The Situationalist Account of Change

Martin Pickup

Oriel College, Oxford

In this paper I propose a new solution to the problem of change: situationalism. According to this view, parts of reality fundamentally disagree about what is the case and reality as a whole is unsettled (i.e. metaphysically indeterminate). When something changes, parts of the world irreconcilably disagree about what properties it has. From this irreconcilable disagreement, indeterminacy arises. I develop this picture using situations, which are parts of possible worlds; this gives it the name situationalism. It allows a B-theory endurance view on which there is genuine incompatibility when things change. There are costs to the view, which are explored, but it is a novel approach which offers a distinct explanation of what happens when things exist through change.

What is happening when things continue to exist over time? In particular, what happens when entities persist through change? There are many different answers to this question. In this paper, I wish to offer a new one. I will claim that, when things change, parts of reality are irreducibly conflicting and that reality as a whole is therefore radically unsettled about how the world is. In other words, change involves disagreement between parts of the world and thereby introduces metaphysical indeterminacy in the world as a whole.

The idea that reality might not all be 'of a piece' has been explored in different ways in different contexts. One example is in Fine's (2005, 2006) fragmentalism, with more recent papers from Lipman (2015, 2016), Loss (2017) and Simon (forthcoming) developing versions of the view. Moore (1997, 2019) also explores the possibility that reality is disunified. In other places, I have offered solutions to other problems which deploy underlying notions of the same sort (Pickup 2016, Pickup, Darby and Robson 2017, Pickup and Darby (forthcoming)). In this paper I intend to show how the persistence of material objects through change can be given a similar treatment to those other puzzles, with similar results. I believe there are advantages to doing so, though I will also highlight some costs of going this way.

Change has a long history as a topic of philosophical reflection and as a source of puzzlement. When something changes, it seems to first have a property and then lack it. But how could one and the same thing both have and lack a property? The answer, of course, involves *time*. But exactly how time enters the picture is contentious.

This initial concern has been framed as a problem: hence 'The Problem of Change'. In contemporary metaphysics, a particular version of this problem – the problem of temporary intrinsics – was raised by Lewis in a few pages of his *On the Plurality of Worlds* (1986, p202-205). As the name suggests, he focused on intrinsic properties which are only had temporarily. A series of papers (Hofweber 2009, Hansson 2009, Rychter 2007) have argued that there is nothing in the vicinity worthy of the title of a

problem, as constructing an argument along these lines will involve at least one premise that shouldn't be even *prima facie* acceptable. Nevertheless, there is a variance of philosophical opinion on how to theorise about objects' existence over time which is highlighted by the different ways they treat change. I intend to describe a novel account within this debate.

I will proceed as follows. First, I will give my take on the phenomenon to be explained and some constraints on an explanation. These will generate a problem. I will then give a brief account of *situations*, which will be a tool for expressing my view. Situations, in short, are portions of possible worlds. Third, I will express my account of change in terms of what is true in different situations. This will involve accounting for what is true when different situations are put together, at which point indeterminacy will be introduced. In the fourth section, I will address some worries that naturally arise about the account. Finally, I will compare my view with a few alternatives before concluding.

1. Change

Change is the phenomenon by which an object first has and later lacks a certain property (or *vice versa*). Consider an orange which changes from not being ripe to being ripe. We can label the orange *o*, the property of being ripe F and the earlier and later times *t* and *t'* respectively. The following statements are then true:

(1)   It is not the case that *o* is F at *t*

(2)   *o* is F at *t'*

This much is uncontested. How to interpret (1) and (2), however, is very much contested. I will propose that there are certain constraints on interpreting (1) and (2). These constraints will not be universally accepted, as they rule out various other options in the literature. But, nevertheless, I think they are plausible.

The first constraint is that it is the *orange* which is changing. More generally, there is a single individual which is the subject of change. The most natural way to cash this out is to say that the thing which bears (or doesn't bear) the property at the earlier time is numerically identical to the thing which doesn't bear (or bears) the property at the later time. This pushes us towards an endurance view: the thing at the earlier time is numerically identical to the thing at the later time. But not quite: the worm-theoretic temporal parts account could say that there is indeed a single thing which is the subject of change, namely the worm which is the sum of the temporal parts.[1] However, a stricter version of this idea cannot be given a temporal parts treatment. The stricter version claims that there is a single individual which is the *primary* subject of change. This can be cast in terms of grounding or fundamentality: the fundamental bearer of the property before and after the change is numerically identical. The motivation for such an explanatory constraint is that if the primary subject of change is not numerically identical then there is no one thing (at the fundamental level) which has changed.

Thus I take it that the following is a constraint on explaining (1) and (2):

---

[1] This might seem to undermine temporal parts as a solution to the problem of change, for if the worm both has and lacks the property (tenselessly), then we have a contradiction. This connects to the criticism that temporal parts theory involves replacement rather than change (see, e.g., Oderberg 2004). I'll set aside this worry for now.

Endurance: the ultimate subject of predication before the change is numerically identical to the ultimate subject of predication after the change

The second constraint is that it is *ripeness* which the orange both lacks at the earlier time and has at the later time. In more general terms, it is one and the same property which the subject has and lacks: the property the individual has is precisely the property the individual lacks.[2] The motivation for this constraint is that if the individual has and lacks numerically *different* properties, it hasn't changed.[3] In a similar move to the one considered above, the relational properties view could arguably satisfy such a constraint if there is a higher-level property, e.g. ripeness, which can be had or lacked in virtue of distinct lower-level properties (such as ripeness-at-*t*) being instantiated. In such a case there could be a single property had and lacked by an individual: the higher-level property. But, in line with our first constraint, a stricter version of the third constraint can be given on which the *ultimate* property an individual has and lacks in a case of change must be one and the same. Thus:

Property Identity: the ultimate property predicated of the subject before (after) the change is numerically identical to the ultimate property subject lacks after (before) the change

A third constraint is that what it is for the orange to *be* ripe is the same at the earlier and later times. The tie between the orange and ripeness which holds at the later time is precisely the tie that is lacking at the earlier time. The constraint, in other words, concerns the instantiation of the property by the changing individual. Whatever instantiation is (and luckily we don't have to settle that question here) this constraint requires it to be the same before and after the change. The motivation is that change involves something coming to be the case which was not the case beforehand. If the tie lacking between property and object is not the same as the tie that obtains when the object has the property, what fails to be the case before the change is not what *is* the case after the change.[4]

Once more, we can speak of the primary or fundamental here. Otherwise we don't rule out a view whereby there is a single higher-level instantiation relation which can hold in virtue of distinct lower-level instantiation relations. This higher-level relation would then be numerically identical across a change even if the lower-level relations are distinct. To rule this out, we specify again that *ultimate* instantiation relations are our target in the constraint.

Instantiation Identity: the ultimate connection between property and subject before (after) the change is numerically identical to the ultimate connection lacking between property and subject after (before) the change

---

[2] Lewis's version of the problem uses intrinsic properties, properties such that nothing external to the object is involved in their instantiation. In other words, if a property is intrinsic then whether an object has it or not does not depend on anything apart from the object and the property. I am giving a more general constraint along these lines, such that the adicity of relations cannot be higher than the number of individuals subject to the change.

[3] See Rodriguez-Pereyra (2003) for a clear articulation of this concern.

[4] This connects to the demand that objects have properties *simpliciter*, which Giberman (2017) develops powerfully in a recent paper. This, I think, is the core of Lewis's objections to adverbialism and the like (see his 2002).

The final constraint will be more of a stipulation. I am working with a B-theoretic structure so wish the times involved in a case of change to be treated equally. There are arguments for the B-theory (and of course responses too).[5] I won't rehearse these here.

The fourth constraint is therefore:

B-theory: all times are metaphysically on a par

The B-theory therefore sees no time as privileged above the others. In particular, the question of what time is the present doesn't have a metaphysically weighty answer. This means that all times are equally authoritative about how reality is.

∗∗∗

This completes the four constraints I will adopt on an explanation of the phenomena of change. Now, as I mentioned above, most current views reject one of these, so protagonists of such positions are unlikely to grant that these are all reasonable constraints. The final constraint is stipulated, and I shall not dwell on it. I have given indicative motivations for the other three constraints, and I hope this will supply some initial plausibility to each of them. But do not expect these to be persuasive for those who already accept a view which breaches one of these constraints. So let me make a few brief dialectical points to appeal to such readers.

