

Critical Discussion of Zhou’s “What the progressive aspect tells us about processes”

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Abstract. Zhou [12] formulates a novel account of processes – where processes are picked out by terms like “running” or “building a house”. More specifically, Zhou holds that: i) processes are not particulars (or individuals); ii) process terms are more akin to stative terms than they are to mass terms; and iii) processes are abstract property or attribute types that are instantiated by Davidsonian events or parts of Davidsonian events. In this article, I provide some considerations in favor of the following two claims: on the one hand, his argument for ii) succeeds, but in an uninteresting way; on the other hand, his argument in favor of iii) fails.

Keywords: Processes; Events; States; Mass and count nouns; Imperfective/Progressive Aspect

Introduction

Recently, there has been a resurgence in the metaphysics of events and processes. According to one of the main views, associated with the account formulated by Mourelatos [2], processes are the ontological correlates of predications in the progressive aspect, like “was building a house” or “was running”, and are the referents of nominals like “building a house”, “running” and the like.² Moreover, Mourelatos holds, nominals for processes enter into mass-quantified expressions, like “there was running by John yesterday” and thus processes have mass-like features.³ Moving from similar linguistic data, Zhou [12] formulates a novel and alternative account of processes – according to which processes are abstract property or attribute types that are instantiated by Davidsonian events or parts of Davidsonian events.⁴

More precisely, Zhou argues for the following three theses:

(Thesis i) Processes are not particulars (or individuals);

(Thesis ii) Process terms are more akin to stative terms than they are to mass terms;

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² Zhou doesn’t differentiate between progressive and imperfective aspect. However, according to many philosophers and linguistics, there is a difference between the two aspects (see, e.g. [11, p. 50]). For the sake of discussion, I adopt Zhou’s assumption.

³ Mourelatos’s account has been adopted and further elaborated by, e.g., [5] and [1].

⁴ Davidsonian events are concrete and unrepeatable individuals that occur in time.

(Thesis iii) Processes are abstract property or attribute types that are instantiated by Davidsonian events or parts of Davidsonian events.⁵

In this article, I critically discuss Zhou's account. In particular, I provide some considerations in favor of the following two claims:

- i) His argument for (Thesis ii) succeeds, but in a philosophically uninteresting way.
- ii) Zhou fails to argue in favor of (Thesis iii).

The present paper is structured in two sections. In section I, I present Zhou's account. In section II, I argue that his account makes (Thesis ii) true but in a philosophically uninteresting way, and that his argument for (Thesis iii) is unsound.

Section 1

Zhou's account is based both on the notion of process as well as on the notion of state. The notion of process has been already introduced. On the other hand, states are picked out by stative predications like in (1):

- (1) John is handsome/John believes that *p*.

Moreover, Zhou argues that the nominalization transcriptions of stative predications are as follows:

- (2) John's handsomeness/John's belief that *p*.

Following Mourelatos's account, Zhou observes a linguistic analogy between nominals for processes and nominals for states. In particular, both types of nominals can occur as objects of perception verbs and can be modified with temporal adverbs:

- (3) I saw John's handsomeness/John's building of a house.
(4) John's handsomeness/John's building of a house lasted for two years.

Moreover, both types of nominals can occur in the context of mass-quantifiers and in association with mass adjectives such as "much", "little", "enough" and the like:

- (5) There is some/much/little handsomeness in John/building of a house by John.

It is crucial to note that, as Mourelatos holds, (5) makes it plausible that both process nominals and states nominals attribute to their respective referents massy-features. Summing up the first part of Zhou's framework, the previous considerations establish a linguistic analogy between nominals for processes and nominals for states.

