ACTIONS: PARTICULARS OR PROPERTIES?

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ABSTRACT

As it is appropriate to regard mental events as properties of their subject rather than as entities, so it is appropriate to treat actions as properties of the agent rather than as particulars. It is argued that the property approach to action should not be rejected because of the implausibility of the theories of Goldman and Kim; for properties need not and should not be individuated in their way. It is also argued that the question of treating actions as particulars or properties is to be settled on pragmatic grounds: it has no clear metaphysical significance. Finally it is argued that the logical form of action sentences, which Davidson endeavours to display by treating acts as particulars, can be shown with greater simplicity and plausibility on a property approach.
Are actions best treated as particulars or as properties? These are the two possibilities that are open to us, given the conventions of predicate logic. Davidson's\textsuperscript{1} analysis of action sentences is based on the assumption that we refer to actions as particular entities. The property approach has been adopted by two distinct schools of thought. One of these holds the view that an action is best represented as a relation between an agent and an event which he "brings about" or "makes happen". Thus Danto\textsuperscript{2} claims to capture the structure of action in the schema 'mDa' where 'm' stands for the agent and 'a' for an event. An alternative version of the property approach is that of Goldman\textsuperscript{3} and of Kim\textsuperscript{4}; these two philosophers differ in terminology but present essentially the same view. For Goldman there are act-properties such as mowing the lawn\textsuperscript{5}; when John mows the lawn he is said to exemplify this property. Presumably a statement to that effect would be symbolized using a one-place predicate.

This paper is a defence of the property approach. In common with many contemporary philosophers I have come to think it inappropriate and misleading to regard a person's sensations, feelings, thoughts and mental images as entities of which he is aware. They are better regarded as being, in some way or other, properties of the person. Given the analogy in logical structure between action and cognition, noted by philosophers as diverse in outlook as Danto\textsuperscript{6} and Polanyi\textsuperscript{7}, consistency demands that actions, too, should be treated as properties. Now I


\textsuperscript{5}Cf. \textit{THA}, p. 10.

\textsuperscript{6}Cf. Danto, \textit{op. cit.}, chapter 1.
think there are two different considerations which might lead people to reject the property approach. One is the implausibility of the theories of Goldman and Kim. Since these men treat actions as properties of agents, it might be thought that rejection of their position entails rejection of the property approach. In Section II, I argue that their strategy for individuating properties is unaccept­able, but that this fact does not invalidate the property approach per se. Secondly it might be thought that the logical form of action sentences can be displayed only through analysis in the manner of Davidson. Hence in Section III, I argue that this task can be accomplished with greater simplicity and naturalness by treating action terms as predicates.

II

The property approach of Goldman and Kim is part of their strategy for formulating individuating descriptions of actions and of other events. An individuating description is, as Brand puts it, one which "differentiates the action in question from all other actions." The literature on this topic is rife with controversy about the proper analysis of examples such as the following by Davidson:

I flip the switch, turn on the light, and illuminate the room. Unbeknownst to me I also alert a prowler to the fact that I am home. Here I do not do four things, but only one, of which four descriptions have been given.9

Davidson's commonsensical "unifying" position is disputed by "multipliers"10 such as Goldman and Kim, who hold that each of the descriptions in this passage refers to a distinct act; the agent does four different things.

In this paper I am concerned with this issue only as the context within which Goldman and Kim develop their version of the property approach to actions. My discussion will focus chiefly upon Goldman, who gives the more thorough presentation of the position. His "fine-grained" procedure for the individuation of acts treats the performance of an act as the exemplification of an act property or act type.


9 Donald Davidson, "Actions, Reasons and Causes" in Brand, op. cit., p. 68.

According to Goldman there are properties such as "mowing one's lawn, running, writing a letter, or giving a lecture". He grants that philosophers have tended not to admit properties of this sort; but he sees no reason for being so restrictive.

Normally philosophers tend to apply the term "property" to such things as being six feet tall, being a bachelor, or having red hair. But we need not restrict the term "property" to static properties. Just as owning a Jaguar is a property that can be exemplified by John at time t, so buying a Jaguar is a property that can be exemplified by John at time t.

Thus to perform an act is to exemplify a property. A particular act is called an act-token, a token of an act property. When John mows his lawn, he exemplifies the property, 'mowing one's lawn', and his act is a token of this property. Given this framework, the individuation of acts amounts to the individuation of properties. Act-properties are a subclass of event-properties.