Firstly, I think it should be accepted that each account of change has its challenges. Some of the challenges with the account I am proposing will be explained in Section 4 (and readers will no doubt find others). The voluminous literature on persistence provides a great range of difficulties for each of the established positions which, although they may be solvable, need to be addressed. In effect, in adopting these constraints I am trying to see what can be done if the negative arguments in the literature against each major view are successful.

Secondly, in giving these constraints I am not at all suggesting that they are non-negotiable metaphysical principles. Each of them might turn out to be false, even if they are initially attractive. So if no satisfactory account of change can be furnished while we accept all of the constraints, we have a choice. We could either say that change is incomprehensible (perhaps even impossible), or we could give up a constraint. I would strongly favour the second approach. I take it that, at least with respect to the first three constraints, this would be revisionary (even if acceptably so). I suggest, therefore, that B-theory accounts which breach a constraint are revisions of our understanding of change.[6] To emphasise: this might be perfectly ok. Lewis's perdurance, for example, is plausibly a revision of our normal understanding of how objects persist. Revising our metaphysics when required is a sensible approach, and my own proposal might be seen as revisionary in a different way.

These both connect to a final point. Even if one or more of the constraints I adopt is unreasonable, and can be plausibly denied, there is still an interesting project to establish whether a coherent account of change can be found which *does* accept all of these constraints. It is, I think, typically

---

[5] As starting points in this vast literature, see Markosian (2016), esp. sect. 5&6, Mellor (1998), Zimmerman and Smart's debate in Sider, Hawthorne and Zimmerman (2008) ch. 5, and ch. 5 of Ney (2014), along with their respective references and bibliographies.

[6] Certain A-theorists will also face a variant of the problem under consideration. If, for instance, all past times are metaphysically on a par then the A-theorist will need an account of how past change is possible. This looks relevantly similar to the B-theorists challenge in accounting for all change across metaphysically equal times. (Thanks to Stephen Williams for pointing this out to me.)

believed that at least one of the constraints I have outlined needs to be rejected in order to make space for the possibility of change. If I am right, then change is possible even if all these constraints are adopted. This is worth investigating. In particular, I suggest it is worth seeing whether the B-theorist needs to breach one of the first three constraints to account for change: I will argue that there is an alternative which does not.

<p style="text-align:center">***</p>

I am now in a position to demonstrate the issue for providing a satisfactory explanation of change. Our change case involving the orange's ripeness above was captured by the following two statements:

(1)   It is not the case that *o* is F at *t*

(2)   *o* is F at *t'*

We need to explain how to interpret these statements. The issue can be constructed as a paradox. The indiscernibility of identicals states that if x is (numerically) identical to y, then any property y has x also has (and *vice versa*). The indiscernibility of identicals is rarely disputed.[7] Using it, however, seems to lead to a problem. From *B-theory* it follows that times *t* and *t'* are on a par: the claims both make about the world must be taken equally seriously. We cannot prioritise one over the other. So it not being the case that *o* is F and it being the case the *o* is F are on an even footing. *Instantiation Identity* tells us that the connection between F and *o* at *t'* is precisely the same connection as that lacking between *o* and F at *t*: there is a univocal sense of 'having' across those times such that the indiscernibility of identicals straightforwardly applies. *Property Identity* tells us that it is precisely the same property which is had at *t'* and lacked at *t*.

But *Endurance* tells us that the thing at *t* is numerically identical to the thing at *t'*. Thus, from the indiscernibility of identicals, we can conclude that the thing at *t* has all the same properties as the thing at *t'*. So the orange has the very same property (namely ripeness) that it lacks; it has this property in the same way that it lacks it and there is no metaphysical priority or distinction between its having and its lacking the property. This is a contradiction.

This sketch will not satisfy everyone that there is a problem of change.[8] Nevertheless, I hope it shows that there is an issue about interpreting the statements of change, like (1) and (2), in a way that avoids difficulties. To put it differently: time needs to enter the picture to stop change cases being contradictory. Given our explanatory constraints, how can it do so? Time can't enter into the object, property, instantiation relation or the metaphysical status of the statement. Where else can it go?

---

[7] Rarely, but not never. See, for instance, Williams (forthcoming; sect. 14) for an interesting discussion of loose identity and its connection with the indiscernibility of identicals. The indiscernibility of identicals is also tinkered with by those who have non-canonical views on identity, for instance that it is relative (e.g. Geach 1967) or occasional (e.g. Gallois 1998).

[8] As mentioned above, see Hofweber (2009), Hansson (2009), and Rychter (2007) for criticisms that this argument warrants the title of a 'problem'. There are responses (e.g. Raven 2011, Einhouser 2012). My own view is that those 'dissolving' the problem of change are doing nothing of the sort: they are *solving* the problem by invoking adverbialism. (This is particularly clear in Hansson's paper where he explicitly refers to adverbialism (p271)). But it is not a dissolution of a problem to appeal to an existing but contentious solution to that problem. Adverbialism, which tinkers with instantiation, is at least a revision of our conceptual scheme. I don't have space to fully defend my views on this here, however.

Before answering this question, I'll first need to quickly introduce some machinery to articulate my proposed answer.

2. Situations

As mentioned above, I will be using situations as a tool for expressing the metaphysical position I wish to propose. I do not think that they are essential to the picture I present, but rather a useful mechanism by which to do so. Situations can be conceived as parts of possible worlds, though in situation theory it would be more accurate to say that possible worlds are special sorts of situations.[9] What situations allow us to do is deal with portions of worlds which are less than maximal. This is in the same vein as views emerging from Austin's work (Austin 1950) and running through to Yablo's *Aboutness* (2014) and the truthmaker semantics of Fine (2014). Situation semanticists use situations rather than worlds as the entities with respect to which propositions are evaluated, and there are a number of claimed advantages of doing so (see, e.g., Kratzer 1989, 2019, Heim 1990, Elbourne 2005, 2013).

For my purposes, I will mention a few features of situations. They are typically partial, giving answers to some but not all questions (contrast this with possible worlds, which give an answer to every question). Because they don't settle every question, some propositions are neither true nor false in certain situations.[10] Situations bear mereological relations to one another, so that one situation can be part of another. Truth is evaluated with respect to situations: what is true in one situation might not be true in another. Accordingly, there is no straightforward notion of truth *simpliciter*.[11]

As an example, consider what is occurring in New York City on the 31st December 2019. There is a situation corresponding to this place and day. Some things will be true in this situation, for instance that people are celebrating, that Thea has eggs for breakfast, that the air temperature is cold. Some other things will be false in this situation, for instance that no-one is sad, that Thea has cereal for breakfast, that Times Square is quiet. There are further things which the situation says nothing about, for instance that the assassination of Franz Ferdinand caused World War I, that Danny had eggs for breakfast (Danny was in London on 31st December 2019), that it is a hot summer in NYC in 2020. These are example of propositions I take to be neither true nor false in the situation we are considering.

The situation corresponding to what's going on in NYC on the 31st December 2019 is part of many other situations, including the situation of what's going on in New York State on the 31st December

---

[9] There are several situation-theoretic choices to make which I will be supressing here. One is whether there are world-sized situations. If not, then there will be no possible worlds. Another is whether there are merely possible situations or only actual ones. If there are only actual ones, there will be exactly one possible world, namely the actual world. See Barwise (1988) for discussion of some of the choice-points in situation theory.

[10] This is another choice point: one could alternatively take propositions to be false when the situation doesn't settle the relevant question. As I will be using them, however, situations allow propositions to lack truth-values.

[11] One might be tempted to construct such a notion, for instance by saying that what is true in the maximal situation corresponding to the (actual) world is what is true *simpliciter*. Or, alternatively, by saying that what is true in all actual situations is true *simpliciter*. Or by saying that what is true in *any* actual situation is true *simpliciter*. I won't follow any of these paths for reasons which may become clearer in the next sections. At any rate, I see no compulsion to generate a notion of truth *simpliciter* within situation theory: we can do without it.

2019, the situation of what's going on in NYC throughout 2019 and the situation (if there be any such situation) of the actual world. It has many other situations as parts, including the situation of what's going on in Times Square on 31st December 2019, the situation of what's going on in NYC between 11.00pm and 11.55pm on the 31st December 2019 and so on. It is also disjoint from many other situations, such as the situation of World War I or the situation of a party in a house in the suburbs of Tokyo on 31st December 2019.