In order to argue for his theses, Zhou introduces an account based on three principles or notions, which leverages on Dummett [2], Lowe [6] and Savellos [10]'s views. In particular, these three principles or notions jointly determine what it means for something

⁵ For a similar account, see [4].

to be a countable entity of a kind or type as distinct from other entities of the same kind. Consider, first, Dummett's criterion of application (see, [2]), which establishes the conditions under which something at a time instantiates a type, namely the conditions under which something is a table or a dog. As Zhou notes, such a condition doesn't apply only to countable entities, but also to things that are not countable, as stuff-like entities such as gold or wood.⁶ Zhou adopts Marcus [7]'s label and call such a principle "principle of instantiation". The second criterion is a criterion of diachronic identity, that establishes the conditions under which some x of type K at a time $t1$ is numerically the same as some y of type K at a different time $t2$. For instance, under what condition a person at $t1$ is numerically the same as a person at $t2$. The third criterion is a principle of individuation. On the basis of Lowe [6] and Savellos [10]'s ideas, Zhou holds that such a principle specifies the conditions under which something is a "an instance of the kind of thing that it is" [12]. In the temporal realm, such a condition amounts to specify what structures articulate an entity as an *individual* of a kind different from other individuals of the same kind.

Now, following Dummett's reflections [2, p. 571, p. 573], Zhou distinguishes countable kinds or sortals, such as *Dog* or *Table*, from properties or attributes, such as *Redness* or *Squareness*, on the basis of the previous principles and criteria. In particular, he holds that countable kinds or sortals possess a criterion of identity and a principle of instantiation as well as a principle of individuation. On the other hand, attributes or properties possess a principle of instantiation, but neither a criterion of identity nor a principle of individuation.

There is a consequence of such an account that is crucial for the aims of my discussion and that Zhou overlooks, namely that kinds of stuff, such as gold, milk and wood, possess a principle of instantiation, but neither a criterion of identity nor a principle of individuation. In other words, kinds of stuff are alike attributes or properties with respect to the mentioned features. Hence, the distinction Zhou is doing is not between kinds or sortals and attributes or properties. Such a distinction is between countable kinds or sortals on the one hand, and attributes or properties as well as kinds of stuff on the other hand.

It is immediate to observe that stuff satisfies some principle of instantiation. For instance, we can claim that some stuff is gold in case it is associated with some physical properties. Moreover, it makes no sense to attribute diachronic identity criteria to stuff. By analogy with an argument used by Zhou himself, it makes poor sense asking whether milk at $t1$ is the same as milk at $t2$. We can ask whether a *quantity of milk* is the same at two moments, but not whether stuff of some kind is the same at these times. Finally, stuff doesn't have countable instances. This means that they don't possess principles of individuation – as Zhou explicitly admits: "states, processes (and, indeed, stuff) are not countable in the manner that paradigmatic objects and events are countable; [...] the terms 'belief', 'running' and 'water' do not supply a principle of individuation" [12]. Such considerations ground the claim that kinds of stuff possess a principle of instantiation, but neither a criterion of identity nor a principle of individuation.⁷

⁶ I use the term "entity" with a wide meaning: stuff-like things are also entities.

⁷ Someone may formulate the following conversation as a linguistic evidence that kinds of stuff possess principles of individuation as well as diachronic identity criteria:

I) There is much junk in Jim's front yard.

II) Is this the same junk he has accumulated there over the years?

III) No, he moved that junk to his back yard last spring. This is different junk.

Given the previous criterion and principles and on the basis of the linguistic analogy between process and state nominals, Zhou formulates an argument for the thesis that process nominals only possess a principle of instantiation:

(P1) States are neither associated with a criterion of identity nor with a principle of individuation, but they do possess a principle of instantiation.

(P2) There exists a linguistic analogy between stative and process nominals.

(Conclusion) So, processes are neither associated with a criterion of identity nor with a principle of individuation, but they do possess a principle of instantiation.

Let us grant (P1). Indeed, as Zhou holds, it has been convincingly defended in several places (see, e.g. [6, pp. 78-9] and [7]). The truth of premise (P2) is motivated by the fact that both process and state nominals can occur as objects of perception verbs and can be modified by temporal adverbs, and by the fact that both types of nominals can occur in the context of mass-quantifiers and mass adjectives like “much”, “little”, “enough” and the like. Given such an analogy, Zhou derives (Conclusion).

