time is the reality’s stock *simpliciter*, but this could hardly provide an answer to the no-change objection – granted, the defender of such a view could claim that ‘reality’s stock *simpliciter* changes’, but what else could such a claim mean, except, as we have seen, that the reality’s stock is different from one time to another? – which, again, is true even under four-dimensionalism. Furthermore, and most importantly, even if there were a difference between the two views with respect to a ‘change’ in what exists (the reality’s stock *simpliciter*), there certainly is no relevant difference in the account the two views provide of what we wanted to account for in the first place: intrinsic change of an entity such as Sam. Exactly as under four-dimensionalism, nothing (that is, *no one thing*) undergoes intrinsic change under presentist perdurantism – what we have in both cases, to repeat the objector’s charge, is not change of an individual, but replace-

ment of one changeless object (one temporal part) by another changeless one. And the same goes, of course, for the world as a whole (the reality's stock at a time) – the world is simply replaced by another, with the passage of time. It seems to me then that if the no-change objection succeeds against four-dimensionalism, it succeeds against presentist perdurantism as well. The diagnostic here is then that what causes trouble, according to the objector, if one wants a good account of change, is not the 'eternalist half' of four-dimensionalism, but rather its 'other half': perdurantism. And so, it is not presentism (the rejection of eternalism) that can save the case of four-dimensionalism. To yield a satisfactory and intuitive account of change, the objector would probably argue, the cure is not presentism, but endurantism (that is, the rejection of perdurantism).

3.

Let us turn now to an independent difficulty with the presentist perdurantist worm view, which four-dimensionalism does not encounter. Remember: presentist perdurantism claims that at the present time t_1 an object such as Sam doesn't exist in its entirety but exists there by having a t_1 -part. The perdurantist component of this view would push us to say that he also has the rest of his temporal parts existing at other times, but according to presentism, those other times don't exist. But how is it possible to claim that material objects have temporal parts at other times than the present if these parts don't exist? Of course, following presentism, one could say that they *existed* and exist no longer, but in what sense would they be *parts* of the object? The very plausible principle involved here was put forward by Trenton Merricks: 'an object cannot have another object as a part if that other object does not exist' (Merricks, 1995, p. 524).

According to Sally Haslanger, this is in no way problematic to the holder of presentist perdurantism (see Haslanger, 2003, p. 11): her grandmother, says she, is part of her family even though she does not presently exist, so if her family can have a non-existent part, why couldn't Sam? But such a line of 'argument by analogy' does not seem to be of great support, since typically a family and a material object like Sam or a table are conceived as different kinds of entities; thus, they are not analogous cases, and so any argument based on an alleged analogy is misguided. In order to make this argument by analogy sound and persuasive, it would be necessary first to show that a family is best conceived of as a material object like a table or Sam, but Haslanger does not do that – and the burden of proof is on her, since one could very well plausibly argue that a deceased member of a family is not a *part* of it: a family is probably best conceived of as a

plurality, like a football team, and exactly as a football team can lose one of its members when this member ceases to exist, a family can lose a member in the same way, and in both cases the lost member is not a part of the team or the family anymore. So Haslanger's example doesn't *prima facie* seem to be a good one since the relation that family members or football team members bear to families and teams is a different relation than the parthood relation, and so this example cannot establish here that any non-existent object could be a part of anything existent, in the strong sense of 'part' required by perdurantism – a doctrine according to which ordinary objects like tables are made up of temporal parts.

Concerns about family members set aside, the main ontological difficulty here is that it really seems very hard to admit that the objects (temporal parts) that compose another object (the whole Sam) exist only one after another, and so fail to ever make up the whole, as they should. Sam is supposed to be an aggregate of his temporal parts, but there never is a time (or time-span) at which such an aggregate exists. The case of the photograph of Sam illustrates this worry well, I think, for one can ask: what is the depictum of the photograph under the presentist version of the worm view? Under eternalism, it was easy – it was enough to point to a sub-worm of Sam. But under presentism, such an entity just does not exist, and cannot exist, so it seems impossible to provide a satisfactory reply here.

