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Multiple Location and Christian Philosophical Theology

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ABSTRACT: This paper discusses how the possibility of multi-located entities can resolve problems both with the Trinity (i.e. there being one God and three divine people, or the Father knowing things that the numerically identical Son does not) and with the existence of souls.

Something is multi-located if and only if it is exactly located at two or more places at the same time. Hudson [2010] and Pruss [2009] have already discussed how multi-location can solve certain Christian theological difficulties. This paper adds to that corpus by bringing multi-location to bear, primarily, on the Doctrine of the Trinity, and, secondarily, on issues to do with substance dualism.

§1-2 discuss the Doctrine of the Trinity. §1 introduces some basic ideas about the metaphysics of multi-location and shows how they can solve an initial problem with the Doctrine: that God both does and does not know the day of Judgement; §2 then extends these thoughts about multi-location to provide a Latin understanding of the Trinity. By the end of those two sections I will have demonstrated that at least one defence of understanding the Trinity is available to the Christian.

§3 shows how similar moves can be made with regards to our souls: we are entities multi-located both in spacetime (and so are physical) and some atemporal realm (and so are also substance dualistic souls). This helps both with making substance dualism consistent with the findings of contemporary science and with making the theory consistent with scripture.

1. The Trinity and Multi-Location

1.1 The Trinity

The Doctrine of the Trinity holds that God is three different people (the Father, the Son, and the Holy Spirit) as laid down in the Athanasian Creed. Start with one immediate problem: in Matthew 24:36, Jesus says of the Day of Judgement: ‘But concerning that day and hour no one knows, not even the angels of heaven, nor the Son, but the Father only.’ Given that, we should believe:

Incompatible Knowledge (IK): The Father knows something that the Son does not know yet the Father is numerically identical to the Son.

It appears, at first blush, to be contradictory (what I call a *prima facie* contradiction).

1.2 Chorology

If God were multi-located, **IK** would not be a contradiction. To explain why, first introduce a ‘chorology’ (that is, a system concerning location).¹ Take the relation ‘___ is exactly located at spatial region ___ (at time ___)’ as a primitive (usually the temporal relativisation will be kept implicit). Use the following examples to ostensibly define it:

The cube is exactly located at just one cube-shaped region.

The Kuiper Belt is exactly located at a scattered region composed of lots of non-overlapping asteroid shaped regions.

A sphere is exactly located at some region with a volume equal to $4\pi/3$ multiplied by the radius (of the sphere) cubed.

Define two more chorological terms:

x is partially located at $r =_{\text{df}}$ r is a sub-region of a region x is exactly located at.

x is multi-located $=_{\text{df}}$ there are two or more distinct regions that x is exactly located at.²

A good example of multi-location would be that of a time traveller [Gilmore 2013; MacBride 1998: 222-3; Pruss 2009: 526; Sattig 2006: 50] (admittedly, this only works if time travel is possible but, following other authors, I set this worry aside as it seems logically possible [Horwich 1987; Lewis 1976] and there are good reasons for further thinking it physically possible [Gödel 1949; Gott 2001; Lloyd *et al* 2011; Morris *et al* 1988; Tipler 1974]). Imagine that eight year old Marty is 4’ tall at 8.59am on November 5th 1976, and seventeen year old Marty is 6’ tall on November 5th 1985. Intent on preventing his younger self from setting fire to a rug, and causing a conflagration in his house, seventeen year old Marty time travels to 9am November 5th 1976. Thus, the following is true:

Marty’s Height (MH): Marty is 6’ tall (at 9am on 5.11.76) and 4’ tall (at 9am on 5.11.76).

If **MH** is true, multi-location must be possible since geometric properties of objects, like size and shape, supervene on the geometric properties of the regions they are exactly located at e.g. a cube must be exactly located at a cube-shaped region, a sphere at a sphere shaped region etc. [McDaniel 2007: 135; Skow 2007]. As Marty is 4’ tall, he must be exactly located at a 4’ tall region. As Marty is 6’ tall, he must be exactly located at a 6’ tall region. Ergo Marty is exactly located at *two* distinct regions. So if **MH** is true, multi-location is possible.

1.3 Resolving *Prima Facie* Contradictions

Already we can see how multi-location bears on problems arising from the Doctrine. **MH**, like **IK**, is a *prima facie* contradiction. If **MH** is true when Marty is multi-located, then **IK** could be true were God to be multi-located. Just as Marty would both believe that setting fire to rugs is an

¹ This chorological system given here is basically that offered by Gilmore [2008: 1228] and McDaniel [2007: 132-33] (although McDaniel terms it ‘occupation’ instead of ‘exact location’). Alternative chorological systems include those by Parsons [2007] and Hudson [2006: 97-122].

² Don’t confuse multi-location, as defined here, with the multi-location of enduring objects (see Effingham [2012] for a list of people who cash out endurantism in terms of multi-location). The brand of multi-location that an enduring entity engages in is *atemporal* multi-location: bearing the *atemporal* exact location relation to multiple spacetime regions. Here we are relying on a different primitive (temporally relativised exact location) and, therefore, a different brand of multi-location (namely *temporally relativised* multi-location). I’ll return to this distinction in §2.6.

excellent source of entertainment (as his past self believes) and that it very much is not (as his future self believes), God can both know and not know certain things.

This is, of course, if **MH** is true. Certainly, as it stands, it's not a contradiction for in (classical) logic it isn't of the form $Fa \ \& \ \sim Fa$, instead being of the (clearly non-contradictory) form $Fa \ \& \ Ga$. A contradiction only arises if we also accept, as a suppressed premise, that if x is 4' tall (at t) then it isn't the case that x is 6' tall (at t) – and, whilst that's true of things in non-time travel scenarios, I take the Marty situation to show that it is false in cases of multi-location. (Carroll [2012] argues likewise, and my arguments in this section are very similar to his.)

