What are we debating about when we debate about processes and events?

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Abstract. In recent years, there has been a raising interest in the metaphysics of processes and events. However, what are we debating about when we debate about processes and events? Such an answer has received three main answers that are mutually incompatible. The situation is worrisome: if philosophers don't even agree on how to individuate process expressions and distinguish them from event expressions, how can one compare two metaphysical theories of processes and events? In this article, I aim to answer to such questions. First, I propose a revised version of Vendler and Kenny's account. Then, I distinguish a linguistic part and an ontological part for each of the three approaches. On the one hand, I argue that the ontological parts constitute not-compelling theses; on the other hand, I make it plausible that the linguistic parts are mutually consistent. Such results contribute to address the initial questions: when we speak about processes and events, we are speaking about a plurality of phenomena characterized through the integration of the linguistic parts of the accounts considered. Moreover, these linguistic parts, taken together, provide data that any adequate metaphysical theory of processes and events has to account for.

Keywords. Processes, Events, Accomplishments, Activities, Imperfective Aspect.

1 Introduction

In recent years, an intense debate concerning the metaphysics of processes, events, and their relationships has been taking place. As Galton [10] nicely puts it, "there are almost as many views on this question as researchers who have written about it" (p. 42). In order for the debate to start off from the ground, the issues concerning the nature of processes and events presuppose that we have already settled an answer to the question: "what are we debating about when we debate about processes and events?" In other words, the metaphysical questions concerning the nature of processes and events presuppose that we are able to identify process expressions and distinguish them from event expressions. Thus, how are the relevant subject matters to be identified?

The present article is concerned with the answer that has to be provided to the previous subject-matter question. Unfortunately, there is no agreement regarding the content that such an answer should have. In this article, I focus in particular on three main accounts: i) Processes as the ontological correlates of 'activity verbs', and events

as the ontological correlates of 'accomplishment verbs'; ii) Processes as the ontological correlates of mass-quantified nominalizations of predications with an imperfective aspect, and events as the ontological correlates of count-quantified nominalizations of predications with a perfective aspect; iii) Processes as the ontological correlates of expressions like "the tennis match that was happening at *t*", and events as the ontological correlates of expressions like "the fight that happened last night". Many researchers involved in the debate concerning the metaphysics of processes and events consider these three accounts mutually incompatible. This situation is worrisome. Indeed, if we don't even agree on how to individuate process expressions and distinguish them from event expressions, how could we argue that a metaphysical theory of processes and events is better than the others? How can we compare two of such theories, if the disagreement is at the level of the subject matter?

The aims of the present article are the following. First, I argue in favor of a revised version of the account mentioned in i). Then, I distinguish a linguistic part and an ontological part for each account. Given such distinctions, and contrary to the standard opinions, I make it plausible that the linguistic parts are mutually compatible. Thus, the resulting framework helps to answer the subject-matter question "what are we debating about when we debate about processes and events?". Moreover, the integration of such linguistic parts provides relevant data that any adequate metaphysical theory of processes and events has to account for. In conclusion, the results of this paper contribute to clarify our understanding of the notions of process and event. In turn, these results contribute to dissipate the worry that we are not in a position to compare metaphysical theories about processes and events and thus help us to place the whole debate about processes and events on firmer grounds.

The article is structured as follows. In the next section, I examine the distinction between activity predications and accomplishment predications, and I argue that this distinction is different from the distinction suggested by Mourelatos. In the third section, I investigate Mourelatos's distinction between mass-quantified nominalizations and count-quantified nominalizations, and I argue that such a distinction is compatible with the previous one. In the fourth section, I present the framework associated with the theories developed by Stout and Fine, and I hold that it is compatible with the other positions. Finally, I draw some conclusions.

2 The distinction between activity predications and accomplishment predications

Vendler [27] and Kenny [15] propose a four-fold distinction of verb-types: activity verbs, accomplishment verbs, achievement verbs, and state verbs. They hold that their linguistic distinction of different types of verbs captures an ontological distinction of different types of occurrents – a different type of occurrent for each different kind of verbs. Before discussing their account, I need to establish two constraints. First, in the present work, I only focus on the two fundamental categories of activity verbs and accomplishment verbs. Second, I mainly focus on the version of the account elaborated by Vendler.[2] Now, let us focus on activity verbs and accomplishment verbs: according to Vendler and Kenny, they pick out, respectively, processes and events. Examples of activity verbs are

[2] Moreover, I shall use the expressions "activity verb" and "accomplishment verb" as well as "activity predication" and "accomplishment predication" with a wide meaning. Indeed, also verbs not pertaining to the realm of human activity may fall under the concepts expressed by these labels.

"run", "walk", "move". Examples of accomplishment verbs are "run a mile", "walk to the station", "move into the hole".[3] Vendler and Kenny provide a characterization of activity verbs and accomplishment verbs based on different kinds of inferential patterns licensed by these different kinds of verbs as well as different kinds of features possessed by these types of verbs.