Lawrence Lombard thinks otherwise (see Lombard, 1999). As he points out, rightly, one must carefully distinguish between two senses of 'exist' if one is a perdurantist (both presentist and eternalist). First, the straightforward sense in which instantaneous temporal parts (let us admit here that there are such things, even if the perdurantist is not committed to them) exist at a certain time – if such entities exist at a certain time, they exist at this time entirely (they are three-dimensional entities) and they have all of their (spatial) parts at this time. Second, the derivative sense in which Sam, a whole composed of all of his temporal parts, exists at some time t – in this sense Sam exists at t in virtue of having a temporal part that does; but one is enough, he does not need to have all of his parts at t . Of course, it is the second, derivative, sense that is the interesting one for the perdurantist here, the first one being accepted by everyone: if there are any three-dimensional instantaneous entities, it is uncontroversial that they exist entirely at the time they do.

Criticising Merricks's claim that an object cannot have another object as a part if that other object does not exist, Lombard says that 'what is obvious is only that an object that exists *at a time* t , cannot have, *at* t , another object as a part, if that other part does not exist *at* t . But what the perdurantist wishes to say is *not* inconsistent with that. [. . .] What exists now in [the derivative] sense – [Sam] – is something that does (at some time

or other) have parts that do not exist now; but what exists now in that sense does not now have those parts' (Lombard, 1999, p. 256).

But let us consider a true statement like 'Sam has a present temporal part, but he is not identical to it'. The problem here, that parallels the worry about the lack of a depictum of Sam's photograph, is simple: what is the referent of 'Sam' and 'he' in this statement? That is, what is this allegedly existent object that we are making reference to by these words? Does this object exist? Of course, it doesn't – only a part of it does. Perhaps, the presentist perdurantist would say that the other parts *existed* and *will exist* and that there is a sense in which we can speak about Sam composed of all of his parts – but such a strategy does not seem to be available here, since it would mean that one is taking seriously something like an extra-temporal standpoint from which one refers to an entity composed of different temporal parts existing at different times. The eternalist could do that, of course, but not the presentist, since doing this would be like considering the different times as equally real. It seems that the only thing the presentist can do is to see things from a standpoint of some determinate moment of time (the present) and from this point of view nothing that could be the referent of 'Sam' is available. So, in what sense can the referent of 'Sam' be said to exist? In reply, Lombard would probably say that it exists derivatively – but what does this mean here? In the presentist's vocabulary, the 'normal' meaning of 'exists' is 'exists now' – only what exists at the present time 'really' exists; remember that presentism is a doctrine about what there is in reality's stock, and that the doctrine claims that there is nothing more than the presently existing things. But now, the presentist perdurantist is telling us that there is more – that there is another, derivative, notion of existence according to which things composed of non-present (non-existent) things exist. But, first, it seems to be a strong departure from one of the central claims of presentism, to introduce two concepts of existence – one that sticks to the presentist view, and another that does not seem to; and second, those two senses of 'exist' are really distinct and irreducible one to the other. Compare this to the case of the four-dimensionalist: she also uses two senses of existence, the 'ordinary' one, and the derivative, but here, the derivative sense does not carry any new ontological commitments – it only tells us that something can exist at a certain time by having a temporal part here, but it does not involve anything more than there already is in the first, non-derivative, sense of existence – so here, the derivative sense of existence is only a device to accommodate ordinary language, but nothing more.

So, it seems that the notion of having non-existent parts carries with it an ill-motivated plurality of notions of existence. But even if such notions of existence were to be accepted and endorsed, this would not leave the presentist perdurantist view cleaned of problems with the having of parts that don't exist.

To see this, let us make a small detour and first consider another rescue mission that the defender of the presentist perdurantist view might want to undertake to answer the problem we had: that the temporal parts that compose an object exist only one after another, and so fail to ever make up the whole – and so it seems that Sam never really exists. Here is a remedy that is readily at hand: deny that Sam is a four-dimensional whole made up of temporal parts, and claim, rather, that he *is an instantaneous temporal part* which persists through time by having other temporal parts at other times as *temporal counterparts*. This amounts to a rejection of the more traditional perdurantist ‘worm view’ in favour of the so-called ‘stage view’ – since ordinary objects like Sam, according to this view, are the instantaneous stages rather than the worms made up of them. (This is the view defended by Sider, 2001.) It is not my purpose to discuss the stage view in full detail here; I only wish to see how relevant it is to the combination of perdurantism and presentism. And it is obvious that it has the nice advantage of answering our objection: if Sam is an instantaneous stage rather than a temporally extended worm, then there is of course no problem about having non-existent parts, since nobody claims that he has any, and there is no problem about how successive stages could make up a whole, since nobody really cares about the wholes (Sider claims that the wholes exist in addition to stages, but that these are not the ordinary objects we usually care about and quantify over – so at least the pressure on the presentist perdurantist becomes much weaker here.)