Note, though, that the conditional statement is true of the different *versions* of Marty – the same version of Marty can never be both 4' and 6' tall i.e. his past version is 4' tall and not 6' tall; his future version is 6' and not 4'. 'Versions' of multi-located entities will do a lot of work in the sequel, and there are many interesting questions we might have about them (e.g. should we reify them? if so, should they be identified with temporal parts? or temporal parts of life events [Leftow 2004]? or should we be anti-realists about them?). I offer no answers, though. You might thereby worry that my explanation of the Trinity is pointless for, without a metaphysics of the versions that I will appeal to throughout, I've not given a complete explanation of how to resolve the mystery of the Trinity. However, whilst it's true that, in failing to give you the metaphysical story behind versions (e.g. whether we're ontologically committed to them; if so, what are they?) I've failed to give a complete story of the most fundamental facts explaining the Trinity, that doesn't mean that what I say doesn't do anything to explain the mystery of the Trinity. Compare: our current ignorance of the fundamental nature of electrons (are they, fundamentally, superstrings? are they charged in virtue of some true statement about quantum fields?) is no threat to electrons playing a role in a useful and informative explanation of the chemical properties of carbon. Analogously: *prima facie* contradictions like **IK** make the Doctrine, at first, seem unintelligible; by showing that such *prima facie* contradictions are true of multi-located Marty, and showing how God can be multi-located like Marty is, we make the Trinity intelligible (even if more remains to be said, and that parts of the theory could be subject to further metaphysical inquiry). My central aim is only to make transparent what is currently opaque, and show that the Doctrine of the Trinity isn't as openly contradictory as it, at first, appears; my aim is not to tell the one true, fundamental story about what is going on.

1.4 The Deviant Stature Approach

Someone might deny **MH**. For it to fail to be true, both conjuncts must fail to be true (for it'd be arbitrary to think only one fails to be true) such that, e.g.:

Marty's Height – Left Conjunct (MH_{LC}): Marty is 4' tall at 9am, 5th November 1976.

fails to be true. Call this the 'Deviant Stature Approach', as it raises odd questions about Marty's height.

There's no motivation for thinking **MH_{LC}** takes some third truth value, or lacks a truth value, for situations where it's reasonable to say that sort of thing – e.g. cases of vagueness – are nothing like the situation we have here. Nor does it seem right to think **MH_{LC}** is meaningless – after all, all other assertions about height are meaningful, so why not this one? So for **MH** to be false, **MH_{LC}** must be false.

The falsity of **MH_{LC}** must arise either because every sentence of that ilk is false or because **MH_{LC}** has a time traveller as its subject. If it's the former then no-one has any height at any time, which is absurd. So statements like **MH_{LC}** must be true except when they feature multi-located entities like, e.g., time travellers standing next to themselves. But that's equally absurd: we could then only be sure of someone's height if we were sure that their later or future selves weren't travelling in time. But it's bizarre to think I should harbour doubts about, say, Barack Obama being 6' 1" unless I've scoured the universe to make sure his 8 year old 4' self hasn't fallen through a rift in time. A referee objected to this, saying that my own theory is just as bad as I can't say Obama *isn't* 4' tall for the same reason. But my theory permits me to be sure of *some* height based propositions (e.g. Obama's being 6'1") even if others (e.g. Obama's not being 4' tall) are thrown into doubt. As the alternative is that *all* height based propositions are thrown into doubt, and knowing some propositions about height is better than none, my theory wins out (and note that the propositions I know – being the positive propositions about what height someone *is* rather than what height someone *isn't* – are the more important ones). In short: denying **MH** leaves us with absurd consequences. So we should think that, in multi-location cases, sentences like **MH** and **IK** can be true.

1.5 The Problem of Multi-Located Intrinsic

Those acquainted with contemporary metaphysics might worry that I've accidentally gone awry. The above discussion is reminiscent of the problem of temporary intrinsic: if a piece of wood, *W*, is round in the morning and I shave it down so that it's square in the evening then 'W is both round and square' is true [Lewis 1986: 202-5]. But we don't take from this that there's a true contradiction. Instead, we conclude that certain fundamental metaphysical facts, which don't have a contradictory form, are true e.g. that *W* has a round temporal part and a square temporal part or *W* is round related to one time and square related to another. **MH** seems similar, and will – so the thinking goes – demand a more fundamental fact e.g. that Marty has two temporal slices that at exist at the same time, one 4' tall and one 6' tall; or that Marty is 4' tall relative to one region of space and 6' tall relative to another [Hudson 2010: 99]; or that Marty is 4' tall relative to one personal time and 6' tall relative to another (where we use 'personal time' as Lewis [1976] does – see Carroll [2012] for discussion).³ In any case, whatever story is told, the objection would be that when we understand the deeper metaphysical story, we won't worry about **MH** – similarly for **IK**.

I admit there's a parallel between temporary and multi-located intrinsic but, interesting as the problem of multi-located intrinsic might be, discussion of it here erroneously changes the subject. Consider what Lewis says about the original problem of temporary intrinsic:

It is *not* a solution just to say how very commonplace and indubitable it is that we have different shapes at different times. To say that is only to insist – rightly – that it must be possible somehow. [1986: 204]

³ Leftow appears to relativise to personal times, but denies that Marty would be 4' tall at the external time (externally) simultaneous to the personal time he is 4' relative to [2004: 107], so appears to instead endorse the Deviant Stature Approach.

So it's true that *W* is round at one time and square at another time but, says Lewis, this fact isn't pertinent as it's not a good explanation, *qua* fundamental metaphysics, of the apparent contradiction. However, it is pertinent to this paper for, just as we acknowledge that it is non-contradictory that *W* can be round at one time and square at another (but then demand a metaphysical explanation of it in fundamental terms) we should acknowledge that it is non-contradictory that one version of Marty is 4' tall and another is 6' ft tall (but add that this fact is merely, not fundamentally, true – that is, finding a deeper, metaphysical explanation of it is a task which remains). This acknowledgement is all we need for the purpose of this paper, as the deeper metaphysical explanation is irrelevant given the subject matter of this paper. When offering explanatory theories, and when dispelling mysteries, it is sufficient to only have true sentences feature in such theories, rather than the theory consisting solely of fundamentally true sentences. And this makes sense for, whatever deeper metaphysical explanation is eventually provided, we'll still accept that sentences like '*W* is round at one time and square at another' are true and, similarly, that it'll still be true that one version of Marty is 4' tall and another 6' tall. Those sentences admitting of a more fundamental metaphysical explanation – that is, their being merely, not fundamentally, true – is by the by. Consider: lest advancements in most disciplines come to a halt, people who don't know how to resolve the problem of temporary intrinsics (i.e. everyone except, perhaps, a select few metaphysicians) needn't stop advancing theories that require objects to change their intrinsic properties. Even if some metaphysical conundrum is connected with change, we shouldn't stop using facts involving objects having different properties at different times in our theories! Similarly, if God were multi-located we can use this fact to show how the *prima facie* contradictory **IK** can nonetheless be true (albeit merely true) even while acknowledging that some deeper, metaphysical truth stands to be uncovered at a later date. Not having that deeper, metaphysical explanation presently to hand doesn't prevent us from dispelling some of the mystery of the Trinity – in particular showing how multi-location permits **IK** to be true without bringing about a contradiction. As long as we can get our head around time travel stories (which millions of sci-fi film aficionados agree that we can) then statements like **IK** will end up being only as mysterious as those situations (which I count as a victory). Thus my move here mirrors that I made concerning versions: genuine progress can be made concerning the Doctrine of the Trinity even if we remain ignorant of some of the fundamental metaphysical facts involved in that explanation (i.e. those concerning multi-located intrinsics and/or the metaphysics of versions).⁴