In order to make plausible the soundness of his argument and so the truth of (Conclusion), he formulates an independent argument for (Conclusion). More precisely, Zhou makes it plausible that process terms, such as “running” or “building a house”, do not possess a criterion of diachronic identity. For instance, he observes, the question whether running at t_1 is numerically identical to running at t_2 sounds odd. Thus, the notion of diachronic numerical identity does not find application to processes. Moreover, he also grounds the claim that processes as well as states do not possess a principle of individuation. Indeed, as already mentioned, processes, states, and stuff are not countable in the same way objects and events are countable. Thus, a principle that “specifies the conditions under which something is *an* instance of the kind of thing that it is” [12] doesn’t apply to processes and states (as well as to stuff). Finally, he argues that process terms and state terms possess a principle of instantiation. Recall that such a principle specifies the conditions under which something is of a particular type, and that such a principle can be also satisfied by entities that are not countable – like stuff. In particular, he suggests the following principle of instantiation for process terms, like “running”:

Human gait involves alternating sequences in which the body is supported first by one limb, which contacts the ground, and then by the other limb...
[R]unning involves alternating sequences of support and non-support, with the proportion of the cycle spent in support varying with speed. ([3, p. 179], quoted in [9, p. 102], quoted in [12]).

Thus, the arguments Zhou provides ground the truth of (Conclusion). Moreover, since process terms do not possess a principle of individuation, it also follows that they are not particulars (or individuals). Hence, (Thesis i) is vindicated. However, it is worth mentioning that, as Mourelatos and his followers argue, (Thesis i) has been already made

I am inclined to think that the occurrence of “junk” in I) has a meaning different from the meaning of the occurrences of “junk” in II) and III). The reason is the following. In I), the quantifier “much” makes the expression “junk” a mass-term. As a consequence, the boundaries of the junk in Jim’s front yard are not drawn. On the other hand, an identity statement presupposes that the things whose identity is investigated have precise boundaries – namely, that these things are precisely individuated. Thus, “junk” occurs with a different meaning in II) and III). More precisely, it means “quantity of junk”. Thus, we can continue to hold that kinds of stuff possess neither a principle of individuation nor a criterion of identity.

plausible by the fact that process nominals cannot but be found in the context of mass-quantified nominalizations.

Summing up, Zhou's account shows that there exists an extensive analogy between processes and states. One part of such an extensive analogy concerns the linguistic analogy between stative and process nominals – viz., the fact that both process and state nominals can occur as objects of perception verbs and can be modified with temporal adverbs, and the fact that both types of nominals can occur in the context of mass-quantifiers and mass adjectives like “much”, “little”, “enough” and the like.

The other part of the analogy concerns the fact that both processes and states are neither associated with a criterion of identity nor with a principle of individuation, but they are associated with a principle of instantiation. Does such an account have as consequences (Thesis ii) – namely that process terms are more akin to stative terms than they are to mass terms – and (Thesis iii) – namely that processes are abstract property or attribute types that are instantiated by Davidsonian events or parts of Davidsonian events?

Section 2

I shall argue that (Thesis ii) is true, but in a philosophically uninteresting way. First of all, let us examine one part of the analogy between processes and states, namely that both of them are associated with a principle of instantiation, but neither with a criterion of diachronic identity nor with a principle of individuation. As already argued, stuff terms is on a par with process and state nominals in this respect. Indeed, I showed that also mass-terms possess a principle of instantiation, but they possess neither a criterion of diachronic identity nor a principle of individuation. Thus, such an analogy cannot discern whether process terms are more alike to stative terms than they are to mass terms.

Let us focus, now, on the linguistic analogies between stative and process nominals. First of all, mass terms, like “gold” and “milk”, can occur as objects of perception verbs:

(6) I saw gold in the cart.