4.

So isn't there a good reason for the presentist perdurantist to become a stage theorist? I think not. Consider the claim that Sam is not straight, but he was bent before. The stage view provides a counterpart-theoretic analysis of such a claim: Sam is now straight, but he has a past counterpart that is (was) bent. Now, what is needed for Sam to have such a counterpart? Two stages are counterparts iff they are related by the counterpart relation. The counterpart relation is a relation of similarity, some sort of spatio-temporal contiguity and/or continuity, and causality. Actually, no stage theorist (including Sider) says what exactly the nature of the counterpart relation is, but my point here is simply that whatever the counterpart relation is, it just cannot hold between different stages if one is a stage view theorist who wants to be a presentist as well. Take Sam at t_1 who is bent and Sam at t_4 (the present time, say) who is straight. These two different individuals are supposed to be counterpart-related. But how could they ever be? How could a non-existent individual (Sam at t_1) bear any degree of resemblance and have any other (spatio-temporal and causal) relations to an existent flesh-and-blood individual (Sam at t_4 – the

present time)? Nothing non-existent is sufficiently similar and related to anything existent to be counterpart-related (if it makes sense at all to even speak about ‘non-existent things’). And generally, the counterpart relation will never hold between the two individuals (the two numerically distinct Sams) simply because there never is a time when the two individuals both exist – and so there never is a time when both relata of the counterpart relation exist. How, then, could the counterpart relation ever succeed in doing the job it promises if the relata that it is supposed to relate never both exist? Of course, one could say here that two individuals are counterparts iff, if they were both present (that is, if they both existed), then they would be counterpart-related, but such a situation never is the case, and so the conditional here would always be vacuous.³ In short then, the stage view does not really help the business of the presentist perdurantist because, even if it seems to answer the objection about *parts* that don’t exist, it immediately yields a different but parallel objection about *counterparts* that don’t exist.

And it is easy to see how this problem also makes trouble for the presentist perdurantist who wishes to maintain the worm view – exactly as different counterparts need to be related by a counterpart relation in order to be counterparts, different parts of four-dimensional worms need to be ‘glued together’ in some way in order to make up the wholes that are the individuals we are interested in, like Sam. Finding such a glue (that is, a unification relation that makes the successive temporal parts of a single four-dimensional worm ontologically stick together) is not an easy task even for the four-dimensionalist, but for the presentist perdurantist, the task just seems impossible. For what would such a glue relation be? Again, it might involve resemblance, or causality, or spatio-temporal contiguity, or something else – in fact, whatever serves the stage theorist to load his counterpart relation can serve the worm theorist as the glue. And so, of course, the same problems as those we have just seen with the stage view will appear for the worm view: how could one existent thing and one non-existent thing be glued together (if, again, I may be allowed to even say such a weird sentence)? That is, what kind of ontological glue would be needed in order to authorise that mereological composition takes place between a thing that exists and nothing? Perhaps one could propose here, as a remedy, to follow the line of almost all four-dimensionalist’s who are friends of the principle of an entirely unrestricted mereological composition (for independent reasons, mainly to avoid problems with ontological vagueness) – so that the glue relation might not be restricted at all. But however unrestricted, it certainly cannot be *that* unrestricted – *unrestricted* mereological composition is *restricted* to existent things only, and any attempts to take away even this restriction would lead one to weird places where no sensible metaphysician (I hope) wants to go – like commitments to individuals

made up of the top half of Sam's body today, and all of the tropical fish of the 19th century, *and* three unicorns, *and* two fire-breathing dragons.⁴

5.