2. The Trinity and Modalism

2.1 Modalism

The above shows how multi-location can solve problems with **IK**, but comparing God to time travellers does nothing to show how there can be one God and yet three Divine People. We

⁴ This isn't to say that the problem of multi-located intrinsics isn't interesting, although I doubt the extant solutions work: temporal parts can't play the role because, as I've argued elsewhere [2011], one cannot get a workable definition of 'temporal part' in a time travel scenario; nor does Hudson's relativising to spacetime regions help as there could be a time travelling boson such that two versions of it with incompatible spins superpose. Nonetheless, the problem does cast some light on the associated problem with temporary intrinsics. For instance assuming one expects the same answer for both the problem of temporary intrinsics and multi-located intrinsics, presentism is no longer on the table as it doesn't solve the problem of multi-located intrinsics.

might meet Marty's younger self, his 16 year old self and his future 70 year old self all at once, but we'd only *mistakenly* believe they were three people – it is, in fact, just one person we're meeting three times over. The analogue position concerning the Trinity is Modalism: the Father, the Son, and the Spirit are one being who appears to have three different 'modes' (as, say, Superman/Clark Kent does) that we mistake as three different people. I assume, along with most Christian philosophers, that we should avoid Modalism.

Solve this by leaving behind time travel stories and focusing solely on multi-location. Time travel cases are merely heuristic devices to help us get a grip on what multi-location involves – namely that multi-location is possible and that statements like **MH/IK** are true – but they are not the only scenarios according to which multi-location occurs.

2.2 Multi-location without time travel

First, let's understand how to have multi-location without time travel. It's a standard meme in contemporary metaphysics to accept a Humean-esque combinatorial principle whereby (roughly) every combination of objects and fundamental properties/relations is possible. If, as seems reasonable, exact location is a fundamental relation, it follows that any object could bear the exact location relation to any plurality of regions (Sider [2007: 52-53] has presented a similar argument; see also Gilmore [2013 §6.2]). If we deny that exact location is a fundamental relation, I nonetheless suggest that what fundamental relation(s) it derives from can, themselves, be recombined to permit multi-location. There's seemingly no demand that the recombined scenarios involve time machines (indeed, such a demand would be an anti-Humean necessary connection!).

Certainly there are already putative examples of multi-location without time travel in Christian theology. The Eucharist, where Christ becomes present on the altar, and therefore is exactly located at *many* altars simultaneously, is one case. Supporters of this understanding of the Eucharist include Ockham [Francis Clark 1960: 320],⁵ Suárez [Durbin 1967] and Thomas More [Gordon 1976]. Bilocated saints provide a second example. For instance, St. Drogo was seen simultaneously attending Sunday mass and toiling in the fields – he was miraculously located in two places at once [Anon 2010]. (Other examples of Saints capable of bilocation include Clement, Francis of Assis, Anthony of Padua, Francis Xavier, Joseph Cupertino, Martin de Porres and Alphonsus Liguori [Auman 1967] as well as Philip Neri [Cross and Livingstone 1997].)

Once we separate multi-location from time travel, we should accept that patterns of exact location instantiation can be fixed in anyway consistent with whatever Humean principle of recombination we take to be true. So God (being omnipotent) can fix the relations however he wants – just as long as the pattern that results is logically possible. Let us turn to how this can solve the problem of the Trinity.

⁵ According to Francis Clark, Ockham believed that the ability to multi-locate was dependent upon Christ becoming point-sized. Thomas Flint suggested to me that this might be because of the standard belief that the whole of Christ is located in each part of the consecrated host – if 'located' meant 'exactly located' then Christ would need to be point-sized.

2.3 Avoiding Modalism

With this in mind, Modalism can be avoided. Start with a scenario involving multi-location without time travel, e.g. one involving a bilocated Saint like St. Drogo, who ends up (for a period of his life) being exactly located at two different regions. Drogo has *prima facie* contradictory properties such as simultaneously standing in the field and sitting in Church, or simultaneously desiring to be in the Church because it's too hot in the field and desiring to be in the field because it's too hot in the Church.

But if different versions of a substance can differ a little, they could differ a lot. Imagine someone multi-located from the beginning of their life to the end (rather than Drogo's temporary mid-life multi-location). Call them Alex. Rather than Alex's versions differing over trifling matters, such as toiling and sitting, the two versions of Alex are radically different: one is born a boy in America, who grows up to become a strapping man who toils in the fields, whilst the other is born a girl in Japan, who grows up to become a petite woman who plays the violin. Rather than differing over minor mental states, such as Drogo's considering how hot he is, they differ radically. Each version is phenomenologically and mentally equivalent to, respectively, a boy growing up in America and a girl growing up in Japan – they never even realise they're two different versions of the same substance.

I think it intuitive that, in this situation, Alex is two different people – one a strapping American man, the other a petite young Japanese girl, and that '___ is the same person as ___' is a two-place predicate that ends up functioning like '___ is the same President as ___' or '___ is the same CEO as ___' whereby the relata can be numerically identical even though the two-place predicate fails to hold.⁶ Grover Cleveland was both the 22nd President of the USA and the 24th President of the USA – so the Cleveland of 1886 isn't the same President as the Cleveland of 1894, but they are, nevertheless, numerically identical. To press the example, imagine the Cleveland of 1894 travelled in time to 1886; there would be two different Presidents who were nevertheless numerically identical at the same time. Or imagine that Bill Gates, who is currently CEO of Cascade Investment and not Microsoft, travels to 1975, when his former self was CEO of Microsoft but not Cascade Investment. They are the same entity but not the same CEO. If the 1975 shareholders of Microsoft needed their CEO to make a decision, then the future version of Bill Gates would not suffice – whilst he would be identical to the CEO of Microsoft, and even be a CEO himself, he wouldn't be the same CEO as the one they needed. I claim that the scenario involving Alex demonstrates that '___ is the same person as ___' functions in much the same way.⁷

This would explain God's multi-location. God the Father is exactly located at Heaven. He then miraculously fixes the exact location relations just as He requires such that He is also exactly located at some place in space and time (namely, where the Son is). Then (depending upon your

⁶ Notice that I retain the classical, absolute notion of identity – I am not relativising identity to a sortal (*à la* Cain [1989], Geach [1967], or Zemach [1974]). My commitment – that in addition to classical identity, there are two-place predicates of sortal-relativised sameness – is innocuous.

