Trouble Up at t'Ontological Mill: An Inconclusive Dialog
A WHIMSICAL POSTSCRIPT IN ONTOLOGICAL FOLKLORE

PETER SIMONS

Department of Philosophy
Room 5009
Arts Building
Trinity College
Dublin 2
Ireland

Email: psimons@tcd.ie
Web: sites.google.com/site/petermsimons/

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"One on't crossbeams gone owt askew on t'treddle."
Monty Python: *The Spanish Inquisition*

Background: Grenon and Smith (2004) propose a framework for the ontology of things in space and time involving and invoking the distinction between continuants and occurrents, which has become a key element of Basic Formal Ontology (BFO). The terminology of SNAP (from "*snap*-shot:" state of a continuant at a time) and SPAN (how an occurrent develops over an interval or time*span*) occurs in that paper's title. While any commonsense ontology will have a place for both continuants and occurrents, there is much room for philosophical debate on whether one of them is more basic than the other, or can be reduced to the other, or whether they are equally fundamental, or whether they are two different perspectives on the same reality. Grenon and Smith opt for the last of these. They call the accounts of continuants (SNAP) and occurrents (SPAN) both "ontologies." They do not have a single ontology of all that is in space and time. This dialog throws a few of the common arguments around a bit and comes to no sure conclusion. But one of the characters bears a faint resemblance to a certain Buffalonian philosopher.

Abstract, Grenon and Smith (2004): We propose a modular ontology of the dynamic features of reality. This amounts, on the one hand, to a purely spatial ontology supporting snapshot views of the world at successive instants of time and, on the other hand, to a purely spatiotemporal ontology of change and process. We argue that dynamic spatial ontology must combine these two distinct types of inventory of the entities and relationships in reality, and we provide characterizations of spatiotemporal reasoning in the light of the interconnections between them.

[Time: the present. Scene: A Philosophy Department Common Room. Four ontologists are discussing change. Three-Dimensionalist (3D) and Four-Dimensionalist (4D) are disputing, the two others are listening.]

3D [in tweed jacket with leather elbow patches, cord trousers, brown Oxford brogues, checked shirt with striped school tie, with chalk-stained fingers, is speaking donnishly at the blackboard]: ... so you see I do not need your events at all. An event is merely a succession of changes to a substance, or what you call a "continuant" (sniffs). Let *C* be any changing "continuant," such as this piece of chalk, a gyrocompass, or a chameleon. Now as Aristotle says in the *Physics* ...

[4D (in shorts and T-shirt with baseball cap and trainers) can contain himself no longer. Throwing down the copy of *Scientific American* that he had been browsing, he jumps up and excitedly runs through Lewis's "temporary intrinsics" argument from *On the Plurality of Worlds*, (Lewis 1986, pp. 202–205) to the effect that because of the threatening inconsistencies in the notion of change, it is best to take *C* to have temporal parts, i.e. be an occurrent. 3D sighs: he has heard it all so many times before.]

[At this point a third and smartly dressed ontologist springs to 3D's defence with a "May I?" With deft and practiced movements, he sweeps chalk dust from the table, places his elegant and state-of-the-art laptop on the clean space, plugs it into the projector, pulls a white screen down in front of the dusty blackboard and starts to click through a large PowerPoint file to reach a slide. He is: SNAP–SPAN Metaontologist.]

SSM: I can avoid the inconsistencies by distinguishing between SPAN, which looks at occurrents over time, and SNAP, which is a series of snapshots (instantaneous states) of continuants at different times (shows several slides in quick succession to emphasize his point).

4D (languidly): I can show using your instantaneous states that *C* has temporal parts after all.

SSM (surprised): How?

4D: I just sum all the instantaneous states together.

SSM: But you can't do that.

4D: Why not? I just did.

SSM: But it's inconsistent. If *C* changes, then its properties at one time are contrary to those at another. What you get by summing states is not *C* but *C*'s life. That's not a continuant, it's an occurrent.

4D: Precisely. *C* and *C*'s life are one and the same.

SSM: But you can't say that. It goes against common sense. It's nonsense.

4D (sarcastically): I don't recognize Oxford ordinary language prohibitions. I am a scientist.