Kim's approach is essentially the same. In the passage I am about to quote he speaks of events and states, not of actions; but it is clear that he regards actions as a subclass of events. For example he tells us that on his criterion, 'Brutus stabbed Caesar' and 'Brutus killed Caesar' describe different events. He defines an event or state as follows:

First, what is an event or state? An event or state can be explained as a particular (substance) having a certain property, or more generally a certain number of particulars standing in a certain relation to one another. Suppressing reference to time, we may take the expressions of the following kind as designating-expressions for events and states: "a's being F," "b's being G," "a standing in relation R to b," etc., where 'a' and 'b' refer to particulars and 'F', 'G', and 'R' to properties and relations. Thus, Socrates' being in pain, Socrates' being in brain state B, and Socrates speaking to Theatetus are all events or states.

Thus Kim would treat John mowing his lawn, etc., in the same way as Goldman. What the latter calls an act-token, the former calls an event. Kim's criterion for the identity of events is as follows:

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12THA, p. 10.
13Kim, op. cit., p. 88.
The event a's being F and the event b's being G are the same event if and only if either the statements "a is F" and "b is G" are logically equivalent, or else the particular a is identical with the particular b and the property of being F (F-ness) is identical with the property of being G (G-ness).\textsuperscript{14}

Goldman's criterion is equivalent to this one; he stipulates that "each act-token is a token of one and only one type (property)."\textsuperscript{15} Apparently he thinks that any opinion to the contrary must arise out of a confusion between being a token of a property and exemplifying a property; for he follows the stipulation with a warning that these two things must not be confused, illustrated by the following example:

John's moving his hand (at t) is a token of the property "moving one's hand," but it does not exemplify that property. (John exemplifies that property.) John's moving his hand (at t) does exemplify a variety of properties, however. It exemplifies the property of causing the fright of a fly; it exemplifies the property of causing the movement of the queen; etc. Act-tokens, like anything else, may exemplify indefinitely many properties, although they are tokens of only one property each.\textsuperscript{16}

We shall find that the main difficulties in this position arise from this last claim, that "act-tokens ... are tokens of only one property each."

When John moves his hand, in this example, he frightens a fly, moves his queen to king's knight seven, checkmates his opponent and gives his opponent a heart attack. On Goldman's position, John's moving of his hand is a basic act-token which has the property of causing the queen to move. Hence, by "causal generation" a form of what Goldman calls the "level generation" relation between acts, John is credited with the act of moving the queen. John's moving his hand and John's moving the queen are thus, for Goldman, distinct acts, related by causal generation. The same relation holds between John's moving his hand and John's frightening the fly.

Now the checkmating of John's opponent is not caused by his moving the queen to K-Kt-7; it comes about as a result of this move by virtue of the rules of chess. A similar relation holds between a driver's extending his arm out the car window and his signalling a turn. These are examples of conventional generation, Goldman's second type of level-generation, which is, he tells us:

\textsuperscript{14}Ibid., p. 89

\textsuperscript{15}THA, p. 11.

\textsuperscript{16}Ibid.
... characterized by the existence of rules, conventions, or social practices in virtue of which an act A can be ascribed to an agent S, given his performance of another act.\textsuperscript{17}

By virtue of the rules of chess, John, having moved his queen as described, is credited with the act of checkmating his opponent. His moving the queen and his checkmating the opponent are two distinct acts, related by conventional generation. There are two further species of level-generation. In \textit{simple generation} "the existence of certain circumstances, conjoined with the performance of A, ensures that the agent has performed A".\textsuperscript{18} Thus S's jumping 6 feet 3 inches generates S's outjumping George, and S's dangling a line in the water generates S's fishing. These are ordered pairs of distinct acts, related by simple generation. Finally there is \textit{augmentation generation} in which "the generated act is formed by "augmenting" the generating act with some relevant fact or circumstance."\textsuperscript{19} Examples of ordered pairs that have this relation are S's extending his arm and S's extending his arm out the car window; S's saying "hello" and S's saying "hello" loudly; and S's running and S's running at 8 m.p.h. Such, briefly sketched, is the structure of Goldman's radical multiplicationism.