⁷ As being a CEO or being a President is a 'metaphysically lightweight' matter, does that make personhood likewise? If it does, I don't see what the problem is – the Doctrine of the Trinity isn't committed to personhood being 'metaphysically heavyweight'. All that is true is that the Doctrine involves serious theological matters, and not every serious theological matter is metaphysically heavyweight e.g. facts about gender are not metaphysically heavyweight facts, but are crucial to very serious theological debates.

reading of *filioque*) either the Father (or, jointly, the Father and the Son) repeats this to get a third version of God (the Spirit). God is then, like Alex: three people but one multi-located entity.

2.4 Objections

Objection One: I am wrong to think Alex is two people. Alex is just one, very strange, person that I might – if I don't know all the relevant chorological facts – mistake for being one person. A stronger objector will say I'm mistaken about time travelling Cleveland/Gates as well, and that they *are* the same President/CEO.

Reply One: We need to be careful not to grind to a halt with simple intuition bashing – me claiming that it is intuitive that Alex is two different people, my opponent claiming that it isn't. First deal with the stronger objector. We can certainly *coin* predicates with the features I need. Even if you thought Cleveland/Gates were, when time travelling, still the same President and the same CEO, we could coin a new two-place predicate – '___ is the same President[♦] as ___' or '___ is the same CEO[♦] as ___' – which functioned almost the same as the regular predicate except that, in the time travel cases given above, Cleveland/Gates are not the same President[♦]/CEO[♦]. Predicates can be made up, and we can dictate how they function however we like; metaphysics cannot tyrannically oppress language! Indeed, if time travel were commonplace, we would have excellent reason to talk solely about Presidents[♦] (or what have you) in order to ensure that decisions of state were made by the version of the person democratically voted in rather than their future or past versions. Similarly, we can definitely coin a two-place predicate '___ is the same person[♦] as ___'.

Now the bone of contention is clear: does the two place predicate '___ is the same person as ___' that appears in natural language mean '___ is the same person[♦] as ___' or does it mean some similar two-place predicate that doesn't permit the numerically identical people to fail to be the same person (call that predicate '___ is the same person[•] as ___')? (Indeed, I just need the weaker claim that '___ is the same person[♦] as ___' is a *legitimate disambiguation* that the authors of the Creeds were divinely inspired to pick out.) It'll be hard to show that we pick out '___ is the same person[•] as ___' rather than '___ is the same person[♦] as ___' as the only situations in which we say someone is the same person[•] and not the same person[♦] are situations involving multi-location. As such situations have not arisen, actual usage alone won't prove my objector right.

There are, however, reasons to think we pick out '___ is the same person[♦] as ___'. Personhood intuitively has something to do with *immanent causal links*. Immanent causal links are those causal links an entity bears to itself from one time to another whereby the way it is earlier on causes how it is later on. A heuristic is to imagine an indelible mark on a given entity: the entity immanently causes (some of) those things that continue to have the mark stamped on them. If you mark me, then (later in the day) the mark will remain, for my earlier self is immanently causally connected to my later self. It's common to believe (as, e.g., Leftow does [2004: 101]) that people must be immanently causally related to their later selves. Turn to time travelling Marty. Having stuck such a mark on past Marty's forehead, he'll have that self same mark on his head in the future, so in the room in 1976 there'd be a child and a man with the same mark on their head. Given the immanent causal link we have a strong indicator that they're the same person. Multi-located Alex, however, doesn't have such connections for a mark placed on either version's head won't appear on the other. The versions *aren't* immanently causally related. So, as immanent

causal connections are needed for personal identity, we should favour thinking ‘__ is the same person as __’ means ‘__ is the same person ♦ as __’ rather than ‘__ is the same person • as __’.

Objection Two: Alex is impossible for, whilst it has been conceded that multi-location is possible and minor differences between versions can arise (as they do with Drogo), that variation cannot be so broad that Alex is possible.

Reply Two: Certainly some cases of putative multi-location are impossible e.g. Alex could not be multi-located such that one version is a person and the other is a table. But this is best explained by the standard position that things have essential properties. Alex is essentially a person (and essentially not a well hewn hunk of inanimate mahogany) so every version must be a person, and the versions can vary only with regards to accidental properties. The person/table situation is now impossible, but Alex (who is not essentially an American field worker, not essentially male etc.) only has varying accidental properties and *is* possible.

For it to be a problem, there must be a competing principle that permitted scenarios already conceded (i.e. Marty and Drogo) and yet excluded Alex. The only alternative I can think of is to say that, necessarily, each stage of an object must be immanent causally inter-related. This rules out Alex (and multi-located people-tables) since the stage of Alex that is a strapping man isn’t immanently causally related to the stage that is a petite violinist. And it would still allow for Marty (as all of his stages are immanently causally related) and St. Drogo (for his multi-located versions are immanently causally related to his singularly located past self and his singularly located future self). However, this alternative rallies against a popular position in metaphysics, namely diachronic unrestricted mereological composition. Given that thesis there are objects like that which exists from 1990 to the end of 1991, such that at every moment it exists during 1990 it is composed of the atoms that make up some turnip and at every moment from 1991 it is composed of the atoms that make up Luciano Pavarotti [*cf* Varzi 2003]. If we dabbed an indelible mark on the turnip in 1990, then that mark won’t turn up on Pavarotti a year later – there are no immanent causal links between that gerrymandered object’s earlier stages and later stages. Nonetheless, it’s a popular metaphysical position to think it’s a bona fide object, and that there can be one, numerically identical thing throughout, even without such immanent causal ties. So immanent causal inter-relatedness appears to be too strong a condition to demand all objects meet. (Some people disagree about exactly this – for instance, Balashov [2003] thinks immanent causation is intimately tied to composition – so there may yet be a problem; but such objections have not marginalised universalism so my position will find broad appeal as it stands.)