This completes the general introduction to situations. Before going on, it might be worth being explicit about the role situations will play in what is to come. My task in this paper is to articulate a metaphysical picture, rather than to furnish a semantics.[12] I will not, therefore, be using situations primarily to give an account of the *meaning* of statements of change, nor the formal, inferential or truth-conditional roles of such statements. Rather, situations are a tool for getting a grip on the notion of a fine-grained portion of reality which allow me to spell out a view of how the world might be. In order to express the new metaphysical account of persistence I wish to present, I use situations as a means of discriminating the chunks of reality which are interestingly heterogenous with respect to what is the case. To explain this comment, which is somewhat cryptic at this stage, I now move on to describe the situationalist's understanding of persistence.

3. Change in terms of situations

So, how can we use situations to model our new way of addressing the challenge of change? I call it the situationalist approach, and it begins by reframing the scenario in terms of situations. Let *s* be the situation before the change and *s'* the situation after the change. Because all truth is relative to a situation, we should list what is true in *s* and *s'*.

In *s*: it is not the case that *o* is F

In *s'*: *o* is F

To be clear, the proposition that *o* is F is false in *s* and true in *s'*. So far, this seems straightforward and unproblematic. What *does* seem to raise an issue is when *s* and *s'* are combined. Suppose there is a further situation *s** which has both *s* and *s'* as parts.[13] What is true in *s**?

There are choices to make here. If *s** contains all truths from *s* and *s'* then we have a contradiction: it both is and is not the case that *o* is F. The view I'm proposing rejects this, and instead takes the proposition that *o* is F to be neither true nor false in *s**.[14] So, on the situationalist account it is neither true nor false that the orange is ripe in a situation containing both *s* and *s'*. It is, in other words, indeterminate whether the orange is ripe in such situations. More generally, when something changes the situationalist allows that there are some situations in which it determinately has the relevant property, some situations in which it determinately lacks the relevant property and some

---

[12] I deal in a little more detail with the semantic issues in earlier work (see especially the Appendix to Pickup 2016), but a full semantics is a future project. There are interesting questions here, variants of which are under current discussion in the literature (see, e.g. work by Yablo (2014, 2018) and Fine (2014, 2020). But I restrict my focus to the metaphysical issues in this paper.

[13] If *s* and *s'* are actual, then presumably *s** will be as well. (Though see Darby and Pickup (forthcoming) sect. 4.3 for a possible challenge to this presumption.)

[14] I will later, in section 5(a), discuss in more detail whether truth in a part of a situation entails truth in the whole situation. There are reasons to think that this is not the case, i.e. that situations are not always monotonic.

situations in which it is indeterminate whether it has the property and indeterminate whether it lacks it.

What this means is that certain situations have truth-value gaps. This, by itself, is not surprising when using situations: situations are incomplete and so plausibly fail to determine a truth-value for some propositions. What *is* surprising is that a situation can lack a truth-value for a proposition when parts of that situation do give a truth-value to it. I shall first spell out how this might be cashed out metaphysically before applying the situationalist solution directly to interpretation of the statements of change (1) and (2) while upholding the constraints I've specified.

Indeterminacy is not a feature that is usually welcomed: it complicated matters. While it might be tolerated at the level of representation (for instance, in the application of vague predicates), it is certainly unpopular when *non*-representational, i.e. when it is claimed of the target phenomenon rather than of the description of the phenomenon.[15] Nevertheless, I propose to understand this indeterminacy as metaphysical indeterminacy: the world itself being unsettled about how things are. This is in line with addressing the nature of change at the metaphysical rather than semantic level. If we are concerned with what the world is like when things change, it is not enough to provide a semantics which avoids contradiction without saying what underlying reality the semantics corresponds to. Having a satisfying description of change is only salutary when that description is an accurate one. While there would be ways of accepting the assignment of truth-values I've detailed without the particular metaphysical reading I will offer, and I welcome such alternatives, I will focus on a straightforward interpretation of what could warrant a semantic outcome as described.

The natural way to connect truth in a situation with what reality is like or, in other words, to connect our semantics and metaphysics, is to take truth in a situation to give what is the case there. Situations are portions of reality.[16] What is true is different in different situations, so what is the case is different in different portions of reality. What the situationalist account of change therefore suggests is that when two different portions of reality which jointly describe a change are put together, unsettledness arises in the resulting portion of reality. There is no answer to the question: 'is the orange ripe?' in a part of the world which contains a change with respect to the orange's ripeness. We *can* say that the orange is unripe in a specified portion of reality before the change, and that it is ripe in a distinct portion of reality after the change. What we *cannot* say is whether it is ripe or not in a part of the world which encompasses both of these scenarios.

On one way of understanding this, it is a fairly banal claim. Everyone, presumably, would accept that what is the case is different in different parts of the world (assuming that the world is not homogenous). What the situationalist is asserting is more radical, however. It is that how things are in one part of reality *conflicts* with how they are in another. What is the case in one situation rules out what is the case in another situation, and yet both situations are actual. In the case of the orange, *s* tells us, unequivocally and in an unrelativised way, that it is not F. Within *s*, it is a bare and primitive fact that this is so. Conversely, *s'* tells us in precisely the same way that the orange is indeed F. Furthermore *s* and *s'* are parts of reality which have equal status.[17]

---

[15] This will be discussed in more detail in part (b) of the next section.

[16] If we allow there to be merely possible situations, these will be possible portions of reality.

[17] One way to think about this is by parallel to possible worlds. Imagine that there is more than one concrete possible world (akin to a sub-class of the Lewisian pluriverse). Furthermore, imagine that entities are transworld identical across (some of) these worlds, and that some such individuals vary in properties between

It is tempting to relativise any such conflict away.[18] But the project of situationalism is to see what happens when reality is taken to *genuinely* conflict. The answer the situationalist offers is that genuine conflict leads to reality itself being unsettled. The combined situation s^*, to speak metaphorically, goes fuzzy at the point of conflict. This encourages us to think that s and s' are more fundamental than s^*, as they do not contain indeterminacy. More generally, it is natural to take smaller situations to be more fundamental than the larger ones of which they are a part (though this is not, I think, essential to the situationalist position).

The situationalist's account of objects persisting through change is therefore the following: when an object changes with respect to some property over time, reality is divided.[19] While it is true in one situation that the object has the property, it is false in some other situation that the same object has the same property. When the situations are put together, the status of the object with respect to that property is indeterminate: there is no fact of the matter about whether the object has the property in the larger situation. Persisting through change, then, is a case of an object existing in different, incompatible portions of the world which are equally part of reality. Correlatively, change is a phenomenon which gives rise to the division of reality into these incompatible parts.

What this suggests is that reality is fundamentally in pieces: reality is composed of parts which irreconcilably disagree. When these disagreeing parts of reality are combined, indeterminacy results. What is determinate in smaller parts of reality can become indeterminate in larger parts of reality. Situationalism contends that change is a phenomenon which introduces indeterminacy into the world in virtue of the irreconcilable parts which are required for something to genuinely change. Change breaks the world into pieces.[20]

Of course, this is a substantive, controversial and far-reaching metaphysical position. Situationalism is by no means an easy answer to the question of how things persist. But, I think, it does allow us to satisfy the four constraints I have detailed on an account of change. That is what I intend to now show.

The statements of change, recall, are:

(1)   It is not the case that o is F at t

(2) o is F at t'

The challenge is to interpret them while maintaining all of:

Endurance: the ultimate subject of predication before the change is numerically identical to the ultimate subject of predication after the change

---

worlds. What is the case across worlds would be akin to what the situationalist claims to be the case across change in a single world.

[18] See Goodman (1978 ch. 7), (1984 ch. 2) for a rejection of the relativisation strategy and an acceptance of reality's pluralism, but with a very different underlying metaphysical picture. Goodman's view informs Moore's discussion (see sect. 5 (c)).

[19] To forestall confusion: it is not that reality *becomes* divided in any loaded sense. Situationalism is B-theoretic, so there is no absolute becoming involved. Rather, change involves reality's just being divided into these conflicting parts, in a way that privileges no time over others.

[20] Change is not the only means by which indeterminacy and fragmentation can be introduced. See, for instance, Pickup (2016), Darby, Pickup and Robson (2017) and Darby and Pickup (forthcoming) for other examples including the Ship of Theseus, quantum indeterminacy and fictional indeterminacy.