SSM (determinedly): Here's an argument. *C*'s life, being an occurrent, has all its parts essentially. So, if *C* is *C*'s life, *C* could not have existed for a longer or shorter time than it did. But *C* obviously could have ceased to exist earlier or later than it did. So, there is a modal difference between *C* and *C*'s life, which means they are essentially distinct. Even if a continuant exists only for an instant, it could have existed for longer, but an instantaneous occurrent has to be instantaneous. So, no continuant can be an occurrent.

[At the word "essentially," 3D, who had been disconsolately fingering his well-used copy of Liddell and Scott's *A Greek–English Lexicon*, brightens up for a moment, only to lapse into despond again at the word "occurrent."]

4D (briskly): I don't accept your modal distinction. For me what you call *C*'s life could have been longer or shorter. I see no need for the distinction. All objects in time are occurrents.

SSM (persistently): But we cannot identify and recognize occurrents except by identifying and recognizing continuants (Strawson 1959).

4D (sneeringly): That's epistemology. I am an ontologist. Anyway, Strawson may be wrong (Moravcsik 1970).

SSM (recovering): I agree that we need occurrents in our ontology. But like Wiggins (2001), and unlike you, or 3D, I am a continuant–occurrent *dualist*.

4D: By your own admission you have instantaneous states in SNAP, and I have just shown you how to sum these mereologically to give temporally extended things, which are in SPAN. So, you are hoisted by your own petard. Admit it, your dualism is unnecessary and by Ockham's Razor continuants should be discarded in a modern scientific ontology.

[3D groans quietly]

SSM: Let me clarify what I mean. By "instantaneous states" I don't mean entities in the world, but momentary snapshots, consistent representations of what there is at an instant.

4D (incredulously): You mean you don't take them ontologically seriously after all?

SSM: Yes, but not as entities.

4D (with heavy irony): Oh I'm sorry, I thought we were doing ontology. I didn't quite catch the silent quotation marks. That's what linguists do all the time isn't it? They confuse entities with representations. I thought you were against that.

SSM (huffily): I am. Vehemently. Medical Informatics is rife with it, but I'm putting them right. What I mean is that because of change you cannot put different SNAP ontologies together consistently. You need a multiplicity of SNAP on-

tologies, one for each different time, and a SPAN ontology for occurrents.

4D: Why can't you put different ontologies together to get a bigger and more adequate one?

SSM: Because by an "ontology" I mean a consistent theory of things all of which can be mereologically summed.

4D (puzzled): And why can't I put different SNAP ontologies together?

SSM: Because then you would have inconsistencies.

4D (more puzzled): Why? Why can't I merge SNAP ontologies just as easily as I summed instantaneous states (before I understood you — er — correctly)?

SSM (triumphantly): Because then either you'd have a SPAN ontology, which fails to recognize continuants, or you'd have continuants which have incompatible properties. A single ontology cannot encompass both continuants and occurrents, and remember, no continuant can be an occurrent.

[4D lapses into head-shaking silence. At this point the fourth ontologist, who has kept silent until now, clears her throat. She is wearing elegant jeggings and top from a Milan fashion house. Her laptop is metallic pink. She is agnostic about 3D/4D but believes that ontology forms a single unified discipline or field. She is: Unified Field Ontologist.]

UFO (to SSM): So are you saying there is no such thing as ontology, Aristotle and Wolff's science of being *qua* being?

SSM: Yes. I used to think there was, but Medical Informatics changed my mind. Since an ontology concerns only things which can be summed mereologically, and not all things can be summed mereologically, there is not one ontology but many.

UFO: What's wrong with the mereological sum principle, that any two or more entities have a mereological sum?

SSM (amusedly): Would we really say there is a single object consisting of the number 9, the color blue, my computer and the first five minutes of this year's UEFA Cup Final? We don't talk like that.

UFO (flashingly and without a trace of sarcasm): I don't recognize Oxford ordinary language prohibitions. I am a scientist.

SSM (coaxingly): Come on, you have to admit such monstrous (Fine 1999) transcategorial sums are absurd.

UFO (defiantly): Go ahead, make my day. Show me the contradiction.

SSM: Erm … well you have to admit they are pretty bizarre and weird.

UFO: I don't deny that, but so are lots of things. Anyway, even if I admit that there are no transcategorial sums, why does that mean we cannot have a single ontology?