Not only does the presentist version of the stage view suffer from a worry about counterparts that parallels the worry about parts in the case of the worm view, but with respect to the case of the depicta of photographs the stage view theorist seems obliged to endorse the worm view after all (and so, its combination with presentism becomes even more directly problematic because of the troubles with parts that don't exist we have seen above). The worry is easy to formulate: what is the depictum of Sam's photograph? Is it Sam? No, since Sam is an instantaneous entity and the photograph depicts a temporally bigger portion of reality. What the stage view theorist is committed to claim here is that the photograph depicts not one person, or a part of a person, but *a lot* of different persons – perhaps even an infinity (if time is continuous). This worry parallels an objection to the stage view that Ted Sider raises himself (see Sider, 2001, p. 197; he, of course, defends an eternalist and not presentist version of this view, but this point applies here to both). The objection is about counting: consider the (true) sentence 'Fewer than two billion persons have set foot in North America throughout history'. The problem is that, according to the stage view, because it takes people to be instantaneous stages, the sentence turns out to be false (there are many more people-stages than people). Following the worm view, we get the right truth-value because we get the right count – people, in this case, are worm-people. So, as Sider concedes 'in some cases we need a worm-theoretic account after all' (Sider, 2001, p. 197). The relevant consequence of this with respect to my worry in this paper is, again, that the worm view's difficulties with the having of parts that don't exist affect the stage view directly.

Part II: Presentist endurantism

6.

In Part I, we have seen that if one is a presentist, one had better avoid the perdurantist theories of persistence through time. Following these considerations, it is then only natural to embrace *endurantism*. Endurantism is often put as the view that says that an object persists through time by being *wholly* (and not partly, as the worm view has it) *multiply located* at all times at which it exists. Thus, at first, one might be tempted to draw the following schema:

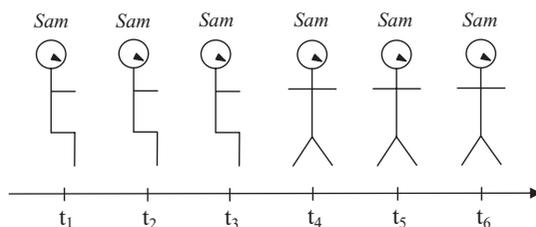


Figure 3

With respect to the question about the depiction of photographs, there seems to be a bizarre *prima facie* answer: a photograph of a person (even an 'ordinary' one, taken at a high shutter speed, where nothing is blurred) depicts one person *a lot* of times (infinitely many times, if time is continuous). This sounds a bit strange, for the same reason this whole picture of endurantism is strange, both under eternalism and under presentism as well. Under eternalism, the idea is that time is space-like – but try to imagine the analogous spatial case of an object 'multiply located' at a lot of places in your garden at the same time. Clearly, since objects are not universals, the natural thing to say here would rather be that there are different objects laid before one's eyes in the garden and not one single object multiply located at all those different places. And since eternalism takes time to be like space, if the picture above were the correct endurantist picture, the view would be as strange as this spatial case. And under presentism such a picture is even more obviously wrong-headed since only one of the times exists, and so the schema does not do justice at all to the presentist's central claim. If this were the endurantist picture, the view would be in trouble.

But, fortunately, it is a *bad* picture. The correct endurantist picture looks more like this:

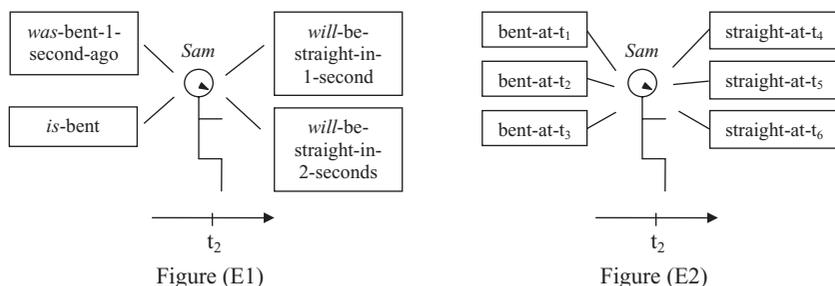


Figure 4

Figure (E1) is the typical endurantist picture of the presentist who is a friend of *tensed* properties, which is probably the most natural and standard view to hold under presentism (indeed, for some, it may even be the main motivation for being a presentist in the first place). Thus, if t_2 is the present time, Sam has the tensed property 'is bent' *simpliciter*, and he also has tensed properties like 'was bent 1 second ago' or 'will be straight in 2 seconds'. It is important to notice that it would not be enough to have here tensed properties like simply 'was bent' and 'will be straight' since these do not say *how far* in the past (or in the future⁵) Sam's having of these properties lies.