Property Identity: the ultimate property predicated of the subject before (after) the change is numerically identical to the ultimate property subject lacks after (before) the change

Instantiation Identity: the ultimate connection between property and subject before (after) the change is numerically identical to the ultimate connection lacking between property and subject after (before) the change

B-theory: all times are metaphysically on a par

The situationalist account, given above, interprets (1) and (2) as stating respectively that it is not the case that the orange is ripe and that it is the case that the orange is ripe. But (1) is true in a situation at *t*, while (2) is true at a situation at *t'*. It is part of the view that truth is evaluated with respect to a situation: (1) tells us that '*o* is F' is false with respect to some situations at *t*, while (2) tells us that '*o* is F' is true with respect to some situations at *t'*.[21] What is true or false in these situations is the straightforward proposition that *o* is F. Thus the orange is unripe in some portions of the world, and ripe in others. This means that the situationalist can maintain that the ultimate subject of predication is *o* at both *t* and *t'*, and she can maintain that the property predicated at both *t* and *t'* is F, and that the relation holding between *o* and F at *t'* is the same as the relation lacking between them at *t*. Furthermore, she can hold that *t* and *t'* (and their corresponding situations) are metaphysically equal. The worry that a contradiction is thereby generated is avoided by introducing indeterminacy in situations which include both parts where the proposition is true and parts where the proposition is false.

So the situationalist maintains all of the constraints but doesn't end up with a contradiction. This is because there is no situation in which the orange is as described by (1) and as described by (2). The orange has the property of being ripe in some situations and lacks it in others, but in no situation is it both the case that the orange is ripe and that it is not ripe. But how is this so, given the argument above that the four constraints jointly create a problem? The answer is that, as noted, truth is situation-relative for the situationalist. Thus what (1) is saying is true of or in only some portions of reality, not all. Likewise with (2). What is the case (unconditionally) depends on what part of reality we are considering. Reality as a whole, for reasons given above, does not provide a univocal account of how the orange is. The incompatibility between what is the case in different situations is, so to speak, domesticated by a situation theory which doesn't require larger situations to contain all the truths of their parts. But the different situations are still genuinely incompatible because it cannot be the case in any situation that what they both say is true.

Change is often described as requiring incompatibility.[22] The existing solutions which breach one of the four constraints above arguably, by doing so, remove genuine incompatibility. There is nothing incompatible about two different objects having and lacking a property. Nor is there about an object having and lacking different properties. Nor again is there about a certain relationship holding between an object and a property and a different relationship not holding between them. Finally, there is no incompatibility about an object having a property in a privileged or genuine way while not having it in a derivative or attenuated sense. I suggest that the situationalist account meets the constraints on explanation I have described and, in so doing, offers a novel account of the persistence of material objects. This account is, to be sure, contentious but it has the advantage that

---

[21] There will be further situations in which the proposition is respectively false and true, e.g. it is false a microsecond before *t* and true a microsecond after *t'* (assuming it doesn't change in the interim).
[22] Mortensen (2016) is a resource for looking into this claim, which is made extensively.

it maintains in a clear way incompatibility between the states of affairs described by a change. In the next section, I will try to address some of the contentious features of the situationalist account.[23]

4. Worries
(a) Monotonicity

It is key to the situationalist solution that when something changes what is true in a situation before the change needn't be true in a larger situation which includes times after the change as well. This contravenes a principle which might seem attractive, namely that whenever something is true in a situation it is thereby true in any further situations which have the former as a part. In situation theory, this is known as the question of the *universal persistence* of propositions across situations. This is somewhat unhelpful terminology in the present context, so I will refer to this property as the *monotonicity* of situations. It can be formally expressed as follows:

Montonicity
If a proposition $p \in P$ is true in a situation $s \in S$ then p is true in any s^* such that $s \leq s^*$

As I say, the monotonicity of situations might initially seem desirable. After all, if something is the case in a portion of the world, why wouldn't it be the case in extensions of that portion of the world? If a proposition is true in a situation how could it be that adding further content to that situation makes it false?

However, there isn't agreement in situation semantics on monotonicity. Kratzer, for instance, accepts it (1989 sect. 3.4), while Elbourne (2005 p75-78) denies it. As it is central to my proposal that situations are not always monotonic, I will give some indicative reasons to support the general denial of monotonicity. I will not, however, exhaustively defend this claim as that would be beyond the scope of the present paper.

The first point to make is there are immediate cases which look like counterexamples to *universal* persistence (i.e. exceptionless monotonicity). Take, for instance, the proposition that all the students passed the exam. This proposition could be true in a particular situation, such as a situation in which all first-year students on a particular course passed an exam. But there are extensions of this situation in which that proposition is false. Take, for instance, the situation including all students at the university taking exams that year. This latter situation has the former as a part, but the proposition is true in the first and false in the second. There will be many similar apparent counterexamples which involve universal quantification, negative existentials, quantification using phrases such as 'no more than seven' and propositions expressing proportions using phrases such as 'half of'. In case like these, it seems clear that adding content to a situation could make a proposition that was true in that smaller situation fail to be true in an extension of it.

There are ways of maintaining monotonicity even in the face of such examples. One option is to introduce implicit domain restriction (this is a familiar move from other areas). But notice that this takes away from something which is initially an advantage of the situation-theoretic approach. Using

---

[23] It is worth noting that situationalism can be augmented to provide a solution to Lewis's connected problem of variation across possible worlds, the problem of accidental intrinsics (see Lewis 1986 sect. 4.2). Given that there are transworld situations (which depends on a choice in one's situation theory), a situationalist can maintain strict transworld identity for entities whose properties vary between worlds. On this view, an entity can have a property in one (possible) situation, lack it in another, and it will be indeterminate in transworld situations combining these.

situations, we can say that exactly the same proposition is expressed in different situations with correspondingly different truth-values. The proposition that all the children are tired makes precisely the same claim about the world in different situations: it states that every child (in the situation) is tired. This will be true about some portions of the world and false about others, but the claim being made is the same. Austin's work on truth (Austin 1950) is a historical precedent here: he distinguished between *types* of utterance and *token* utterances, the former given by rules concerning what is said (descriptive conventions) and the latter by rules concerning what it is said about (demonstrative conventions). In these terms, denying monotonicity allows us to say that the type of utterance is the same in different situations, while the token utterance is distinct. Because the token utterance is distinct, the truth-value can vary. The implicit domain restriction and similar approaches, by contrast, require that a different type of utterance is made by the same linguistic string in different situations. This means that something different is meant by these words in different situations, and what is claimed then has the same truth-value in all situations. As Kratzer makes clear (1989 p617) using implicit domain restriction requires a *different* proposition to be expressed by different utterances of the same sentence. While consistent, this seems somewhat against the grain of a situation-theoretic approach.

Suppose we accept that situations are not always monotonic in such cases. Is the situationalist solution given a firm grounding? Not yet. For notice that the counterexamples considered so far all involve complex propositions (generally involving quantifiers). The situationalist requires that even *atomic* propositions can fail to be monotonic. Propositions such as '*o* is F' are not true in some larger situations despite being true in some of their proper parts. The motivation for monotonicity seems especially strong when considering atomic propositions because it isn't obvious how adding extra content could prevent the orange from being ripe in the way that adding extra exam-taking students can make 'all the students passed the exam' false.

I will not suggest that denying monotonicity is easy when considering atomic propositions. I believe it to be a cost of the situationalist view. But I am suggesting that it is worth seeing what denying monotonicity can do. The cost it incurs is derived from the core commitment of situationalism: in cases of change the extra content added by material concerning the entity before/after the change is relevant to the truth-value of the proposition. This is because the world itself is irreducibly conflicted about the properties of the entity, and so parts of the world containing members from both sides of the conflict are situations which are themselves unsettled about the state of the entity.[24]

At this point, we might be concerned that any workable notion of monotonicity is beyond the situationalist. However, a restricted account of monotonicity can be provided. This helps because it shows that monotonicity is a property that situations typically display, and details the exceptions to this rule. I don't have space here to systematically argue for the following restriction, but provide it in the hope that it assuages some of the discomfort with denying universal monotonicity.

Restricted monotonicity

---

[24] Here, again, the comparison with a modal realist who accepts transworld identity gives a helpful parallel. See footnote 17.

If a proposition $p \in P$ is true in a situation $s \in S$ then p is true in any s^* such that $s \leq s^*$ unless there is an $s' \in S$ such that $s' \leq s^*$ and p is false in s'[25]

In essence, this tells us that situations are monotonic with respect to a proposition when they contain no parts which disagree about that proposition. Whether a situation is monotonic will therefore also tell us whether it contains disagreement. This means that pieces into which reality divides, on the situationalist picture, can be delineated by the holding of restricted monotonicity for atomic propositions.