First of all, both kinds of verbs can take progressive, e.g. "Tom is running/a mile", and perfect forms, e.g. "Tom ran/a mile". Given such a premise, let us consider accomplishment verbs. Accomplishment verbs, like "run a mile" or "walk to the station", specify a direction or goal built in in their form. If it is true that John is walking to the station, then the final destination of John's walk is the station. Related to such a feature, this kind of verbs may take expressions that refer to or quantify over extended period of time, like in "John walked to the station in ten minutes". Moreover, according to the account considered, accomplishment verbs are non-homogeneous, where such a condition is formulated by Vendler [27] as follows:

(1) "John ran a mile from t_1 to t_n" entails "John didn't run a mile during any subperiod of that period".

Finally, sentences including accomplishment verbs license the following inferential pattern:

(2) "John is running a mile at t" entails "John has not run a mile at t".

According to Vendler and Kenny, activity verbs fulfill the negation of the previous conditions. In particular, activity verbs don't specify any direction or endpoint, as it is evident from "run" and "walk". Nevertheless, they may take expressions that refer to or quantify over extended period of time, as in "John walked for ten minutes". Moreover, activity verbs are homogeneous, where this feature is expressed by Vendler [27] by the following pattern of implications:

(3) "John was weeping for an hour" entails "John was weeping during any subinterval of that hour".

Finally, sentences including activity verbs license the inferential pattern expressed by:

(4) "John is weeping at t" entails "John has wept at t".

Vendler and Kenny's account has been attacked, in particular, by Mourelatos [17].[4] He holds that the distinction Vendler and Kenny have in mind has to be captured by a distinction made at the level of entire predications, not at the level of verbs as Vendler and Kenny contend. The key notion of Mourelatos's account is the notion of the aspect of a predication. Roughly, the aspect of a predication conveys information about the dynamic organization of an occurrent a predication is about. For instance, the imperfective aspect of a predication, like "be running a mile", describes e.g. John's doing from 'the inside' point of view, or from moment to moment, or without specifying the

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[3] Admittedly, "run a mile" and the like are not verbs syntactically. However, I shall follow Vendler who considers these verbal expressions as verbs.

[4] For a similar objection, see also e.g. [19] and [22].

temporal boundaries of that occurrent. The imperfective aspect can be marked in several ways: for instance, either with a continuous form of the verb, or with the preposition 'for' as in "John pushed the cart for hours" – where, in such a case, the predication is "pushed the cart". On the other hand, the perfective aspect of a predication, like "ran a mile in 10 minutes", describes e.g. John's act from an 'external' point of view, taking into focus an occurrent as a whole. The perfective aspect is usually marked with a perfect tense plus some preposition, like "in", that specifies an exact time stretch.

Mourelatos holds that processes are picked out by predications with an imperfective aspect, like "be walking to the station" – thereafter called "process predications". On the other hand, events are picked out by predications with a perfective aspect, as "walked to the station in 5 minutes" – thereafter called "event predications". Mourelatos also holds that an accomplishment verb, like "run a mile", can enter both in process predications, e.g. "be running a mile", and in event predications, e.g. "ran a mile in 10 minutes". Further, he argues that the distinction Vendler and Kenny are after is made at the level of entire predications, and that such a distinction corresponds to the distinction between process predications and event predications. His argument is based on the observation that "run a mile" can satisfy the homogeneity condition, which is one of the fundamental criteria for activity expressions. Indeed, "John was running a mile for an hour" entails "John was running a mile during any subinterval of that hour". Finally, Mourelatos diagnoses that Vendler and Kenny's account is inadequate because they don't take into consideration the aspect of a predication.

Mourelatos's objections make it clear that Vendler and Kenny's account must be modified by taking into account both entire predications and the aspects of predications. However, I shall propose a classification of verb-predications which is based on Vendler and Kenny's account and which bears on the requirements named "Culmination", "Cumulativity", and "Aspect Laws". Then, I shall show that such a classification is not that suggested by Mourelatos. Thus, Mourelatos's account changes the subject with respect to the revised version of Vendler and Kenny's framework when he claims that his distinction is what Vendler and Kenny are after.

Culmination. Mourelatos's account doesn't satisfy one of the crucial requirements for distinguishing activity predications from accomplishment predications according to the conception based on Vendler and Kenny's framework. Indeed, according to Vendler and Kenny, accomplishment verbs have a culmination built in. In the same way, I shall require that accomplishment predications have a culmination built in. For instance, the predication "smoking a cigarette" has an intended culmination: the completion of smoking that cigarette – despite the fact that "smoke" would be considered an activity verb by Vendler and Kenny. On the other hand, activity predications have no culmination. For instance, "smoking cigarettes" has no intended culmination. Hence, there is an immediate difference between predications with an intended culmination and predications without an intended culmination. Consider, now, Mourelatos's account. According to his view, "be smoking a cigarette" is a process predication as well as "be smoking cigarettes". Thus, the intended built-in culmination makes no difference for Mourelatos's distinction. This marks a difference between the predication-classification here developed and Mourelatos's classification.