In this respect, this strategy is close to Figure (E2) that uses *time-indexed non-tensed* properties, in the sense that *some* sort of 'index' has to be put somewhere in the picture in order to account for the having of properties at certain specific times. (E2) is Van Inwagen's (1985) version of endurantism that uses the so-called 'indexicalist' strategy with respect to properties: all properties are time-indexed, and this is why we have here 'bent-at- t_1 ' instead of 'bent'.⁶ Thus under both pictures, there is an index on properties, it's just that according to (E1) the index is relative to the present time, while according to (E2) it is non-relative. As time 'passes', properties under (E1) will thus change, whereas under (E2) they will always (at all times) be the same (here is probably a reason why most presentist endurantists would go for (E1) rather than (E2) since they would say that (E2) cannot account for genuine change (but, think of the discussion about change in Part I, where I motivate the rejection of this alleged difficulty)).

Both (E1) and (E2) avoid the obvious difficulties with the first bad endurantist picture above, and importantly both allow the presentist endurantist to account for truths about the past. Most likely, the presentist's strategy here will be to claim that the having of these properties does not need to be *grounded* in some past fact or past states of affairs or something else (since such past entities do not exist under presentism), but that it is a brute fact that Sam exemplifies them. For my present concerns, I shall accept this strategy as being a part of the standard presentist endurantist framework and I will not object to it. Finally, with respect to (E2), note that time-indexed properties were initially introduced as a response to the Lewisian objection from temporary intrinsics⁷ which is *not* a problem for the presentist, but we see here that they can also serve another purpose, that is to account for the truth/falsity of propositions about the past.

7.

Now that we have the correct presentist endurantist pictures in mind, let us see how they can handle the case of the *depicta* of photographs. This case is no more than just an illuminating example; below I will claim that it

generalizes to many other cases. For expository reasons and reasons that will be made clear below, I shall start with (E2) rather than with the more natural picture for the presentist which is (E1).

Remember that the photograph of Sam in §1 was taken at a low shutter speed and that it depicts him during the interval of time from t_2 to t_5 . So, something more needs here to be said in addition to the (E2) endurantist picture, since this picture only represents Sam at *one* time (namely t_2 , in the example above). Indeed, Van Inwagen insists that the features (relevantly, being bent) portrayed on the schema should be those that Sam has at the present time, while his other properties are only represented as being exemplified by Sam, but not as being drawn on the schematic image (this is why Sam is represented on the schema as sitting). This may well work in the idealized case of an instantaneous present time, but it will not do for the case of photographs, since they never depict an instantaneous part of reality. When drawing such a schema for the photograph of Sam, we would easily know what properties we should fill in the boxes (that is, *all* of his time-indexed properties that he ever has), but we would not know how to draw the schematic image of the person and how to draw the arrow of time, while avoiding to end up with the bad endurantist picture we have seen at the beginning of §6. What one needs to do here, is to be more precise.

By ‘being more precise’, I mean to stop drawing schemas in terms of little fellows sitting or otherwise, but by being a bit more abstract and representing on the schema the fundamental components of the nature of Sam. There are two main options: Sam is a bundle of properties, or Sam is a bare particular (substratum) that instantiates properties. Let us start with the bundle theory:

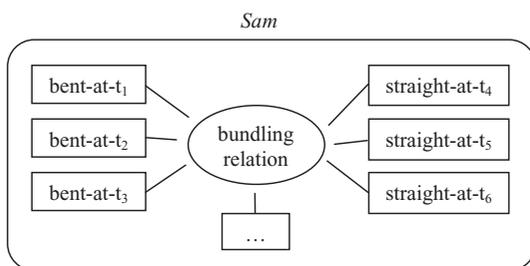


Figure 5

According to this endurantist indexicalist bundle-theoretic view, Sam is a bundle of properties (all of his time-indexed properties) united by a special primitive relation often called ‘comprehension’ or ‘constituentiation’

– I shall simply call it ‘the bundling relation’ in order to have a label as neutral as possible and as non-informative as possible since this relation is a primitive one that is only defined by its theoretical role: bundling together properties in order to make particulars. Now that we have this more precise picture in mind, we can ask how it provides an account of what is being depicted by the photograph of Sam. Here, the answer is as easy and straightforward as it was in the case of the perdurantist worm view (it just took more time to get there in the endurantist’s case not because endurantism handles this phenomenon less well, but because endurantism needed to be articulated more carefully in order to have a view precise enough to be able to do any good job): it depicts a ‘sub-bundle’ of Sam who is the whole bundle. Since the photograph depicts the interval of time between t_2 and t_5 , it depicts the sub-bundle of Sam that includes all of his properties that are indexed between t_2 and t_5 .