Now this fine-grained way of individuating act-properties is not the way that we normally individuate properties. The difference stems from his stipulation that "Every act-token is a token of only one type (property)."\textsuperscript{20} It is because of this principle that he holds that 'John's saying "hello"' and 'John's saying "hello" loudly' (both referring to the same occasion, on which John answers the telephone) represent different act-tokens.\textsuperscript{21}

These, as we have seen, Goldman claims to be two distinct acts, the latter being augmentationally generated by the former. Now we do not follow such a principle in individuating tokens (or samples or instances) of other kinds of properties. Let us think of colour properties, and in particular of a specific red shirt. The colour of this shirt is a token of the property, red. Now 'red' is a vague term which stands for any one of a variety of different shades. Suppose that we can describe the shirt's colour more specifically as 'scarlet'. Now we do not say that the red of the shirt and the scarlet of the shirt are different colour tokens that have some peculiar relationship; we

\textsuperscript{17}THA, p. 25.
\textsuperscript{18}THA, p. 26.
\textsuperscript{19}THA, p. 28.
\textsuperscript{20}THA, p. 11
\textsuperscript{21}Cf. THA, p. 3.
say, rather, that 'red' and 'scarlet' are descriptions of the same colour sample, the latter more specific than the former. When the colour of the shirt is described as 'red' it has to be some shade of red; which one is left unspecified. The situation in Goldman's example is analogous. When John says "hello", he must say it with some volume; we might think of a scale ranging from 'inaudibly' to 'deafeningly'. The description, 'saying "hello"' leaves the volume unspecified, whereas 'saying "hello" loudly' specifies it. Thus on our normal way of individuating properties these are two descriptions, one more specific than the other, of the same act-property.

Goldman justifies his position by arguing that John's saying "hello" and his saying "hello" loudly have different causal properties in that the latter, but not the former, occurred because John had just quarreled with his wife. Since they differ in causal properties, these two acts cannot be identical. Now suppose that we follow this principle in individuating colour properties, and that the scarlet shirt of my example is faded through exposure to the sun. We could argue as follows: "Consider these two colour tokens, the scarlet of the shirt and the faded scarlet of the shirt. The latter, but not the former, has been caused by exposure to the sun. Hence these tokens have different causal properties and cannot be identical." Now in what sense do the two "tokens" have different causal properties? Presumably the scarlet colour was produced by dyeing. Sunlight caused it to fade. The description, 'scarlet shirt', mentions a property that characterizes the shirt; the more specific 'faded scarlet shirt' also mentions a second-order property characterizing the shirt's colour. The cause of the first-order property is the same in both cases. The second-order property has a different cause. But we must note that the referent of 'scarlet shirt' is faded; this fact is simply not mentioned. So the two putative "tokens" do not have different causal properties. What we are really given in this example is not two colour tokens, but two descriptions. Whether they refer to the same entity or to different entities is a question of reference, not of meaning. Goldman's approach assumes that every member of a set of non-synonomous descriptions refers to a different entity. His several arguments against "the identity thesis", the position of the reductive unifiers, are vitiated through relying on this defective assumption. Each of them begins by quoting two act-descriptions and calling them two act-tokens. It is then argued that since token A has a property that token B lacks, the two are not identical.

This criticism of Goldman's way of individuating act-tokens could be put differently by saying that he applies to tokens a criterion that is appropriate only for types. It is true that 'red' and 'scarlet' (or saying "hello" and saying "hello" loudly) do not refer to identical types. That this is so can be decided on the basis of the meanings of the terms. But it does not follow from this fact that in a specific instance the two descriptions do not refer to the same token.

22 Cf. THA, Chapter 1.
I have argued that in cases in which Goldman claims that we have tokens of two distinct properties, related by augmentation generation, our everyday or common sense way of individuating properties has it that we have the same token described more specifically in one case than in the other. In the argument I made use of our intuitions about colour properties, claiming that act-properties should be treated similarly. Perhaps, the reader might think, there is something distinctive about act-properties that makes a different treatment appropriate. But Goldman is far from making any such suggestion. His recursive definition of level generation refers, not specifically to act-tokens, but to "property-instances of any kind". It appears, therefore, that he regards the logical behaviour of act-properties to be of a piece with that of other kinds of properties. Presumably, then, he would individuate colour tokens in the way I have suggested!

It is clear that Kim would do so. A shirt's having a certain colour satisfies his definition of "an event or state", and the property of being red is not identical with that of being scarlet. Hence the shirt's being red is not the same event (or state) as its being scarlet. Since an event, for Kim, consists in a substance having a certain property, this conclusion is synonymous with the claim I attribute to Goldman that the red of the shirt (or the shirt's being red) and the scarlet of the shirt (or the shirt's being scarlet) are two distinct act-tokens. Kim, for his part, is aware of this counter-intuitive consequence of his approach; for he remarks,

Such common notions as one description of an event being more detailed than another description of the same event, one description being more informative than another, and so on, have no immediate meaning under the proposed analysis.