Moreover, they occur in the context of mass-quantifiers and mass adjectives like “much”, “little”, “enough” and the like:

(7) There is enough gold in the cart to make all of us rich.

Thus, concerning these factors, the behavior of mass terms is analogous to that of stative and process nominals. Thus, there is no basis to conclude that process terms are more alike to stative terms than they are to mass terms.

The fundamental fact that grounds the claim that processes are more akin to states than they are to stuff is that states and processes are temporal entities, while stuff concerns the spatial realm. Such a fact grounds a further, connected difference between process nominals and state nominals on the one hand, and mass terms on the other: as Zhou observes, process nominals and state nominals can be modified by temporal adverbs, while mass terms cannot. However, such a difference and its consequence are facts of our pre-philosophical conceptual schema, which divides between temporal entities and spatial ones. No wonder that, other things being equal, temporal entities and their terms are more akin among each other, than some temporal entity and some spatial entity, and

their respective terms, are. What would make (Thesis ii) philosophically interesting, would be an account that showed that *the nature* of states and processes are similar in a deep and not yet considered way and that these natures differ in some important respect from the nature of stuff. However, Zhou doesn't show anything like this. Thus, his account makes (Thesis ii) true, but in a philosophically uninteresting way.

Finally, let us consider whether his account succeeds in arguing for (Thesis iii), according to which processes are abstract property or attribute types that are instantiated by Davidsonian events or parts of Davidsonian events. From (Conclusion) and the fact that properties or attributes types are only associated with principles of instantiation, he claims that "it follows that since what I've been calling processes possess only a principle of instantiation, *processes are, I submit, property or attribute types*. Qua property or attribute types, processes can be exemplified or instantiated by Davidsonian events or parts of Davidsonian events" ([12], *italics mine*). However, such a conclusion doesn't follow from his account. As I have argued, kinds of stuff are on a par with properties or attributes types: they are associated with principles of instantiation, but neither with criteria of diachronic identity nor with principles of individuation. Thus, processes may well be mass-like, instead of being property or attribute types. As a consequence, it is possible that processes may well be of a different ontological type than properties and attributes. But, then, Zhou's argument for (Thesis iii) fails. Further, the option considered opens another interesting possibility, namely that processes, states, stuff, and attributes have in common the features expressed by (Conclusion) *because* these features stem from a common *source* present in the nature of all these kinds of things.⁸

Summing up, Zhou proposes a novel account of processes constituted by Theses i-iii. First, Zhou succeeds in arguing for (Thesis i). However, as Mourelatos argues, the linguistic features of process nominals already make such a thesis plausible. Second, Zhou's account entails (Thesis ii). However, its content is reduced to a philosophically uninteresting fact. Finally, he fails to argue for (Thesis iii). Let me finish this discussion by mentioning a positive suggestion already hinted above. The suggestion is that we should look for the sources of the features processes possess. Finding such sources may provide a fruitful metaphysical explanation of the several linguistic and metaphysical similarities we detect between processes, states, and stuff.⁹

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⁸ An assumption that both Zhou and I agree on is that either processes are property or attribute types, or they are stuffs of some kind, but not both. However, someone may question such an assumption by asking why they couldn't be both, if in fact kinds of stuff themselves are properties or attribute types (as the very word "kind" suggest). The previous concern is based on a misunderstanding that is worth clarifying. Stuff is of some kind: some gold is of the kind *GOLD*. However, the kind *GOLD* is different from the actual gold-stuff. Moreover, when I claim that kinds of stuff are associated with principles of instantiation, I mean that, e.g., the kind *GOLD* is associated with a principle of instantiation that is satisfied by gold-stuff. Given such clarifications, it is clear why, if processes are stuff-like, they cannot be also property or attribute types.

⁹ For comments and suggestions on a previous version of this paper, I would like to thank Ziqian Zhou and two anonymous referees of this journal. This work has been supported by a Research Assistant Contract in the project NEXON at the University of Bozen-Bolzano.

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