I now wish to move on to discuss another connected concern one might have with situationalism, namely that it requires indeterminacy and the metaphysics that undergirds it.

(b) Indeterminacy/reality in pieces

It is distinctive of situationalism that it posits metaphysical indeterminacy in some situations. This is contentious: metaphysical indeterminacy has been considered suspect in various quarters.[26] It is at least respectable enough to also be defended in several places.[27] I won't argue for the cogency of metaphysical indeterminacy here (though see Darby, Pickup and Robson (2017) and Darby and Pickup (forthcoming) for some of my views on this). Instead I want to spell out in more detail the picture of reality that situationalism suggests so that the theory can be evaluated with full appreciation for the underlying account of the world it invokes.

According to situationalism, there are parts of the world which fundamentally disagree. This disagreement is deep and serious: different parts of the world make true propositions which are incompatible. In our world, reality is in pieces.[28] I take *this* to be the fundamental claim of situationalism, and I grant that it is hard to countenance. A natural aim in systematic metaphysics is to promote harmony, while this account contains irreducible disharmony. To metaphysicians of a certain mind-set, it would be disappointing to discover that the parts of reality didn't neatly cohere. I therefore admit that situationalism is radical and, to some extent, costly.

However, it is important to recognise that by accepting that different parts of the world have incompatible propositions true in them we are not proposing a dialetheist view.[29] In other words, on the situationalist account there are no true contradictions. How so? Well, truth is evaluated with

---

[25] There are refinements needed here to get a fully adequate condition. As it stands, for instance, existentially quantified statements will typically come out indeterminate. Suppose, for instance, polar bears exist in some situation s. There will be an extension s^* of s which has as a part a situation s' in which there are no polar bears. Thus, according to the condition, it is indeterminate whether there are polar bears in s^*. But this doesn't seem correct: it should be *true* that there are polar bears in s^*.

There are a number of ways to solve this issue, e.g. by finessing the condition, by revising the semantics of existential quantification to account for this, or by taking restricted monotonicity to apply only to atomic propositions. This isn't relevant for the use I will shortly be making of the denial of universal monotonicity, so I won't explore this issue further. (Thanks to Stephen Williams for discussion.)

[26] A representative sample of those who think all indeterminacy is representational (i.e. not metaphysical) include Russell, Dummett, Lewis and Sainsbury. See Keil (2013) for an introduction.

[27] See, e.g., Williams (2008), Barnes (2010), Bokulich (2014) and Wilson (2016).

[28] Perhaps in other worlds, which contained no change, reality wouldn't have to contain fundamental disagreement. One could still have a situationalist account of such a world. (Thanks to Stephen Williams for focusing my attention on this possibility.)

[29] A dialetheist can say some interesting things about change. As an example, see chs. 11, 12 and 15 of Priest (2006).

respect to situations, so for a contradiction to be true is for there to be a situation in which some proposition and its negation are both true. But there is no such situation. In a change case some proposition is true in a situation, the negation of this proposition is true in a distinct situation, but because monotonicity is denied there is no larger situation which verifies both the proposition and its negation. In particular, if there is a situation corresponding to the whole actual world this situation will contain no true contradictions. It will, however, be gappy: it will lack truth-values for some propositions.

The fact that there are no true contradictions in situationalism distinguishes it from dialetheism. There is no risk, for instance, of explosion. Nevertheless, we might still be concerned that the intuitions driving the distaste for dialetheism are not merely that no *formal* contradiction be endorsed (and the semantic consequences of doing so), but also what might be termed a metaphysical intuition that reality is unitary. Depending on exactly how this intuition is spelt out, situationalism may be in tension with it.

According to situationalism, metaphysical indeterminacy arises from the deeply conflicted parts of reality. Truth-value gaps appear when conflicting parts of reality are put together. Reality is therefore not unitary in the sense of containing only elements which can be combined in a straightforward additive way without giving rise to disagreement. The pieces of reality into which the situationalist carves the world are robustly independent of one another. Though they can be combined they cannot be integrated, if by integration we mean that how things are in these distinct portions of reality are incorporated *tout court* into a broader portion of reality. The denial of monotonicity informs us that some discrete chunks of the world are not able to be integrated in this way. These chunks are not homogenous, not merely by exhibiting variety of *which* entities and properties there are but of *how* those entities and properties are. To reiterate, this heterogeneity is not to be relativised away.

While this is indeed controversial, I think it can be motivated by reflection on change. If we ask of the changing orange whether it is ripe, a straightforward answer isn't forthcoming. We might reply, 'When?'. We are asking which portion of the world is under consideration.[30] Definitive answers can be given if a time before the change or a time after the change is specified. But what happen if we are to assess whether the orange is ripe across a time-span which includes the change? It seems plausible to say there is no answer to this question: it is unripe in some parts of that time-span and ripe for other parts of that time-span. In the time-span as a whole, it is neither unripe nor ripe.

If this way of thinking is on the right track, it provides some support for the situationalist account. For the situationalist takes statements like this at face-value. While the temporal parts theorist chops objects into parts, the relational properties theorist chops properties into parts, and the instantiation-indexer chops instantiation into parts, the situationalist chops reality into parts. Importantly, these parts of reality are equally privileged (unlike on A-theory). The very same orange just is unripe in the earlier chunk of the world and ripe in the later chunk of the world. These chunks

---

[30] Those favouring a different account of change will take this question to be a request to disambiguate between several different, temporally relativised things which could be asked by 'is the orange ripe?'. But it seems, at least to me, that we want to know what *part of the world* is relevant, not which (temporally relativised) object, property or instantiation relation is being referred to.

are metaphysically on a par. But when the chunks are put together, reality is unsettled about how the orange is.[31]

This, in brief, is the metaphysics of situationalism. As I have been at pains to make clear, it is controversial. However, I believe it offers a distinctive approach to accounting for change. In order to underline this, in the final section I will compare the view to a couple of recent alternatives to which it bears a resemblance. This will both serve to highlight the ways it is different, hence making the view clearer, and perhaps offer some indicative reasons to take situationalism as a serious contender.

5. Comparisons
(a) Fragmentalisms

Kit Fine's fragmentalism (in his 2005 and 2006, and explored in a small literature including Lipman (2015, 2016), Loss (2017, 2018) and Simon (forthcoming)) is a view which bears significant similarities to the situationalism I'm presenting. Fragmentalism is a view which allows perspectival facts to be taken seriously without metaphysical privilege being given to one perspective. The most developed application is to tense, where fragmentalism offers a novel way to be a realist about tense. I'll very briefly recount Fine's view and its further specification by commentators and show some key differences between it and situationalism.

The standard way of being a realist about tense is to say that there is an ontological or metaphysical priority of some time (or times) over the others. Fragmentalism denies this and holds that all times are ontologically and metaphysically on a par; on this point it agrees with the B-theory of time. However, and unlike B-theory, it is a realist view about tense: it contends that reality really is perspectival with respect to time. No time is privileged, but tense is irreducible.

To be more precise, Fine introduces fragmentalism as the denial of the following thesis:

Coherence
Reality is not irreducibly incoherent, i.e. its composition by incompatible facts must be explained in terms of its composition by compatible facts.[32]

In effect, what the fragmentalist denies is that there is a holistic picture of reality which contains all the facts and is coherent. There are chunks of reality— fragments— which are coherent. But these fragments do not necessarily cohere with each other. That is, different but equally privileged parts of the sum total of reality are in disagreement. This has clear parallels with my situationalism. But there are differences.

Note first that situationalism and fragmentalism talk about different things: fragmentalism in this context is concerned with *tense*, while situationalism is a tenseless account.[33] Fragmentalism is

---

[31] As mentioned above, it would be natural to add to this picture the idea that the smaller situations are more fundamental than the larger ones they compose. Thus determinacy and fundamentality would be aligned. I think this is probably the right way to develop the view, but nothing I have said so far requires it.

[32] Fine 2005 p273. It is important to note that the use of 'facts' here does not commit Fine, or his interpreters, to an ontology containing facts as fundamental constituents: the claims can be expressed using only sentential operators. This should be borne in mind throughout this section.