Cumulativity. The cumulatively condition aims at capturing the intuitive idea according to which, for activity predications but not for accomplishment predications, it holds that if a predication applies to two contiguous intervals of time, then it also applies to their sum. For instance, given an activity predication like "wept", it is plausibly true that if John wept from t_l to t_n, and he wept from t_n to t_m, then he wept from t_l to t_m.

However, given an accomplishment predication like "ran a mile", it is not necessarily true that if John ran a mile from t_1 to t_n, and he ran a mile from t_n to t_m, then he ran a mile from t_1 to t_m – indeed, he ran two miles from t_1 to t_m. The cumulatively condition is formulated by considering predications with a perfective aspect, such as "wept from t_1 to t_n" or "ran a mile from t_1 to t_n". In particular, given activity predications with a perfective aspect, one can formulate the following implication pattern:

(5) if "wept" truly applies to John at a closed interval $[t_1, t_n]$, and it truly applies to John at a semi-closed interval $]t_n, t_m]$ ($n < m$), then "wept" truly applies to John at the closed interval $[t_1, t_m]$.

On the other hand, given accomplishment predications with a perfective aspect, a structurally analogous premise doesn't entail a structurally analogous conclusion:

(6) If "ran a mile" truly applies to John at a closed interval $[t_1, t_n]$, and it truly applies to John at a semi-closed interval $]t_n, t_m]$ ($n < m$), then it doesn't follow that "ran a mile" truly apply to John at the closed interval $[t_1, t_m]$.

John performed two different acts of running a mile within the interval $[t_1, t_m]$. However, he didn't run a mile from t_1 to t_m – viz. at the interval $[t_1, t_m]$. Thus, the implication patters (5) and (6) are different.

In the previous two examples, any initial predication has a perfective aspect. However, the implication patterns are different. Since the only difference concerns the kinds of verbs considered, the difference in implication patterns must have its source in the different kinds of verbs employed. These different kinds of verbs ground a difference between activity predications and accomplishment predications, respectively. Thus, activity predications with a perfective aspect are cumulative, accomplishment predications with a perfective aspect are not.[5]

Aspect Laws. Vendler and Kenny claim that activity verbs and accomplishment verbs are differentiated on the basis of tense implication patterns, e.g. "*f*-ing at *t*" implies "*f*-ed at *t*". In view of Mourelatos's objections, these implication patterns must be revised by taking into consideration the aspect of a predication. Moreover, the distinction we are after is not a distinction in verb-types, but a distinction in predication-types. Thus, we shall examine implication patterns where the premise has an imperfective aspect, and the conclusion has a perfective aspect. It turns out that sentences including activity predications result in different implication patterns than sentences including accomplishment predications. Consider, for instance, the following sentences:

(7) "John was weeping at *t*" implies "John had wept at *t*"
(8) "John was building a house at *t*" implies "John had not built a house at *t*".

In these cases, the aspectual patterns are the same, while the patterns of implications are different. The only difference between the two situations is the kinds of verbs

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[5] The strategy suggested hinges on the notion of true application of a predicate at a period of time. Such an interval semantics approach is different from the strategy rejected by Crowther [2, pp. 14-15] in which the notion of cumulatively is expressed via occurrents allegedly picked out by activity verbs and the notion expressed by "a period of time during which running was going on".

considered.[6] Thus, these patterns of aspectual implications must depend on the kinds of verbs considered, which ground a difference between activity predications and accomplishment predications, respectively.

However, a possible worry concerning the validity of implication (7) is the following: it may be true that John was weeping at t, because e.g. a tear was attached to the inferior lacrimal punctum. However, since John had not shed any tear at t, it is false that John had wept at t.[7] A strategy that explains the plausibility of (7) and (8) and that establishes the difference between activity and accomplishment predications is the following. First, given a predication with a perfective aspect – for instance "wept from t_1 to t" –, the notion of minimal wept-period has to be introduced as a period of time included within $[t_1, t]$ at which "wept" truly applies to, e.g., John *and* no proper subinterval of that period is such that "wept" truly applies to John at that subinterval. Now, consider an activity predication, e.g. "weeping": if John started weeping at t_1 and he was still weeping at t, and if the period $[t_1, t]$ contains a minimal wept-period involving John, then the implication pattern (7) is valid:

(7) "John was weeping at t" implies "John had wept at t".

Indeed, suppose John started weeping at t_1 and he was still weeping at t. Suppose also that the predicate "wept" truly applies to John at the interval $[t_1, t]$. Then, John had also wept at t. Thus, the additional premises allow one to explain the situations in which (7) is valid.