2.5 Comparisons to Other Latin Views

My response is a Latin response: each Divine Person is numerically identical, yet somehow a different person. There are other Latin responses available, and this sub-section explains the benefits of my own theory versus those competitors.

Leftow’s Latin response is the most pertinent for it also uses time travel to respond to the problem of the Trinity. Some preliminary comparisons favour my account. Firstly, some worry that Leftow cannot escape the charge of Modalism (e.g. Rea [2009: 410-12]). Given my account of how God is like Alex, no such problem plagues my account. Similarly, Leftow [2007] later alters his account such that the Divine Persons are a type of event, rather than a substance, which

seems worrying. As my account identifies each person with the same substance – just like any other person – it doesn't have this issue.

Nor do the comparative benefits of my account stop there. Leftow's response to the problem of the Trinity is to be accomplished by drawing analogies with time travel. I drop the focus on time travel, and instead concentrate on multi-location, cashing out my theory purely in terms of God literally (and not analogically) being exactly located at multiple regions. Unlike Leftow, I'm not telling you what God is *like*, I'm telling you how God *is* (or, as this is a defense of the Trinity, how God could literally be). It's a theoretical virtue to provide a theory that says how things literally are rather than providing merely an analogical device, so my theory delivers a better account than Leftow's. (Compare: whilst it has pedagogical value to be told that gravity works a bit like a heavy ball causing a dimple in a rubber sheet, the literal truth cashed by general relativity has more explanatory power.)

Indeed, it is this feature – giving a literal tale about how God is, rather than what He is like – which means you should favour my view over alternatives. For instance, Morris [1991: ch. 9] claims that God might be analogous to a person with multiple personality disorder, whilst Merricks [2006] argues that the Trinity is more akin to situations involving commissurotomy. Both, then, tell you what God is like, rather than detailing how He literally is; my theory, again, has superior explanatory power by providing a literal, not merely analogical, explanation.

2.6 The Father's location

That is, of course, only if you agree that I've given a literal account. You might worry that it must still be analogical for, whilst the Son (and maybe the Spirit) is exactly located somewhere in space and time, the Father (and maybe the Spirit) is not, for He is eternally timeless and so located nowhere. In that case, I would have failed to give a literal explanation as the Father is not a multi-*located* version of God, and God would at best be merely analogous to multi-located Alex.

I deny this. Let's (charitably) assume that the Father is a timeless, atemporal being. Even a timeless Father is literally, and not analogically, exactly located somewhere – that is, there is something to which He bears the 'exact location' relation (being precisely the same relation that any concrete entity bears to a region of space). That something is a single point. That point is not a *spatial* point, nor a *spatiotemporal* point, nor a *time*; it is simply a point, unrelated by any spatiotemporal (or analogous) relation to anything else (including itself). But it *is* intrinsically identical to the points of spacetime – that point is not an item of a different ontological category that we must add to our ontology just for the sake of my theory about the Father's location (ergo, as I shall explain below, being a spacetime point, rather than simply a point, is an *extrinsic* property of a point). This point, like all other relata of the exact location relation, suffices to serve as the relatum of the exact location relation the Father stands in. He is, then, literally located at something (albeit not a region of space or time).

You may doubt that such a thing is possible: how can a point fail to be spatiotemporal in any way, whilst still having something exactly located at it? To show how this is possible, we first need two lessons concerning the nature of points.

First lesson: Treat our universe, u_1 , substantively such that it's a fusion composed of points related by spatial and temporal relations (relativistic concerns are irrelevant here, so feign Newtonianism; similarly, substantivalism has only been assumed for purposes of exposition).

Chorological relations relate entities to parts of that fusion e.g. I am exactly located at region r at t in u_1 . Next (following a paper I co-authored with Joseph Melia [2007]) imagine a universe, u_2 , which is a duplicate of but one instant (e.g. t) from u_1 . So u_2 is only a single hyperplane of points that no longer stand in the earlier than, or later than, relations to any other hyperplane. Presumably, I nevertheless am still exactly located at r , for the other instants not existing at u_2 doesn't leave me untethered from space! Next imagine u_3 : a timeless universe, which is a duplicate of u_2 except that the points aren't even related by simultaneity to one another. That u_2 could possibly exist is a possibility is easy to grasp. If simultaneity is a fundamental relation then (using the same combinatorial principle deployed in §2.2) u_3 is possible for it is just u_2 with instances of that fundamental relation dropped. If simultaneity isn't fundamental, and instead derives from other temporal relations like 'earlier than' or 'later than', then u_2 is already identical to u_3 for, as nothing is earlier than or later than anything else in u_2 , nothing is simultaneous with anything else either and it is a timeless universe. Alongside Sider [2001: 99] I believe that objects at such timeless universes nonetheless have the same intrinsic properties they otherwise would've had at the instant we've 'carved out' using recombination (e.g. just as an object can be charged at a given instant, or coloured at a given instant, it can be timelessly charged or coloured at the timeless universe). Similarly, then, making a universe timeless doesn't unhook me from space, so I am exactly located at r at u_3 .

Second lesson: Imagine (solely for simplicity) a universe, u_4 , at which Chisholm [1989: 126] is correct and people are microscopic – let's say point sized – entities. We can have a further universe, u_5 , consisting solely of those points I am exactly located at. Just as we could remove the other times from u_1 and arrive at a timeless universe, u_3 – in removing all spatial regions other than the one that point-sized Nikk is exactly located at – leaves us with a non-spatial universe. There are still temporal relations between the points, though, so we've arrived at the caricature of Berkeley's idealism: a world without space but with time. As with the above, the removal of the points makes not one jot of difference as to what region(s) point-sized Nikk bears the 'exact location' relation to. So we can radically vary the relations between the points in a different manner, leaving chorological relations unchanged between what's left.

Combine the two lessons and we can arrive at a universe where a person is exactly located at a point but where that point isn't related by any spatial or temporal relations to anything – including itself. It would be a timeless, non-spatial universe (so being a spatial point, spatiotemporal point, time etc. is, unsurprisingly, an extrinsic property that requires the point to be a relatum of a spatial, spatiotemporal, temporal etc. relation [Effingham and Melia 2007: 144]). And if we take the lessons seriously, the timeless, non-spatial nature of the point is no impediment to (timeless, non-spatial) people, e.g. the Father, being exactly located at it. So the Father can literally, not merely analogically, be exactly located at some such point. Our world, then, is composed of two disconnected fusions of points: one fusion is the spatiotemporal universe that we inhabit (and God is exactly located where the Son is) and the other is the single atemporal point at which God is exactly located (where the version of Him that is the Father is).⁸ So God is literally, not analogically, located somewhere.