[33] Fine also applies fragmentalism to the first-person perspective and there may be other versions of fragmentalism applying the view to different domains. I'll focus on the temporal case for the contrast with situationalism.

realist about tense, by which Fine means that fragmentalism takes reality to be composed of tensed facts. What the fragments of fragmentalism disagree about is the attributions of past/present/future to the ways things are. One fragment, for instance, will have KF's sitting as being present and his standing as being future, while another will have his sitting as being past and his standing as present. Reality is irreducibly tensed, and the view is fragmentalist because the different fragments are incompatible with respect to *how* reality is tensed. Fragments agree about what is (tenselessly) the case, but disagree about attributions of tense to what is (tenselessly) the case.

By contrast, there is nothing in situationalism which requires or even suggests that tense be taken seriously or be irreducible. The propositions we have been considering are to be interpreted as tenseless. As a straightforward B-theoretic view, situationalism rejects Fine's premise that reality is composed of tensed facts.[34] Situationalism, as applied to the problem of change, is about objects having properties, not about the past, present or future. The situations which fundamentally disagree in the situationalist account disagree about what is (tenselessly) the case: in one situation the orange is (tenselessly) ripe, in another is it not. But in neither is there an important fact about what is present. This is a major difference between the views.

A second significant distinction is connected. Fragmentalism is perspectival: the fragments are irreducibly from a certain point of view, and they are incoherent because the points of view attribute different tensed features to the world. This suggests that in each fragment we have a complete account of all facts, but from a particular (tensed) perspective. E.g. in any fragment KF's sitting and KF's standing will be accounted for, but from varying tensed views. Finean fragments are not times but particular temporal perspectives on the whole of history.

Situationalism is not perspectival: situations are not *perspectives* on reality but *parts* of reality. This is an important point. Situations do not encode, require or bring with them an outlook on the world. They are rather elements of the world. It is because of this that situations involve what is *tenselessly* the case: there is no implicit or explicit appeal to a point of view on reality.[35] Temporally constrained situations say nothing about other times, whether tensed or tenselessly. What they do is to say *how things are*, in an unvarnished and unrelativised way. This is what gives rise to the disagreement between situations.

So in one sense, fragmentalism is more radical that situationalism, while in another sense situationalism is more radical than fragmentalism. Fragmentalism is more radical in that the perspectives encoded by the different fragments are global: each is like a view of the whole world. The incoherence between fragments is incoherence between different holistic accounts of how all of reality is. By contrast, situationalism only posits a disagreement between *parts* of reality: the situations which are the equivalent of the fragments of the fragmentalist are not holistic, nor do they attempt to capture everything which is the case.

But situationalism is more radical than fragmentalism in that the disagreement between the chunks of reality are disagreements about what is (tenselessly) the case: they are disagreements about the attributions of properties to objects. The disagreements in the fragmentalist's case, by contrast, are disagreements about the tensed features of reality or, in other words, the temporal relationship between subject and what is (tenselessly) the case.

---

[34] To repeat footnote 31: Fine is not ontologically committed to facts. Nevertheless, reality is tensed in a way that can be represented through its composition by tensed facts (even if the tensed nature of reality can ultimately be captured using sentential operators rather than facts).

[35] This is discussed in more detail in part (c) of this section, below.

To illustrate this, consider what a fragmentalist and a situationalist will say about the changing orange. The fragments of a fragmentalist will each include the whole career of the orange, from its unripe to ripe states. But different fragments will have different tense perspectives on the orange's ripeness. For instance, one fragment will include the facts that the orange is (presently) unripe and that it will be ripe. Another fragment will include the facts that the orange was unripe and that it is (presently) ripe. The facts of the different fragments are incompatible, hence the fragmentation. By contrast, as we have seen, the situationalist has distinct situations, which need not contain the whole career of the orange. Some situations will disagree about the orange, but they disagree about whether the orange is (tenselessly) ripe. In one situation, the orange is (tenselessly) unripe, and hence it's not the case that it is (tenselessly) ripe. In another, later situation the orange is (tenselessly) ripe. The cross-change situations containing both are indeterminate.

Situationalism and fragmentalism concern different things, namely what's tenselessly the case and what the time is. They also have different mechanisms: partiality for situationalism and perspective for fragmentalism. They thereby are different in scope, for fragments are accounts of everything that happens, but from a particular point of view, while disagreeing situations are accounts of less than everything, but not from a point of view.

Nevertheless, there are structural resemblances between the views, so it is worth dwelling slightly more on the differences between them. Let's compare situationalism as a B-theoretic way to capture change with fragmentalism's attempts to combine A-theory with the denial that any perspective is to be prioritised.

In these terms a final key difference I will highlight. This is the role indeterminacy plays in the situationalist picture. Fine doesn't expand in detail on how the fragmentalist should conceive of the 'über-reality' which contains disagreeing fragments. He notes that fragmentalism doesn't lead to accepting contradictions, because, while reality is in a sense contradictory, no contradiction will ever be assertible (Fine 2005 p282). However, he doesn't say what happens when disagreeing fragments are put together (if this is even possible). On the view I have presented, disagreeing parts of reality can be put together, and this is where metaphysical indeterminacy enters in: it is in combining incompatible parts of reality that we generate gaps. Indeterminacy doesn't feature in fragmentalism but is essential to situationalism.

The interpretations of fragmentalism in the literature take up, in different ways, the challenge of filling in Fine's sketch of the view. I wish to quickly flag that the way I develop situationalism is importantly distinct from each of them.

Lipman (2015, 2016) uses a primitive co-obtainment relation to formalise the fragmentalist claims (see esp. (2016) sect 4). On this view, obtaining and co-obtaining are distinct. Co-obtaining is a relation which holds between facts when they obtain *together*. Pairs of facts can both obtain without co-obtaining, and can co-obtain without both obtaining. The distinction between obtaining and co-obtaining gives Lipman two different ways facts can conflict; firstly, by being unable to both obtain (being *contrary*) and secondly, by being unable to co-obtain (being *incompatible*). A semantics is provided that shows how incompatibility (in Lipman's sense) doesn't lead to contradiction.

Lipman's interpretation of fragmentalism is novel and promising. Co-obtainment might be the best way to render Fine's views. But it will not be the best way to grasp the parallel claim in the change case. This is because a central motivation for situationalism is the desire to capture *real* incompatibility. This is a supposed advantage of the view. Incompatibility as defined by Lipman, however, is not obviously incompatibility in the straightforward sense. In fact, as it definitional that

two facts can be incompatible but both obtain, facts which are incompatible in Lipman's sense can both be true. Thus, for instance, in the change case the orange's being unripe obtains and the orange's being ripe obtains. What isn't the case is that the orange's being unripe *co-obtains* with the orange's being ripe. Rather, the orange's being unripe co-obtains with it not being the case that the orange is ripe, though this latter proposition does not obtain.

Our ordinary notion of incompatibility doesn't use co-obtainment but rather obtainment: two states are incompatible when they cannot both obtain. Given this, Lipman's interpretation doesn't give us what we want in the change case, because no pairs of facts both obtain which are incompatible in this sense (contrary, in Lipman's terminology). Situationalism, however, allows that contrary facts can be true in different actual situations. A proposition and its negation can be true (i.e. obtain) in distinct situations. There is therefore no distinction between facts being contrary and incompatible in situationalism. This makes the incompatibility in change cases more robust.[36]

Simon (forthcoming) applies fragmentalism to B-theory endurance (as well as interpretation of quantum theory) and so the issues that he addresses are closer to those I discuss than the tense-related concerns of Fine, Lipman and Loss. Simon's own proposal is 'smooth' fragmentalism, a view which softens fragmentalism so that there is no real (logical) incompatibility even between different fragments. The facts in different fragments are logically compatible: nothing co-obtains with anything contrary to anything else which obtains. They are, however, incompatible in a different sense: they are incompatible just in virtue of being unable to co-obtain. Again, the view is interesting and novel, but distinct from my suggestion here. Smooth fragmentalism has even less incompatibility than Lipman's 'jagged' fragmentalism, as Simon himself points out. It is a virtue for him that this is so. From my point of view, however, we want a more jagged version, albeit one which doesn't tip into what he terms dialethic fragmentalism. That is what I hope to have offered.

Mention of dialethic fragmentalism brings us to Loss (2017) (see also his (2018)). Loss's version of fragmentalism denies the principle of adjunction, that the truth of p and of q entails the truth of 'p and q'. Reality is fragmented because true propositions cannot always be conjoined. This allows him to adopt a subvaluation view according to which something is true iff it is true in some fragment. As a consequence, some proposition and its negation can both be true (*simpliciter*) by being true in different fragments while their conjunction is not true. Thus the law of non-contradiction, stating that no conjunction of proposition and its negation is true, is upheld despite contradictory propositions being true.