Now, the same schematic premises explains the validity of (8). Consider an accomplishment predication, e.g. "building a house". If John started building a house at t_1 and he was still building this house at t, then the period $[t_1, t]$ *cannot* contain a minimal built-a-house-period involving John. Indeed, at the interval $[t_1, t]$, he has not finished to build such a house. Thus, the predicate "built a house" doesn't truly apply to John at that interval. Hence, there are situations in which "John was building a house at t" is true. But, in all these situations, it is also true that John had not built a house at t. Therefore, the additional premises ground the validity of (8):

(8) "John was building a house at t" implies "John had not built a house at t".

The two considered cases have the same aspectual patterns, and only differ in the kinds of predication employed. Thus, the difference in implication patterns (7) and (8) must have its source in such kinds of predication. Hence, the implication patterns (7) and (8) mark a difference between activity predications and accomplishment predications, respectively. Summing up, the requirements Culmination, Cumulativity, and Aspect Laws capture a distinction between activity predications and accomplishment predications that is based on the distinction that Vendler and Kenny have in mind – and such a distinction is different from the distinction between types of predications suggested by Mourelatos.

There is a further respect in which Vender and Kenny's framework has to be revised. Vender and Kenny hold that their linguistic distinction between different types of verbs captures an ontological distinction between different types of occurrents. However, such

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[6] The implication patterns (7) and (8) give rise to the imperfective paradox, which is the problem of providing adequate truth-conditions for these different kinds of implication patterns – see, e.g., ([4], [13], [16], [26]).
[7] For such a worry, see [2].

an ontological thesis is not the only possible thesis. A possible alternative is the following. First, as Mourelatos suggests, process predications pick out entities different from the entities picked out by event predications, and these different kinds of entities are related by some metaphysical links.[8] Second, activity and accomplishment predications don't pick out any occurrent at all. Instead, activity and accomplishment sentence predications individuate different features that explain the characterizations of such predications. More precisely, the ontological correlate of an accomplishment predication with a perfective aspect – e.g. "smoked a cigarette from t_1 to t_n" – and the different ontological correlate of such an accomplishment predication with an imperfective aspect – viz. "smoking a cigarette" – share a structure or a set of properties that account for the characterization of accomplishment predications – mutatis mutandis for activity predications. Given this situation, I do not assume, as Vendler and Kenny do, that the distinction between activity predications and accomplishment predications capture an ontological distinction between different types of occurrents. Instead, I propose a less demanding requirement, namely that any adequate metaphysical theory of processes and events has to account for the different patterns of implications associated with activity predications and accomplishment predications, respectively. This requirement is tantamount to the thesis that metaphysics has to provide an explanation for our common-sense implication patterns.

The data examined license the following conclusions: once Vendler and Kenny's account has been modified by taking into account whole predications, different features possessed by predications as well as different patterns of implications capture a classification of predication-types based on Vendler and Kenny's categorization.[9] Such a classification of types of predications I proposed is different from Mourelatos's distinction between process predications and event predications. Thus, Mourelatos's account changes the subject with respect to the revised version of Vendler and Kenny's framework when he claims that his distinction is what Vendler and Kenny have in mind.[10]

3 The account based on process predications and event predications

In this section, I examine Mourelatos's framework, further developed by, e.g., Bach [1], Crowther ([2], [3]), Hornsby [14], and Steward ([21], [22]). Moreover, I make it plausible that the linguistic part of such a framework, together with the previous distinction between accomplishment and activity predications, contribute to clarify our overall notions of process and event.

As already discussed in the previous section, Mourelatos distinguishes between predications with a perfective aspect – event predications – and predications with an imperfective aspect – process predications. Intuitively, event predications describe occurrents that are completed wholes, viz. they are terminated. Consider, for instance, the following example: "John wrote a letter in ten minutes". This sentence intuitively describes a whole writing of a letter by John that occurred within those ten minutes. On

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[8] For similar metaphysical views, see e.g. [2] and [14].

[9] I don't hold that the characterization provided is complete. However, this characterization is sufficient to distinguish activity predications from accomplishment predications as well as to conclude that such a distinction is different from the distinction proposed by Mourelatos.

[10] Some metaphysical accounts based on Vender and Kenny's framework are Roberts [18], Simons [20], and Galton ([8], [9], [10])'s theories.

the other hand, process predications intuitively describe occurrents that may not be completed and may still be going on at the time they are described.[11] Consider the following example: "John is running" intuitively describes some activity John is engaged in and which is still going on. It is important to distinguish the way in which event predications describe something that is terminated from the way in which accomplishment predications have a terminus built in. Event predications like "John wrote a letter in ten minutes" intuitively describe something that is completed – an entire completed whole. Accomplishment predications – e.g. "Tom was smoking a cigarette" – specify an intended endpoint that may not be currently achieved – as when an accomplishment predication has an imperfective aspect. So, Mourelatos proposes a distinction between process predications and event predications. Further, he suggests a metaphysical view that accounts for these kinds of predication. In the following, I expand the introduction here provided.