⁸ This exercise also allows us to tell the difference between concrete timeless entities like God and abstract atemporal entities like numbers, transcendent universals etc. [cf Lewis 1986: 81-86] for now we can say that

2.7 A brief tangent: non-temporally relativised multi-location

A final technicality remains (if you're uninterested by technicalities, nothing is lost by skipping to §3). There are two exact location relations: the triadic temporally relativised exact location relation introduced by ostension in §1.2 ('Object ___ is exactly located at spatial region ___ at time ___') and a dyadic atemporal exact location relation ('Object ___ is exactly located at spacetime region ___') where the latter holds between, e.g., perduring entities (if there be any) and spacetime regions, as well as between spacetime regions and themselves (at least if we assume spacetime regions are located at themselves, which is not unreasonable [Parsons 2007: 224]). Thus far we have exclusively discussed the former, in particular §1.2's time travel scenario demonstrates only the cogency of temporally relativised multi-location and does not clearly demonstrate the possibility of atemporal multi-location (see also Effingham [2010]). When I have moved from the multi-location of Marty to the multi-location of a Godhead that has a version exactly located at a timeless, non-spatial fusion I (at first glance) appear to now rely on atemporal multi-location, for, as the Father's location is timeless, you may think that the chorological relation the Father bears to it is atemporal. In short: I shifted to relying on the possibility of something I haven't shown to be possible.

Deal with this by looking again at u_1 and u_3 where, in both universes, I argued that we should think I am exactly located at r . But in the timeless universe u_3 should we then say that the relation in question is temporally relativised exact location or atemporal exact location? If it's atemporal exact location then imagine a timeless universe, u_6 , which is an intrinsic duplicate just of that instant from 9am on the 5th November 1976 at which Marty is multi-located in the temporally relativised sense. If, at u_3 , I am atemporally exactly located at r then, just as Marty is exactly located at two regions at the same time in 1976, Marty will be atemporally exactly located at two regions at u_6 . So there *would* be an example of the possibility of atemporal multi-location (indeed others, such as Gibson and Pooley [2006], already accept such a possibility). If, alternatively, we think that at u_3 I bear the relation of temporally relativised exact location to r even though the universe is timeless, it transpires that it's just a very badly named relation which sometimes doesn't hold relative to any time. Instead it is either a relation with a variable adicity (so, at a timeless universe, becomes dyadic) or (if, like Sider [2001: 99] you aren't happy with such a proposal) the relatum that takes the place of that slot can be any fusion of points, not just a hyperplane identified with a time [cf Effingham and Melia 2007: 145]. In either case the original scenario of Marty time travelling demonstrates that this (badly named) relation can hold many-one. So God can be related to both the timeless, non-spatial point which the Father is to be located at and to the regions of space Christ is exactly located at, by the same (badly titled) relation of 'temporally relativised' exact location (which, it transpires, sometimes holds in non-temporal circumstances). No matter how we play it, God can be literally multi-located in the required sense.

abstracta are the unlocated things and concreta are the located things, for even timeless entities like God are located at some point. Chorology, therefore, reveals to us the mark of concreteness.

3. Souls and the Afterlife

Multi-location can also help us achieve a version of substance dualism consistent with contemporary science. A sample of problems dualism faces includes: evidence that our brain is the origin of our body's actions, and not some nonphysical soul; that our neural activity is so closely correlated with our mental states that the two must be the same [Churchland 1990: 20; van Inwagen 2002: 196-98]; that just as there are problems with combining a timeless god with the theory of special relativity (see Craig [2009: 149-51]) there will be problems with souls being in time but not in space. I do not deny that a standard Cartesian or Thomist style dualism could resolve these problems, nor that Christian materialism [Merricks 1999; van Inwagen 1978] is a viable alternative. However, I think there is an interesting alternative to both. Rather than believing that the soul is in time but not space, we should believe that it is in neither, instead locating it at some timeless, non-spatial point (or fusion of such points).

Initially, this sounds crazy. The soul is that thing in which my complex, changing mental states inhere and it's difficult to see how I can have changing mental states if, in fact, I am atemporal. Even if we could account for the illusion of phenomenological change, we have a problem concerning widespread error. For example, I believe I am *now* writing a paper and am *not now* in pain from attending a dental appointment when I was 15. But one should say either that every fact about what goes on at any time is true now from the standpoint of an atemporal timeless region (ergo, I am wrong about not now being in pain – from the timeless standpoint I am now in pain!) or that no such fact is true now from that standpoint (ergo, I am wrong to believe I'm writing the paper now). Either ways, the theory implausibly commits us to believing there is widespread error in everyone's belief structure. And, in any case, this theory does nothing to avoid the anti-dualist arguments from above (with the exception of the problem from special relativity, which is only an issue with regards to temporally located souls).

The view is less crazy, however, if I say I'm multi-located, such that there are two versions of me: one exactly located at an atemporal point, the other exactly located at the region(s) in space and time that the materialist says I am exactly located at. This means that one version of me is a physical thing and I can agree with the materialist that I am a biological entity, physically located in the universe. For each problem the materialist raises against dualism, I then rely upon the same response to it that materialists do. For example, when the materialist says that the reason my body moves is not because of a soul sending magic rays to move my limbs but because my brain causes my limbs to move, I agree. My brain *does* make my body move (and my soul does not) – whilst a version of me is an immaterial timeless soul, I deny that the 'soul version' is sending signals of any sort to the material world, or interacting in any way with my body, for the brain-version of me does all the work in that regard. Just think back to Alex: what causes the violinist to play the violin is one thing (the brain of the violinist-version of Alex) even though Alex has other mental states – those belonging to the version of Alex as a strapping young man – that are causally isolated from making the violinist version of Alex do anything. So when the materialist argues that the reason my brain states cohere with my mental states is because I am my brain, I agree! I *am* my brain (although, you should note, I am *also* a nonphysical soul) just as Marty is his younger self (and also his older self). And so on for all of the objections generally levelled against substance dualism. My theory is still, however, a substance dualist theory as I add that I am also

exactly located at the timeless point. So I am *also* a soul, which is nonphysical, and so substance dualism is true.