SSM: Because by an "ontology" I mean a consistent theory of things all of which can be mereologically summed.

UFO: Oh yes, so you said. But there's a lot more to ontology than mereology. For instance, if John kisses Mary there are John and Mary, both of whom are continuants, and the kiss, which is an occurrent. They may not (*pace* Lewis, Armstrong and others) be parts of a single mereological whole, but you have to admit they are connected.

SSM (smugly): Oh yes, I do. Entities in all my different ontologies are linked by relations. The theory of these linking relations is what I call "metaontology."

UFO (puzzled herself): But surely the relations in your metaontology are in the world?

SSM (decisively): Yes of course. I am a realist. Well, except that some of the relations are internal, but let's not worry about that.

UFO: So why is the whole consisting of all your ontologies together with metaontology not Aristotle and Wolff's science of being?

SSM: Because the whole is inconsistent.

UFO: Not if you do the job properly.

SSM (firmly): By keeping ontologies confined to consistent maximal mereological ones, I rescue as much of that doomed project as is possible.

UFO: Why privilege mereology?

SSM: Because it's central to ontology.

UFO (pensively): I don't disagree there. But let's see, you presumably think that identity is at least as fundamental to ontology as mereological relations are?

SSM (suspiciously): Yeees — go on.

UFO: Well suppose I confine an ontology to all that can consistently be said of all the things that can be glued together using the identity relation. Then I'd have as many ontologies as entities (smiles cheerfully).

SSM (outraged): But then you couldn't even say in one ontology that *a* is not identical to *b*, or that *a* is a proper part of *b*! That would be intolerable!

UFO: I could deal with all the linking relations between distinct existences in my metaontology, which would contain all yours does and more still, to cope with difference and mereology.

SSM: That would be ridiculous.

UFO: It's no different in principle from what you do.

SSM (trying another tack): But anyway, identity isn't a real relation. Your ontologies would contain only such trivialities as that $a = a$ and that *a* exists. All or nearly all the interesting parts would be relegated to the metaontology.

UFO: The same as in your case. Only once all the fun is in the metaontology I can forget the silly ontologies and just rename the whole thing "ontology," and I get what I want.

SSM: But at least my ontologies are consistent. Your metaontology would not be.

UFO: Why not?

SSM: Because you can't put all the ontologies (including the mereologies) together consistently.

UFO: You can if you do the job properly.

SSM: You said that before. Let's not repeat ourselves. What do you mean by doing the job properly?

UFO: You admit that each of your ontologies is consistent.

SSM: Of course. It's designed to be.

UFO: So a consistent ontology is one that could be completely true?

SSM: Yes of course.

UFO: So all the ontologies could be true together.

SSM (condescendingly): Just because some judgments are consistent and some other judgments are consistent doesn't mean the whole lot are consistent. Take any contingent judgment, say that *p*. Each of *p* and its negation not-*p* is consistent but the pair {*p*, not-*p*} is not. In ontology it's much more complicated but the principle is the same.

UFO (doggedly): Suppose one of your ontologies O1 is not just consistent but actually true.

SSM: All right.

UFO: And another one O2 is also true.

SSM: Yes. That could happen.

UFO: Then O1 + O2 is also true, so it is consistent.

SSM: I'll grant you it works in that simple case, but in the full-blown case ...

UFO (smoothly): If you do the job properly, each of the ontologies is true, as is the metaontology, so the whole consisting of all of them is true. So the whole is true, and therefore consistent. That's what I mean by doing the job properly.

SSM: But look, it just can't be done. I used to think like you, but Medical Informatics has convinced me it cannot.

UFO: Surely you aren't suggesting that truth be relativized to a time, or an ontology, or a view, or in some other way.

SSM (stiffly): Of course not. Truth is absolute. It's just that some of the things traditional ontologists thought could be done cannot be done without getting into contradictions ...

3D (perking up, *sotto voce* in UFO's left ear): You could call them "antinomies of pure reason."

SSM: ... so we have to pull our horns in and be more modest.

4D (catching on, *sotto voce* in UFO's right ear): You could call it "metaphysics within the bounds of sense."

SSM (noticing the whispering): What?

UFO (brightly): So — you are a follower of Kant then?

SSM (affecting not to hear the name): Who? Anyway, it's getting late. Anyone fancy a glass of wine?

END

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