Mourelatos associates process predications and event predications with different kinds of nominalization transcriptions, that apparently quantify over different kinds of entities. A nominalization transcription is a way of rewriting a predication in such a way that this predication becomes an explicit quantified expression and the original verb is transformed into a nominal governed by a quantifier. For instance, a sentence like:

(9) John built a boat in two hours

has the following nominalization transcription:

(10) There was a building of a boat by John in two hours

which is an expression that quantifies over boat-buildings.

According to the view under examination, event predications, like "built a boat in two hours" and "erupted three times", have nominalization transcriptions that have count-features. This is clear from sentences like (9) or (11):

(9) John built a boat in two hours
(11) Vesuvius erupted three times

whose nominalization transcriptions are:

(10) There was a building of a boat by John in two hours;
(12) There were three eruptions of Vesuvius.

These nominalization transcriptions have count-features: (i) the quantifier is an existential count quantifier – as the indefinite article makes it clear –, and these nominalizations can take cardinal numerals, e.g. "There were three eruptions of Vesuvius"; (ii) the nominals "building" and "eruption" can take plural forms without shifting of meaning, e.g. "buildings" and "eruptions"; (iii) these transcriptions can be supplemented by adjectives such as "many", "several", "few", "each", and "every" – for instance, "there were several boat-buildings by John". Thus, such nominalizations attribute to their referents count-features. In particular, their referents have a definite individuality and are completed wholes. For instance, in "there was an eruption of

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[11] The same intuition is widely shared, see e.g. [21, p. 381].

Vesuvius", the eruption is described as a completed whole. Given their character, Mourelatos calls these nominalization transcriptions "count-quantified nominalizations".

On the other hand, process predications have nominalization transcriptions that have massy-features. Consider, for instance, process predications like "was painting the Nativity" and "pushed the cart" in (13) and (14):

(13) John was painting the Nativity,
(14) John pushed the cart for hours.

According to the present position, their nominalization transcriptions are, respectively, the following:

(15) There was painting of the Nativity by John,
(16) For hours there was pushing of the cart by John.

These nominalizations transcriptions possess the same massy-features that 'mass terms', like "gold" or "milk", have: (i) the quantifier is not a count quantifier – as the absence of the indefinite article makes it clear –, and these nominalizations cannot take cardinal numerals: "For hours there were three pushings of the cart by John" sounds odd; (ii) the nominals "painting" and "pushing" cannot take plural forms without shifting of meaning – e.g. "paintings" or "pushings" mean occasions of paintings or pushings, respectively;[12] (iii) both transcriptions of process predications and mass terms can be supplemented by adjectives such as "much", "little", "enough". Thus, such nominalizations seem to attribute to their referents massy-features (viz. stuff-features). In particular, their referents seem to be entities that have no definite unity and individuality, where these concepts are construed in a count-term way. Thus, "there was painting of the Nativity by John" attributes to its ontological correlate stuff-like features. Given their character, Mourelatos calls these nominalization transcriptions "mass-quantified nominalizations".

Mourelatos's framework is constituted both by a linguistic thesis and by an ontological thesis. As we have just seen, the linguistic thesis holds that event predications are associated with count-quantified nominalizations which attribute to their referents count-features. On the other hand, process predications are associated with mass-quantified nominalizations which attribute to their referents massy-features. Moreover, at the ontological level, Mourelatos and his followers advocate the following ontological thesis. Count-quantified nominalizations refer to events. Thus, event predications pick out events. Moreover, events are characterized as completed wholes with count-features. Instead, mass-quantified nominalizations refer to processes. Thus, process predications single out processes. Processes are characterized in analogy with stuff as uncountable occurrents to which the concepts of count-individuality and wholeness don't apply.[13] Accordingly, I shall call such a kind of processes "massy-processes".

So far, the ontological thesis that constitutes Mourelatos's framework can be expressed as follows: events correspond to objects in being countable, processes correspond to stuff in not being countable. However, the advocates of such a framework

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[12] Compare the following two sentences. "There was much painting of the Nativity by John" is admissible. However, "There was much paintings of the Nativity by John" doesn't sound grammatical. More specifically, see e.g. [17, p. 428].
[13] Hornsby [14] points out that Mourelatos is ambivalent in the use of the terms "activity" and "process". They may be used to single out both stretches of massy-processes that are particular occurrents – viz., events –, and massy-processes. Here, I only discuss, with a charitable reading, his account of processes as massy-processes.

further strengthen the analogy between objects and events and between stuff and processes as follows: in the same way in which countable objects, such as a gold ring, are constituted by stuff, such as gold, thus countable events, such as the event referred to by "there was a run of a mile by John", are constituted by massy-processes, such as the massy-process referred to by "there was running of a mile by John".[14]

In order to conclude this section, I argue that the previous ontological thesis is not compelling. Then, I shall make it plausible that the distinction between process predications and event predications is compatible with the distinction between accomplishment and activity predications.