Assuming that it makes sense to say that things can have mental states at a given instant (making mental states comparable to instantaneous accelerations), which, if you're happy with the idea of a timeless Father, is a fair assumption, then I will have the same mental states in u_3 as I had at some given instant in u_1 . In general, then, entities that are timelessly and spacelessly located can have mental states. So imagine that God sees what I am like at the end of my mortal life and takes a 'snapshot' of my mental states at that last instant. (Indeed, given §2.3, for my soul to be the same person as me we'll need to add that the last slice stands in immanent causal connections to my soul. This is not problematic, and moreover bears out 1 Corinthians 15: 46 which says that the natural body is prior to the soul, for my theory makes it causally prior to the soul.) When God multi-locates me He ensures that the version that is exactly located at the timeless, non-spatial point has those mental states. God could even alter them slightly to reflect His judgement about my temporal life. Maybe I'm timelessly – dare we say eternally – basking in God's glory, or timelessly – dare we say eternally – feeling remorse and suffering punishment without needing there to be beth-one years of devils poking me with pointy sticks. (And if you demand a literal resurrection, just maintain that God ensures that the first slice of your resurrected brain has the same mental states, and is immanently caused by, your timeless soul.)

So I am physical *and* I am nonphysical; I am timely *and* I am timeless; I am eternal (in the sense of being timeless) even though I live for only a set amount of time. None of this is contradictory, in the same way that **MH/IK** are not contradictions. As made clear above, this theory will be compatible with all scientific discoveries concerning the mind. Of course, it requires things like timeless heavenly realms, which one may think are inconsistent with contemporary science, but a commitment to such things is a commitment any Christian should have. Moreover, science not including things like a place for a timeless God (and the souls) to dwell is not worrisome in the way that dualism's problem of accounting for neuroscience's success (or its apparent inconsistency with special relativity etc.) is worrisome. The, more serious, latter worries are ameliorated by my theory.

This theory does undermine most arguments for dualism. For instance, we could no longer argue that substance dualism was true because matter and mere neural activity cannot be responsible for qualia. But this is a positive point, not a negative, point for the type of Christian I am trying to attract to this theory, namely one who feels overwhelmingly attracted to the philosophical/scientific virtues of physicalism but also feels pressed into thinking substance dualism is true because of scripture. They'll be happy to give up on arguments for substance dualism that rely on such anti-physicalist sentiments. You might, then, wonder why we would believe such a version of dualism.

The answer is that the theory manages to bear out the relevant portions of scripture. There are many comparisons of sleep to being in the afterlife (e.g. 1 Thessalonians 13 – 15; 1 Corinthians 15: 6, 20; Luke 8: 52). Sleep can be characterised by a lack, but not a total lack, of consciousness and awareness, as well as the strange effect it has on how we perceive time. So if we were to try to convey the idea of a timeless existence, to say we are 'sleeping' would be one way to gesture at it. Moreover, it's now quite easy to square the claim in Jeremiah 51: 39 that the wicked would be sent to a *perpetual* sleep with the standard position that everyone, including the wicked, will

eventually be resurrected. Short of a strange supertask, if your afterlife were temporal, you could not perpetually sleep and *then* come back to wakefulness ready for the resurrection, so we have a tension. We can resolve this tension by treating the claim about sleeping in perpetuity to be a way of gesturing at the timeless nature of the afterlife, since your existence in the afterlife never expires so is, in a sense, perpetual. The wicked are immanently connected to their timeless soul, so when they die they enter a state of ‘perpetual sleep’ and that soul is connected to their resurrected body, so they manage to ‘perpetually’ sleep but still return to face judgement during the Resurrection. Thus it is that my proposed theory deals with this scriptural element perfectly (it also makes for an interesting alternative to the theory of psychopannychism [e.g. Cullmann 1958], which is an alternative method for accounting for Biblical allusions to a sleep/death connection). Finally, consider Davis [1993: 88] who argues that we should believe that we go to an afterlife upon dying to bear out Luke 23:43, wherein Christ says that the criminal who died alongside him would today be in paradise (rather than having to wait around until Judgement Day). Given my theory, the Father knows how the criminal is at the last instant of his existence and ensures that he’s multi-located in the timeless, non-spatial afterlife that is paradise. Jesus’s words now come out as true, for if ψ is true and ψ is a timeless truth then ‘It is now the case that ψ ’ is true (e.g. it’s now the case that $2+2=4$). The criminal is in timeless paradise, so it’s true for Jesus to say that he is, today, in paradise. Indeed it’d be correct to say he was yesterday and last week (but, doubtlessly, there’s little reason to explain such metaphysical nuances to a dying man, so no wonder Jesus stuck simply with ‘today’!). When it comes to claims that Jesus, or whomever, has not yet ascended into Heaven (e.g. John 20:17) this, too, is compatible with what I say. We can take that sentence as being broadly elliptical for saying that the current time slice of you isn’t the one that God has decided to replicate in the timeless, non-spatial realm, and that it is a later time slice of you that God has replicated the mental states of.

So, my version of dualism manages to avoid the usual objections to dualism and manages to not only be compatible with the scripture but, in certain cases (e.g., Jeremiah 51: 39) it manages to resolve *prima facie* tensions within scripture. Exactly why God would set things up this way – and why He would have you be a multi-located entity as so described – I won’t comment on in this paper; nevertheless, I think this interesting spin on substance dualism is worth noting.⁹

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⁹ Whilst separate from the theory proposed above, it’s worth pursuing in this footnote how issues raised in this paper can explain Lowe-style causal interactionism whereby the causal chains in the universe are all purely physical but souls are responsible for the chains themselves [Lowe 1992]. Anecdotally, people have a hard time understanding this. But imagine a two-temporally dimensional world of time and hypertime. Imagine, *per impossible*, that God and the souls all exist at but one time at hypertime T_1 . They jointly cause lots of physical things to appear, in certain arrangements, at hypertemporal instant T_2 , at each of the times during T_2 . Imagine a second world where the hypertemporal relations are recombined away, but leave the causal relations. That leaves you with a Lowe-style world where souls and God are jointly responsible for the purely physical causal chains. Whilst this is not my theory of the soul, it is noteworthy.