Although Loss avoids introducing a new primitive co-obtainment relation, to which Lipman and Simon are committed, his resulting theory goes further than the situationalist, as can be seen by a couple of observations. Firstly, on Loss's view it could be the case even within a fragment that a proposition and its negation are assertible: all that is debarred is their conjunction being assertible (see his fn 19). This suggests that, for Loss, propositions and their negations can both be *true* in a fragment, although their conjunction will not be. Secondly, while for the situationalist truth is always relative to a situation, Loss has a subvaluation approach to truth. This gives reality as a whole (i.e. Fine's über-reality) a contradictory character, while the situationalist's denial of monotonicity allows for gappiness instead. I doubt situationalism will be seen as a bastion of classical logic, but it seems as least less revisionary than this proposal.

So, to conclude, there are interesting and noteworthy overlaps between the fragmentalisms discussed here and situationalism. Space has constrained a detailed comparison, but I hope to have

---

[36] Though this comes at a cost: see the previous section.

shown that the position I have carved out has something distinct to say here on the issue of persistence through change. In particular, I hope it warrants the claim that situationalism steers a unique course between compatibility and contradiction which is profitable in the case of change.

(b) Bottani's indeterminacy

Andrea Bottani (2016) offers a response to Lewis's temporary intrinsics argument which invokes indeterminacy in an attempt to maintain that things have properties *simpliciter*. His intentions are somewhat aligned with mine, as Bottani recognises the need to uphold a straightforward relationship between objects and properties as well as proposing radical indeterminacy as a way of retaining this.[37]

However, there are significant differences between the two views. Bottani interprets having *simpliciter* as having eternally and essentially, i.e. having regardless of the time. So, for him, no temporary (or even contingent but permanent) properties are had *simpliciter* by their bearers. Rather, if an object doesn't have a property eternally and essentially it is radically indeterminate whether it has it. (Radical indeterminacy here means it is indeterminate whether the sentence expressing that the entity has the property is true, and indeterminate whether it is false.)

By contrast, situationalism allows that temporary properties can be had *simpliciter*, but this is the case within a particular situation. Having *simpliciter* is not having in all situations: having *simpliciter* is rather having in an unmediated way. It is a matter of the instantiation of a property by an object being univocal. Thus it needn't follow from the essence of an individual that it has a property in order for it to have that property *simpliciter*. No appeal to essences is required. What is the case, however, depends on the situation under consideration. (Notice, too, that the indeterminacy in situationalism is not of the radical kind Bottani envisages; it is just that the relevant propositions are neither true nor false.)

There are a couple of advantages I see to the situationalist approach. Firstly, of course, it is better not to be committed to an ontology of essences if one needn't be: it's contentious whether there are such things. Secondly, as it stands Bottani's view seems to lose expressive power. If all claims of the form '*o* is F' are (radically) indeterminate when F-ness isn't part of *o*'s essence, how can we express capture the obvious truth that the orange is ripe at the later time? For surely the orange is indeed ripe at the later time. But the orange is not essentially ripe so, for Bottani, not ripe *simpliciter*. In what sense is it ripe? Nothing has been said about how to keep hold of the true statements we make about changing particulars. It might be that Bottani's account can be supplemented here, but as it stands there is no contextual constraints to the indeterminacy of the orange's ripeness.

So, despite the fact that Bottani's critical arguments are useful for providing motivation for an indeterministic account of persistence, the positive account is wanting. This provides a form of support for the situationalist alternative.

(c) Moore's disunified world(s)

---

[37] He also makes what I consider to be plausible criticisms of adverbialism and SOFism, other views in the vicinity. The positive proposal appears in sect. 7.

In several places, Adrian Moore develops, though does not defend, views which have parallels to the situationalist picture of reality (see his 1997, and several essays collected in his 2019). The issue motivating his discussion is the question of whether reality, understood as the totality of what is actual, is unified or not. This connects to the question of whether there is an absolute perspective, i.e. a possible representation of reality which is not from any point of view.[38] Moore's own position is that absolute representations are possible and that reality is unified, though he is careful to note that he doesn't take himself to have conclusively demonstrated this.

I do not have space to elaborate on or deeply engage with Moore's rich reflections on this topic. But I will briefly highlight some features of the alternatives he considers, in order to make clear some important differences between them and the situationalist theory I am presenting.

Reality being disunified is a matter of multiple different worlds being real. 'Worlds' here is not meant in the modal sense: the disunity of reality is not modal realism. Rather, these multiple worlds are multiple *actualities*. Strikingly, Moore several times turns to tense as an example candidate for how a theorist could maintain multiple actualities, anticipating a fragmentalist-style account. He says:

> "Given some tensed item of knowledge, there is no indicating what makes it true except from the same temporal point of view ... Reality fractures into different temporal worlds, then. Each temporal point of view carries its own world with it. The facts that peculiarly constitute one of *these* worlds can be indicated only from the corresponding temporal point of view. It immediately follows that there are some items of knowledge, namely items of knowledge from different temporal points of view, for which there is no single way of indicating how reality is thereby known to be".[39] (2019, p178)

It being humid today is a fact which is not able to be represented from any other temporal perspective: is not identical to the fact that it was humid yesterday, from the perspective of tomorrow (though there may be some other connection between these facts). Each temporal standpoint, therefore, provides a universe of facts which are not able to be united into a single point of view.

As I have said, Moore does not accept these claims. He believes that tense and all other perspectival markers do not undermine the possibility of an absolute perspective. Indeed, he thinks an absolute perspective may be constitutive of what it is for something to answer to the title of 'reality'. Nevertheless, we have here a noteworthy precursor to the situationalist account.

The situationalist will agree that reality is disunified, because for the situationalist there are portions of reality which disagree. Reality is, indeed, in pieces, just as Moore's interlocutor proposes. Depending on exactly how the meaning of 'world' is specified, the situationalist can also therefore accept that there are multiple 'worlds'. These 'worlds', however, are not intuitively world-sized: they do not claim to cover everything. Rather, they are portions of the whole of reality which contain no disagreements (and hence within which monotonicity is preserved). They are neither the worlds of modal realism, nor the fragments of Fine. This is why I am wary of using the term 'worlds' to speak of such situations. Nevertheless, the monotonic situations which are parts into which reality

---

[38] The exact connection between these questions is a matter of some delicacy. For Moore, the unity of reality is an assumption in an argument for the possibility of absolute representations (see his 1997 ch. 4).

[39] Chapters 11, 12, 13 and 14 of Moore's 2019 engage with versions of this view. These chapters are drawn from papers dating from 2001 to 2016. The Moorean theory is attested in the earliest paper: "The picture … is that reality fractures into different worlds, where a world is constituted by a set of facts. Each temporal point of view carries its own world with it." (2019, p151)

fractures, on the situationalist's account, can be conceived as a multiplicity or plurality that cut against the claim that reality is unified, in Moore's sense.

There are, however, several ways in which situationalism fails to exactly correspond to the views Moore considers. First, as mentioned in the previous paragraph, the elements of the situationalist's disunified reality do not even purport to be maximal, world-sized entities: they are explicitly partial. Secondly, situationalism as presented is concerned with reality itself, without involving representations or perspectives on reality.[40] It is an attempted description of the way things are, separate from the issue of how we engage with what there is. Situationalism therefore does not involve the claim that reality is perspectival. This is because, thirdly, competing situations are not competing accounts of one and the same phenomenon but of distinct parts of reality. It is not that equally robust facts have competing, irremovable inflections, but that there are equally robust, competing inflectionless facts. Finally, situationalism essentially involves metaphysical indeterminacy whereas that is absent from the views Moore is concerned with. Depending on exactly what is meant by 'world' and 'unity', the situationalist can say that there *is* a single, unified world, it is just unavoidably indeterminate.[41]

There is an interesting feature of these four points of difference between situationalism and Moore's multiplicity of worlds: each of them is also a distinction between situationalism and fragmentalism (see (a) above). This lends weight to the idea that Moore and Fine are articulating accounts which are sympathetic to one another. Situationalism's distinctive position certainly bears resemblance to these earlier theories, but it makes a set of different, and differently challenging, claims.