There is nothing special coming from the bundle theory here, since the same treatment can be given if one embraces the substratum theory as well:

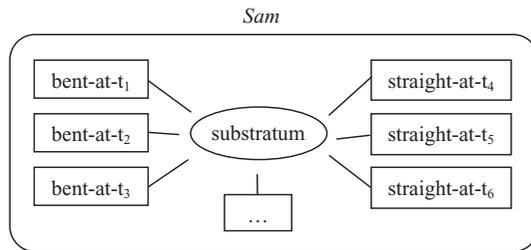


Figure 6

According to the substratum (or ‘bare particulars’) theory, Sam is not only a bundle of properties, rather his properties inhere in a substratum that exemplifies them and unifies them in order to make a (thick) particular. But, with respect to my present concerns, it does not matter whether it is a substratum that unifies the properties in order to make a particular, or whether they are united by the bundling relation.⁸ Both views get rid of the problem of not knowing how Sam should be drawn (bent or straight?), since neither the substratum nor the bundling relation have to be conceived that way, and both views get rid of the arrow representing the flow of time, since all the information provided by it is already given by the indexes attached to the properties. Both views are thus structurally entirely similar, and allow for the same treatment of the nature of the depicta of photographs – in the case of the bundle theory it is a sub-bundle, and in the case of the substratum theory it is the substratum plus all of the properties that are indexed between t_2 and t_5 .

The upshot of all these considerations is the following: (E2)-endurantists (can) handle the case of the depicta of photographs in the same way perdurantists do. But then, do they suffer from the same troubles? That is, what about the worry that this 'sub-Sam' (Sam in the interval between t_2 and t_5) cannot be something that is depicted by the photograph since it never exists? Under the worm view, we had the problem of an entity composed of temporal parts that do not exist. But here, we do *not* have such a problem, whether we use the bundle theory or the substratum theory. Under the substratum theory, it is not a problem to claim that at the present time, say here t_5 , there exists a substratum and that it exemplifies the properties 'bent-at- t_2 ', 'bent-at- t_3 ', 'straight-at- t_4 ', and 'straight-at- t_5 '. This does *not* make Sam a temporally extended entity, it just makes him have properties that are indexed, and it certainly is not a problem for a presently existing entity to have properties such as 'being-bent-yesterday' or 'being-bent-at- t_1 '. (And similarly under the bundle theory.) That is, all this works if, importantly, properties are *not* tropes, for tropes are spatio-temporal entities that are located at the places and times where they are exemplified, and so if properties were tropes here, we *would* have the same troubles the worm view has, since at the present time t_5 , the trope 'being-bent-at- t_2 ' does not exist, and under presentism this means that it does not exist full stop. So, the presentist endurantist has to embrace platonic universals (that is, *unlocated* universals, otherwise the same problem as with tropes would arise again). This is the first price to pay for being a presentist endurantist, a price that will perhaps not be to everyone's taste, but a price that can be paid. In addition, there is another price to pay: if the view is that properties are platonic universals, the *bundle theory* seems a very unpalatable view indeed (not only because of well-known troubles with Identity of Indiscernibles,⁹ but also simply because it would mean that objects like Sam or a table are *unlocated*, since they would *be* no more than bundles of unlocated properties), and so it seems that the substratum theory has to be endorsed.

Thus, here is the full consequence of being a presentist: first, one cannot be a perdurantist (see Part I), and so one has to embrace endurantism; second, one cannot be a trope theorist or a friend of located (immanent) universals (otherwise problems from Part I would arise again), and so one has to embrace *unlocated* (platonic) universals; and consequently, one has to reject the bundle theory and one can only be a substratum theorist. A price for being a presentist that some may be willing to pay, and some may not.