5. Bibliography

- Anon. 2010. Saint of the Week. *Catholic Herald*, 16 April, 18.
- Aumann, J. 1967. Bilocation, Mystical, *New Catholic Encyclopedia*, Palatine, Ill: Jack Hearty & Associates.
- Balashov, Y. 2003. Restricted Diachronic Composition, Immanent Causality and Objecthood: A reply to Hudson, *Philosophical Papers* 32, 23-30.
- Cain, J. 1989. The Doctrine of the Trinity and the Logic of Relative Identity, *Religious Studies* 25, 141-52.
- Carroll, J. 2012. Self Visitation, Traveller Time, and Compatible Properties, *Canadian Journal of Philosophy* 42, 359-70.
- Chisholm, R. 1989. Is There a Mind-Body Problem?, in R. Chisholm (ed.) *On Metaphysics*, Minneapolis: University of Minnesota Press.
- Churchland, P. 1990. *Matter and Consciousness Revised Edition*, London: MIT Press.
- Craig, W. 2009. Divine Eternity, in T. Flint and M. Rea (eds.) *The Oxford Handbook of Philosophical Theology*, Oxford: OUP.
- Cross, F. and Livingstone, E. (eds.) 1997. *The Oxford Dictionary of the Christian Church 3rd edition*, Oxford: OUP.
- Cullmann, O. 1958. *Immortality of the Soul or Resurrection of the Dead?*, London: Epworth Press.
- Davis, S. 1993. *Risen Indeed: Making Sense of the Resurrection*, Grand Rapids, Michigan: Eerdmans.
- Durbin, P. 1967. Bilocation, *New Catholic Encyclopedia*, Palatine, Ill: Jack Hearty & Associates.
- Effingham, N. and Melia, J. 2007. Endurantism and Timeless Worlds, *Analysis* 67, 140-7.
- Effingham, N. 2010. Mereological Explanation and Time Travel, *Australasian Journal of Philosophy* 88, 333-45.
- Effingham, N. 2011. Temporal parts and time travel, *Erkenntnis* 74, 225-40.
- Effingham, N. 2012. Endurantism and Perdurantism, in R. Barnard and N. Manson (eds.) *Continuum Companion to Metaphysics*, London: Continuum.
- Francis Clark, S. 1960. *Eucharistic Sacrifice and the Reformation*, London: Darton, Longman & Todd.
- Geach, P. 1967. Identity, *Review of Metaphysics* 21, 3-12.
- Gibson, I. and Pooley, O. 2006. Relativistic Persistence, *Philosophical Perspectives* 20, 157-98.
- Gilmore, C. 2008. Persistence and Location in Relativistic Spacetime, *Philosophy Compass* 3/6, 1224-54.
- Gilmore, C. 2013. Location and Mereology, in E. Zalta (ed.) *The Stanford Encyclopedia of Philosophy* (Summer 2013 Edition), URL = <http://plato.stanford.edu/archives/sum2013/entries/location-mereology/>
- Gödel, K. 1949. An Example of a New Type of Cosmological Solutions of Einstein's Field Equations of Gravitation, *Reviews of Modern Physics* 21, 447-50.
- Gordon, W. 1976. Scholastic Problem in Thomas More's Controversy with John Firth, *Harvard Theological Review* 69, 131-49.
- Gott, J. 2001. *Time Travel in Einstein's Universe: The Physical Possibilities of Travel Through Time*, London: Orion Books.

- Horwich, P. 1987. *Asymmetries in Time*, Cambridge, MA: MIT Press.
- Hudson, H. 2006. *The Metaphysics of Hyperspace*, Oxford: OUP.
- Hudson, H. 2010. Multiple Location and Singular Location Resurrection, in G. Gasser (ed.) *How Do We Survive Our Death? Personal Identity and Resurrection*, Farnham: Ashgate.
- Leftow, B. 2004. A Latin Trinity, *Faith and Philosophy* 21, 304-33, reprinted in O. Crisp (ed.) *A Reader in Contemporary Philosophical Theology*, London: T&T Clark. [references are to the reprint]
- Leftow, B. 2007. Modes without Modalism, in P. van Inwagen and D. Zimmerman (eds.) *Persons: Human and Divine*, Oxford: OUP.
- Lewis, D. 1976. The Paradoxes of Time Travel, *American Philosophical Quarterly* 13, 145-52.
- Lewis, D. 1986. *On the Plurality of Worlds*, Oxford: Blackwell.
- Lloyd, S., Maccone, L., Garcia-Patron, R., Giovannetti, V. and Shikano, Y. 2011. Quantum mechanics of time travel through post-selected teleportation, *Physical Review D* 84, 025007.
- Lowe, E. 1992. The Problem of Psychophysical Causation, *Australasian Journal of Philosophy* 70, 263-76.
- MacBride, F. 1998. Where are Particulars and Universals? *dialectica* 52, 203-27.
- McDaniel, K. 2007. Extended Simples, *Philosophical Studies* 133, 131-41.
- Merricks, T. 1999. The Resurrection of the Body and Life Everlasting, in M. Murray (ed.) *Reason For The Hope Within*, Cambridge: William B. Eerdmans Publishing Company.
- Merricks, T. 2006. Split Brains and the Godhead, in T. Crisp et al (eds.) *Knowledge and Reality: Essays in Honor of Alvin Plantinga*, Dordrecht: Kluwer.
- Morris, M., Thorne, K., and Yurtsever, U. 1988. Wormholes, Time Machines, and the Weak Energy Condition, *Physical Review Letters* 61, 1446-9.
- Morris, T. 1991. *Our Idea of God*, Downers Grove: InterVarsity Press.
- Parsons, J. 2007. Theories of Location, *Oxford Studies in Metaphysics* 3, 201-32.
- Pruss, A. 2009. The Eucharist, in T. Flint and M. Rea (eds.) *The Oxford Handbook of Philosophical Theology*, Oxford: OUP.
- Rea, M. 2009. The Trinity, in T. Flint and M. Rea (eds.) *The Oxford Handbook of Philosophical Theology*, Oxford: OUP.
- Sattig, T. 2006. *The Language and Reality of Time*, Oxford: OUP.
- Sider, T. 2001. *Four-dimensionalism*, Oxford: OUP.
- Sider, T. 2007. Parthood, *The Philosophical Review* 116, 51-91.
- Skow, B. 2007. Are Shapes Intrinsic?, *Philosophical Studies* 133, 111-30.
- Tipler, F. 1974. Rotating Cylinders and the possibility of global causality violation, *Physical Review D* 9, 2203-06.
- van Inwagen, P. 1978. The Possibility of Resurrection, *The International Journal for Philosophy of Religion*, 9, 114-121.
- van Inwagen, P. 2002. *Metaphysics, 2nd edition*, Boulder: Westview.
- Varzi, A. 2003. Perdurantism, Universalism, and Quantifiers, *Australasian Journal of Philosophy* 81, 208-15.
- Zemach, E. 1974. In Defence of Relative Identity, *Philosophical Studies* 26, 207-18.