Conclusion

Situationalism offers a novel account of the persistence of changing objects. It suggests that reality is in pieces, and that these pieces fundamentally disagree about how changing things are. Persistence, then, is a matter of existing across situations which disagree in this way. Situationalists can allow that one and the same object has and lacks one and the same property in one and the same way in different portions of the world. Given the metaphysical equality between these portions of the world, reality is fragmented. Reality as a whole, however, is not contradictory because what is true in disagreeing parts of the world does not straightforwardly compose what is true in the whole. Where reality disagrees, the whole world is indeterminate. Though this picture is radical, it does have the virtue of maintaining serious incompatibility in instances of change: what is the case before the change is simply not consistent with what is the case afterwards. Insofar as change involves serious incompatibility, situationalism has an advantage. While there are costs to situationalism, some of which I've highlighted, it is an instructive theory for showing how things could exist through

---

[40] Moore, I suspect, would be interested in interrogating the distinction between a concern with reality itself and a concern with representations of reality. There are many interesting issues which arise here.

The view he considers is supposed to be an account of *reality*, not just of our representations of reality, which might seem to undercut the difference I am trying to indicate. But, nevertheless, on this view the phenomena of disunity is ultimately derived from the inescapably perspectival nature of reality. So while the Moorean multiplicity of worlds does not require *actual* representation or an inhabited perspective, it plausibly *does* require that reality is structured representationally. This is not the case for situationalism.

[41] Of course, if being unified and being a world are understood in terms of determinacy (and thereby, in the situationalist set-up, non-conflict) there would be no such single, unified world. But there will be other ways to understand these terms too.

change even when change is interpreted in this strong sense. For that reason, I suggest it is added to the menu of options. A full evaluation of its worth will require a broader investigation of the value of situationalism in a number of other contexts, to assess whether the costs are worth the advantages.[42]

References

Austin, John L. 1950. "Truth." *Aristotelian Society Supp.* 24: 111-29.

Barnes, Elizabeth. 2010. "Ontic Vagueness: A Guide for the Perplexed." *Nôus*, 44(4): 601–627.

Barwise, Jon. 1988. "Notes on branch points in a situation theory". In his *The Situation in Logic.* Stanford: CSLI.

-------- and John Perry. 1999. *Situations and Attitudes.* Stanford: CSLI.

Bokulich, Alisa. 2014. "Metaphysical Indeterminacy, Properties, and Quantum Theory." *Res Philosophica*, 91(3): 449–475.

Bottani, Andrea C. 2016. "Bringing back Intrinsics to Enduring Things." *Synthese*.

Einhouser, Iris. 2012. "Is There a (Meta)Problem of Change?" *Analytic Philosophy*. 53(4): 344–51.

Elbourne, Paul. 2005. *Situations and Individuals*. Cambridge, MA: MIT Press.

-------- 2013. *Definite Descriptions*. Oxford: Oxford University Press.

Fine, Kit. 2005. "Tense and Reality." In his *Modality and Tense: Philosophical Papers*. Oxford: Oxford University Press, 261-320.

-------- 2006. "The Reality of Tense." *Synthese* 150(3): 399-414.

-------- 2014. "Truth-Maker Semantics for Intuitionistic Logic." *Journal of Philosophical Logic* 43: 549-577.

-------- 2020. "Yablo on Subject-Matter." *Philosophical Studies* 177: 129-171.

Gallois, André. 1998. *Occasions of Identity*: *A Study in the Metaphysics of Persistence, Change and Sameness*. Oxford: Clarendon Press.

Geach, P.T. 1967. "Identity." *Review of Metaphysics* 21: 3-12.

Giberman, Daniel. 2017. "Bent, Not Broken: Why Exemplification Simpliciter Remains a Problem for Eternalist Endurantism." *Erkenntnis* 82: 947-966.

Hansson, Tobias. 2007. "The Problem(s) of Change Revisited." *Dialectica* 61: 265-274.

Haslanger, Sally. 1989. "Endurance and Temporary Intrinsics". *Analysis* 49(3): 119-125.

-------- 2003. "Persistence Through Time." In M. Loux and D. Zimmerman (eds.) *The Oxford Handbook of Metaphysics*. Oxford: Oxford University Press.

Heim, Irene. 1990. "E-Type Pronouns and Donkey Anaphora." *Linguistics and Philosophy* 13: 137-78.

Hofweber, Thomas. 2009. "The Meta-problem of Change." *Nous* 43: 286-314.

Keil, Geert. 2013. ""Introduction: Vagueness and Ontology." *Metaphysica* 14: 149-164.

Kratzer, Angelika. 1989. "An Investigation of the Lumps of Thought." *Linguistics and Philosophy* 12(2): 607-653.

-------- 2019. "Situations in Natural Language Semantics." *The Stanford Encyclopedia of Philosophy* (Summer 2019 Edition), Edward N. Zalta (ed.), URL = <https://plato.stanford.edu/archives/sum2019/entries/situations-semantics/>.

Lewis, David. 1986. *On the Plurality of Worlds*. Oxford: Blackwell.

-------- 2002. "Tensing the Copula." *Mind* 111: 1-14.

Lipman, Martin. 2015. "On Fine's Fragmentalism." *Philosophical Studies* 172(12): 3119-3133.

-------- 2016. "Perspectival Variance and Worldly Fragmentation." *Australasian Journal of Philosophy* 94(1): 42-57.

Loss, Roberto. 2017. "Fine's McTaggart: Reloaded." *Manuscrito – Rec. Int. Fil. Campinas* 40: 209-239.

-------- 2018. "Fine's Trilemma and the Reality of Tensed Facts." *Thought* 7: 209-217.

Markosian, Ned. 2016. "Time." *The Stanford Encyclopedia of Philosophy* (Fall 2016 Edition), Edward N. Zalta (ed.), URL = <https://plato.stanford.edu/archives/fall2016/entries/time/>.

Mellor, D. H. 1998. *Real Time II*. London: Routledge.

Moore, A. W. 1997. *Points of View*. Oxford: Oxford University Press.

-------- 2019. *Language, World, and Limits*. Oxford: Oxford University Press.

Mortensen, Chris. 2016. "Change and Inconsistency." *The Stanford Encyclopedia of Philosophy* (Winter 2016 Edition), Edward N. Zalta (ed.), URL = <https://plato.stanford.edu/archives/win2016/entries/change/>.

Oderberg, David. 2004. "Temporal Parts and the Possibility of Change." *Philosophy and Phenomenological Research* 69(3): 686–703.

Pickup, Martin. 2016. "A Situationalist Solution to the Ship of Theseus Puzzle." *Erkenntnis* 81(5): 973-992.

-------- and Darby, George and Robson, Jon. 2017. "Deep Indeterminacy in Physics and Fiction." In O. Bueno, G. Darby, S. French and D. Rickles (eds.), *Thinking about Science, Reflecting on Art*. London: Routledge.

-------- and Darby, George. Forthcoming. "Modelling Deep Indeterminacy." *Synthese*.

Priest, Graham. 2006. *In Contradiction: A Study of the Transconsistent*. 2nd Edition. Oxford: Oxford University Press.

Raven, Michael. 2011. "There is a Problem of Change." *Philosophical Studies*, 149: 77-96.

Rodriguez-Pereyra, Gonzalo. 2003. "What is wrong with the Relational Theory of Change." In H. Lillehammer and G. Rodriguez-Pereyra (eds.) *Real Metaphysics*. London: Routledge.

Rychter, Pablo. 2009. "There is No Problem of Change." *Dialectica* 63: 7-22.

Sider, Ted, John Hawthorne and Dean Zimmerman. 2008. *Contemporary Debates in Metaphysics*. Oxford: Blackwell.

Simon, Jonathan. Forthcoming. "Fragmenting the Wave Function." In *Oxford Studies in Metaphysics* 12.

Williams, J. R. G. 2008. "Ontic Vagueness and Metaphysical Indeterminacy." *Philosophy Compass*, 3(4): 763–788.

Williams, S. G. Forthcoming "Focality, Analogy, and the Articulation of Concepts." In a Festschrift for David Charles (title pending).

Wilson, Jessica. 2016. "Are there Indeterminate States of Affairs? Yes." In E. Barnes (ed.), *Current Controversies in Metaphysics*. London: Taylor and Francis.

Yablo, Stephen. 2014. *Aboutness*. Princeton, NJ: Princeton University Press.

-------- "Reply to Fine on Aboutness." *Philosophical Studies* 175: 1495-1512.