The previous ontological thesis is not compelling. Mourelatos's massy-processes may be one explanation of the features expressed by mass-quantified nominalizations, but it need not to be the only one. Indeed, Mourelatos and the other supporters of this framework merely assume that the referents of mass-quantified nominalizations are massy-processes. However, they don't justify such a thesis. An alternative picture may well be that the referents of mass-quantified nominalizations are not occurrents at all. For instance, these referents may be forms or principles in the sense of Fine's theory of variable embodiments.[15] More precisely, forms of variable embodiments are function-like entities and, so, they are different from count-individual entities, like objects or events. Thus, someone may try to explain the massy-features of mass-quantified nominalizations in terms of the nature of these forms. Given such a view, the referent of "there was running of a mile by John" would be the principle of the variable embodiment *running of a mile* in which John was engaged in while he was running that mile. Thus, one cannot grant Mourelatos's assumption without further justification.[16] Generalizing the present methodological strategy, we may assume that any metaphysical theory of processes and events has to explain the massy character of mass-quantified nominalizations associated with process predications, and the count character of the count-quantified nominalizations associated with event predications.

Finally, the distinction between process predications and event predications, and their associated nominalizations, is compatible with the distinction between accomplishment and activity predications. Indeed, the linguistic part of Mourelatos's framework characterizes predications with an imperfective aspect (i.e. process predications) and predications with a perfective aspect (i.e. event predications). In turn, these predications are employed to ground a further classification between activity predications and accomplishment predications. Thus, there is no incompatibility between the two classifications, which instead integrate each other. Now, a metaphysical theory to be adequate has to account for the features expressed by both types of classification. However, as we have examined in the previous section, Mourelatos's framework doesn't account for the distinction between activity and accomplishment predications. Hence, such a framework cannot be considered adequate as a general metaphysical account of processes and events.

In this section, I discussed Mourelatos's distinction between process predications and events predications as well as his account of such a distinction. The account can be divided into a linguistic and an ontological thesis. The linguistic thesis provides data that

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[14] See also, e.g., [1], [2], [3], [11], [14], [21], [22].

[15] A variable embodiment is a compound constituted by a principle that determines the constituent matter for any given time the variable embodiment exists. A rigid embodiment is a compound constituted by a form which is embodied in some fixed matter for any time the compound exists – see, [5], [6], [7].

[16] [28] provides another account of mass-quantified nominalizations and the features they express different from the account elaborated by Mourelatos and his followers.

any adequate metaphysical theory of processes and events has to account for. On the other hand, I suggested some reasons why Mourelatos's ontological thesis is not compelling. Finally, I made it plausible that the distinction between process predications and event predications is compatible with the distinction between accomplishment and activity predications.[17]

4 The account based on count-process nominalizations and count-event nominalizations

A third view concerning what kinds of expressions pick out processes and events is associated with the positions developed by Stout ([23], [24], [25], [26]) and Fine ([5], [6], [7]). According to such a view, processes are countable and not completed things that are picked out by nominals like "The tennis match that was happening at t". On the other hand, events are countable and completed things that are picked out by nominals like "The tennis match that happened from 9.00 to 11.00".

In order to introduce such a framework, let us consider an everyday situation: Roger and Rafa are playing tennis in Court 1 at moment t, while Nole and Andy are playing tennis in Court 2 at the same moment t. Given such a situation, we may have the intuition that there are two different tennis matches that are happening (or going on) at the same time t. In particular, the intuition goes on, these tennis matches are countable and different things that are happening at the same time, and they are not concluded – indeed, the score of the match between Roger and Rafa is 6-4 2-5, while the score of the match between Nole and Andy is 6-3 4-1. We may want to refer to one of these not concluded matches that are going on. The nominal "The tennis match that is happening between Roger and Rafa at t" is an expression of our everyday use that we may employ to pick out the match between Roger and Rafa to the extent that it is happening at t. Such a referential expression expresses the features of countability, not-completeness, and on-goingness.[18] As a further motivation that backs up the thesis according to which such a kind of nominals attribute to their referents the feature of not-completeness, consider that the sentence "The tennis match that is now happening is now finished" seems to be inconsistent. In other words, on the basis of the meaning of the progressive "happening", something that is happening at a certain moment cannot also be finished at the same moment. Thus, nominals like the one examined express the features of countability, not-completeness, and on-goingness. Moreover, since they attribute to their referents the character of being on-going, these referents are plausibly occurrent-like entities. A theory of events and processes has to account for the characters expressed by such a kind of nominals.