Until now, I have focused on the (E2) endurantist picture rather than on (E1). This is because I think that while the same considerations discussed above apply to both (relevantly, the depictum of the photograph could be a 'sub-Sam' in the same way as above), (E1) does not work as well, and is a more problematic view. Consider the depictum of the photograph of

Sam (and let us use here the bundle-theoretic talk, while of course the same could be expressed under the substratum theory): since it does not depict an instant of reality but an interval, and since the photograph does *not* exhibit any *tensed* features, it would be hard to see *which* tensed properties should be bundled together here – that is, what is the bundle that is being depicted by the photograph. This is so because the photograph does not say anything about there being (or, which is) a privileged time with respect to which properties had at other times included in the interval can be relatively indexed (like the relative index in ‘was-bent-1-second-ago’). And the worry here is a more general one about presentism and (E1)-like strategies, for of course these worries about the depicta of photographs generalize to many other cases: having a thought, saying something, running, grabbing a pen – any doings take time and involve intervals of time rather than instants, and raise problems analogous to the case of depicta of photographs.¹⁰

Department of Philosophy
University of Fribourg, Switzerland

NOTES

¹ I use ‘depict’ roughly in the sense of what a photograph represents; and I use it neutrally with respect to the debate concerning questions about whether photographs depict something in the same way paintings do.

² For statements of this objection see, for instance, Brogaard (2000), Haslanger (2003), Sider (2001), Simons (2000). The origins of the objection seem to be found in McTaggart (1927).

³ This parallels what Lewis (1986, p. 238) says about modal counterparts.

⁴ Some Meinongians might be ready to endorse such a commitment.

⁵ In what follows, I will always speak about the past and the future in a similar way – if you don’t like this sort of talk about the *future*, just take it mentally away from what I say; it will not make any significant difference to the points I shall raise.

⁶ Another alternative here is the adverbialist version of endurantism that proposes not to temporally modify the property but the having of it. Thus the adverbialist will say that ‘Sam is bent at t1’ is to be analyzed as ‘Sam is-at-t1 bent’ or, more elegantly, ‘Sam is t1-ly bent’ (see Johnston, 1987, pp. 129–29). Choosing adverbialism over indexicalism here is neutral to the claims I will make below.

⁷ See Lewis (1986, p. 203).

⁸ See my ‘The Bundle Theory and the Substratum Theory’ (Benovsky, 2008) for a detailed comparison of the bundle theory and the substratum theory with respect to this issue.

⁹ See Black, 1952.

¹⁰ For very valuable comments and suggestions, I would like to thank Fabrice Correia, Fabian Dorsch, Michael Esfeld, Mark Heller, Sven Rosenkranz, Gianfranco Soldati, David Stauffer, and an anonymous referee of *Pacific Philosophical Quarterly*. The photograph included in this paper is protected by international copyright by Jiri Benovsky, www.benovsky.com.

REFERENCES

- Benovsky, J. (2008). 'The Bundle Theory and the Substratum Theory: Deadly Enemies or Twin Brothers?' *Philosophical Studies* 141, pp. 175–90.
- Black, M. (1952). 'The Identity of Indiscernibles', *Mind* 61, pp. 153–64.
- Brogaard, B. (2000). 'Presentist Four-dimensionalism', *The Monist* 83, pp. 341–354.
- Haslanger, S. (2003). 'Persistence Through Time', in M. J. Loux and D. Zimmerman (eds) *The Oxford Handbook of Metaphysics*. Oxford: Oxford University Press.
- Johnston, M. (1987). 'Is There a Problem about Persistence?' *The Aristotelian Society* 61, pp. 107–135.
- Lewis, D. (1986). *On the Plurality of Worlds*. Oxford: Blackwell.
- Lombard, L. B. (1999). 'On the Alleged Incompatibility of Presentism and Temporal Parts', *Philosophia* 27, pp. 253–60.
- McTaggart, J. M. E. (1927). *The Nature of Existence, volume 2*. Cambridge: Cambridge University Press.
- Merricks, T. (1995). 'On the Incompatibility of Enduring and Perduring Entities', *Mind* 104, pp. 523–31.
- Sider, T. (2001). *Four-dimensionalism*. Oxford: Clarendon Press.
- Simons, P. (2000). 'Continuants and Occurrents', *Proceedings of the Aristotelian Society* 74, pp. 78–101.
- Van Inwagen, P. (1985). 'Plantinga on Trans-world Identity'. Reprinted in Van Inwagen (2001) *Ontology, Identity and Modality*. Cambridge: Cambridge University Press.
- Zimmerman, D. (1998). 'Temporary Intrinsic and Presentism', in P. Van Inwagen and D. Zimmerman (eds) *Metaphysics: The Big Questions*. Oxford: Blackwell.