Stout and Fine suggest a framework based on such a kind of expressions. Their framework can be divided into two components. One component is what may be called "the linguistic part". As the previous considerations suggest, referential expressions like "the tennis match that is happening between Roger and Rafa at t" derives from sentences

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[17] Among the metaphysical theories based on Mourelatos's framework, there are [2], [3], [11], [14], [21], [22].
[18] A related crucial question is whether "The tennis match that is happening between Roger and Rafa at $t1$" and "The tennis match that is happening between Roger and Rafa at $t2$" refer to numerically the same thing. See, among others, [12].

with a progressive aspect, as "Roger and Rafa are playing a tennis match at t".[19] Call such a kind of referential expressions "count-process nominalizations". [20] These nominalizations attribute to their referents the features of countability, not-completeness, and on-goingness, and also the character of things that are/were/will be happening. Consider, now, referential terms like "the tennis match that happened between Roger and Rafa from t_1 to t_n". This is an everyday singular term that is apparently used to refer to a countable and completed tennis match between Roger and Rafa that occurred from t_1 to t_n. Indeed, the match in question is over, and it is numerically different from the tennis match that Nole and Andy played. Call the kind of referential terms considered "count-event nominalizations". Count-event nominalizations derives from sentences with a perfective aspect. For instance, the previous nominalizations derives from "Roger and Rafa played a tennis match from t_1 to t_n". In general, count-event nominalizations attribute to their referents the features of countability and completeness, and also the character of things that happened or will happened.[21]

The second component of the framework concerns an ontological thesis. More precisely, according to Stout and Fine, the referents of count-process nominalizations are processes. Call them "count-processes". Moreover, count-processes possess the features attributed to them by their nominals, namely they are countable, not-completed things that go on. On the other hand, Stout and Fine hold, the referents of count-event nominalizations are events. Call them "count-events". Count-events possess the features attributed to them by their nominals, viz. they are countable, completed things that happened or will happened.[22]

However, the previous ontological thesis is not compelling. First, as this article showed, there are several candidates that have equal rights to be called "processes", viz. massy-processes and count-processes. Thus, one cannot merely assume that "process" means count-process.[23] Second, a metaphysical theory has to account for the features expressed by count-process nominalizations and count-event nominalizations, respectively. However, one cannot simply assume that the referents of count-process nominalizations *are* countable, not-completed things that go on. Indeed, an open possibility is to explain the features expressed by such nominals either in terms of completed and countable events or in terms of massy-processes.[24]

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[19] As Stout ([25, p. 50] makes it clear, "the progressive aspect is a species of the imperfective aspect". The progressive aspect of a predication describes the ontological correlate of such a predication from the 'inside' point of view, as happening from moment to moment.

[20] Despite the fact that most of my examples of count-process nominalizations derive from accomplishment predications with a progressive aspect, one should bear in mind that count-process nominalizations can be also derived from activity predications with a progressive aspect. For instance, from "Jack was smoking a cigarette at t" one derives the count-process nominalization "The episode of Jack's smoking of a cigarette that was happening at t".

[21] Stout [25, p. 50] convincingly argues that all these kinds of nominalizations are plausibly referential expressions.

[22] It must be noted that Stout and Fine specify the previous ontological thesis differently. More specifically, Stout ([25, p. 50], [26, pp. 4-5]) holds that count-processes are enduring entities, while events are perduring entities that are the results of count-processes. An enduring entity is an entity that persists by being wholly present at each moment at which it exists. A perduring entity is an entity that persists by being temporally extended, and by having different temporal parts at different moments of times at which it is present. On the other hand, Fine holds that that count-processes are variable embodiments, while events are rigid embodiments (see footnote 15).

[23] It must be acknowledged that, at least partially, Stout [25, p. 57] accepts the previous observation.

[24] For approaches along this strategy, see [3], [14], [29].

Now, a crucial question is whether an account based on the distinction between count-process nominalizations and count-event nominalizations is compatible with the other distinctions, viz. the distinction between mass-quantified nominalizations and count-quantified nominalizations and the distinction between activity predications and accomplishment predications. Consider, first, whether an account based on the distinction between count-process nominalizations and count-event nominalizations is compatible with the distinction between mass-quantified nominalizations and count-quantified nominalizations.

First, let us make it plausible that count-process nominalizations and their ontological correlates are compatible with mass-quantified nominalizations and their ontological correlates. Indeed, from the previous investigations, it results that the same predications with a progressive aspect – for instance, "Nole was playing a tennis match at t" – gives rise to two different nominalizations – namely, "the tennis match played by Nole that was happening at t" and "there was playing of a tennis match by Nole at t" – that attribute to their respective ontological correlates different features.[25] But this is not contradictory. Admittedly, this conclusion prompts a requirement upon any metaphysical theory of processes and events, namely that it has to account for the features these two kinds of normalizations attribute to their referents as well as for the relations between such referents.

Furthermore, nothing excludes that count-event nominalizations and count-quantified nominalizations pick out the same kind of entities. Indeed, both of them attribute to their referents the features of countability and completeness, and also the character of things that happened or will happen. Hence, there is no incompatibility between these two frameworks. Actually, one may give an example of a theory that satisfies these requirements: Fine's theory of processes and events. In particular, one may take a mass-quantified nominalization to pick out the principle of a variable embodiment; the related count-process nominalization to pick out the variable embodiment at a certain time; while both the count-event nominalization and the count-quantified nominalization may individuate the rigid embodiments that constitute the variable embodiment at various times.

Consider, now, the question whether an account based on the distinction between count-process nominalizations and count-event nominalizations is compatible with the distinction between activity predications and accomplishment predications. There is no incompatibility between the two frameworks.
Count-process nominalizations are derived from accomplishment predications with a progressive aspect as well as from activity predications with a progressive aspect. Consider, for instance, the following progressive sentences:

(17) Jack was smoking a cigarette at t;
(18) Jack was smoking cigarettes at t.

The related count-process nominalizations are respectively:

(19) The episode of Jack's smoking of a cigarette that was happening at t;

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[25] Mass-quantified nominalizations are derived from predications with an imperfective aspect, while count-process nominalizations are derived from predications with a progressive aspect. However, as Stout holds, the progressive aspect is a species of the imperfective aspect. Thus, I shall restrict the focus on such a type of predications.

(20) The episode of Jack's smoking cigarettes that was happening at t.[26]

On the other hand, count-event nominalizations are derived from accomplishment predications with a perfective aspect as well as from activity predications with a perfective aspect. Consider, for instance, the following perfective sentences:

(21) Jack smoked a cigarette from 10.00 to 10.10;
(22) Jack smoked cigarettes from 10.00 to 10.30.

The related count-event nominalizations are respectively:

(23) The episode of Jack's smoking of a cigarette that happened from 10.00 to 10.10;
(24) The episode of John's smoking cigarettes that happened from 10.00 to 10.30.[27]

Thus, the situation is the following. Stout and Fine characterize a distinction between count-process nominalizations derived from predications with a progressive aspect and count-event nominalizations derived from predications with a perfective aspect. Some predications with a progressive aspect are accomplishment predications, while others are activity predications. In the same way, some predications with a perfective aspect are accomplishment predications, while others are activity predications. Hence, there is no incompatibility between the two classifications, which instead integrate each other.

An objection to the present framework that is worth examining is based on an argument provided by Steward [22, p. 784]. According to such an objection, the notions of count-process nominalization and count-event nominalization are inconsistent. The argument can be structured as follows:

(P1) Count-process nominalizations and count-event nominalizations attribute different features to their respective referents. In particular, count-process nominalizations attribute to their referents the feature of not-completeness, while count-event nominalizations attribute to them the feature of completeness. Therefore, the referents of these kinds of nominalizations are different entities.[28]

(P2) It is plausible to hold that if an event e has happened by t, and e was not instantaneous, then e must have been happening at some time prior to t. As a consequence, the referents of count-event nominalizations are identical to referents of count-process nominalizations.

(C) The notions of count-process nominalization and count-event nominalization are inconsistent.

I wish to suggest a reading of the previous argument that triggers a positive conclusion. In short, the argument individuates a weakness in our pre-philosophical conceptual framework that a metaphysical theory of processes and events has to explain

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[26] Predications with a progressive aspect give rise to count-process nominalizations that single out (countable) episodes or stretches and attribute to them the features of not-completeness and on-goingness. Moreover, I shall use expressions like (19), instead of expressions like "Jack's smoking of a cigarette that was happening at t", in order to stress the fact that this kind of nominalizations express the feature of countability.

[27] Predications with a perfective aspect give rise to count-event nominalizations that individuate (countable) episodes or stretches and attribute to them the features of completeness, and the character of things that happened or will happened.

[28] Clearly, P1 hinges on the thesis that the same occurrent that is incomplete at a certain time (while it is ongoing) cannot be complete at a different time. Such a thesis is questionable. See, e.g., [12].

away. Concerning P1, it should be noted that it is a fact of our everyday use of count-process nominalizations and count-event nominalizations that they attribute to their respective referents the features described by P1. On the other hand, it also seems to be a fact of our everyday use of these nominalizations that we adopt some rule like P2. However, such premises concern our everyday uses and our pre-philosophical concepts. Thus, the argument individuates a limit in our common-sense conceptualization, and it calls for a metaphysical explanation that solves such a puzzle. In this respect, the situation is not different from the puzzles that concern material constitution.[29] Hence, Steward's argument doesn't provide a knock-down objection against a framework involving count-process nominalizations and count-event nominalizations.

Stout and Fine's framework characterizes kinds of nominals that are of everyday use. In particular, count-process nominalizations express the features of countability, not-completeness, and on-goingness; count-event nominalizations attribute to their referents the features of countability and completeness, and also the character of things that happened or will happened. Moreover, such a framework is compatible with the distinction between accomplishment and activity predications and with the distinction between mass-quantified nominalizations and count-quantified nominalizations. A metaphysical theory of processes and events has to account for all these distinctions.

The results of the present article prompt a three-fold conclusion: first, these results allow one to locate the source of the initial inconsistency – and the associated subject-matter worry – in the ontological theses adopted by each account. Second, when we speak about processes and events, we are speaking about a plurality of phenomena characterized through the integration of the linguistic parts of the accounts considered. Third, not only the linguistic parts integrate each other and together contribute to our understanding of the notions of processes and events, but they also provide data that any adequate metaphysical theory of processes and events has to account for.[30]

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