In this context Kim goes on to sketch a possible way of clarifying these notions through constructing a more comprehensive notion of event, for which he suggests the term 'happening'. In terms of this notion, 'Brutus killed Caesar' and 'Brutus stabbed Caesar' could be said to be about the same happening. But this suggestion does not affect the present issue. Were the doctrine of "happening" developed, it is clear that Kim would still hold that 'Brutus stabbed Caesar' and 'Brutus stabbed Caesar in the stomach' describe different events. Now my rejection of this approach is based simply on the fact that it represents a radical departure from the way we normally individuate properties. My appeal is to common sense and ordinary language. I do not think that our ordinary ways of thinking and speaking are sacrosanct; but whenever they are rejected or disregarded there should

23THA, pp. 44-5.

24Kim, op. cit., p. 90, fn.
be a good reason for doing so. In the present case there would seem to be no such reason.

Goldman's claim on behalf of the distinctness of act-tokens related by conventional and simple generation can be undercut by a line of argument similar to the one I have used in relation to augmentation generation. With regard to simple generation, for instance, we might think of a blue shirt, of a shade darker than the blue sky. On Goldman's approach the blue of the shirt is one colour token, the blue that is darker than the sky is another one, "generated" by the former token through its relationship to the colour of the sky. It can be argued, in the same vein as before, that any sample of blue must have some relation to the blue of the sky, a relation that may or may not be specified. In the first description ('The blue of the shirt' or 'The shirt's being blue') it is not specified; in the second one ('The shirt's blue that is darker than the blue of the sky' or 'The shirt's being a blue darker than that of the sky') it is; but in each case, on our ordinary way of individuating properties, the description refers to the same colour sample. The mind boggles at the prospect of trying to locate and distinguish the two distinct colour tokens that this theory claims to exist (let alone the indefinitely large number of distinct colour samples that can be generated in the same manner). Similar things can be said of any of Goldman's examples of simple generation, for instance the pair 'S's jumping 6 feet three inches' and 'S's outjumping George'. S's jump must have some absolute length and, given that George has jumped first, some comparative relation to George's jump. The former description specifies the length but not the relation, the latter description the relation but not the length. But it is, surely, the same token of jumping that is the referent in both cases.

In relation to conventional generation, let us think of yet another shirt, this one with a pattern on the front, a circle with a small cross suspended from its periphery at the bottom. This configuration symbolizes 'woman'. On Goldman's approach the shirtfront bears (1) a token of a circle-and-cross configuration, and (ii) a token of the symbol for 'woman'. These are distinct tokens related by conventional generation. I shall not weary the reader going through the same line of argument again; it is obvious what it would be, and that it would yield the conclusion that there is one token, subject to two descriptions, rather than two tokens. Similar considerations apply to Goldman's example, the pair 'John's moving his queen to K-Kt-7' and 'John's checkmating his opponent'. Any chess move has both a piece-and-square description and a description in terms of strategic purpose.

Thus I have arrived at the conclusion that, to use Goldman's terminology, acts related by conventional, simple or augmentation generation are, in general, identical. This conclusion depends upon the
premise that the non-identity of the properties mentioned in a pair of descriptions does not entail the non-identity of the property tokens referred to. Thus the Goldman-Kim position is to be rejected because of the groundless and implausible character of its criteria for individuating properties. But this consideration does not in any way count against the property approach as such.

Whether actions are to be treated as particulars or as properties is a pragmatic question, not an ontological one. There is always a great deal of latitude in what may be taken to be a substance or particular and referred to as a subject characterized by predicates. For Kant, this latitude is unlimited. In his account of "The Psychological Idea" in the Prolegomena he writes as follows:

Pure reason requires us to seek for every predicate of a thing its proper subject, and for this subject, which is itself necessarily nothing but a predicate, its subject, and so on indefinitely (or as far as we can reach). But hence it follows that we must not hold anything, at which we can arrive, to be an ultimate subject... For the specific nature of our own understanding consists in thinking everything discursively, that is, representing it by concepts, and so by mere predicates, to which therefore the absolute subject must always be wanting.  

In my discussion I have repeatedly used coloured shirts as examples, always referring to a shirt as a particular characterized by a colour property. But the status of a shirt as a particular is far from being enshrined in the nature of things. In dealing conceptually with a shirt one could, alternatively, (a) take as particulars m pieces of cloth which collectively exemplify the complex relational property of shirt-ness, being a shirt; or else (b) take as particulars cotton threads, a group of which collectively exemplify the complex relational property of cloth-ness, being cloth; m of these groups would then exemplify the higher-level relational property of being a shirt; or else (c) take as particulars cotton fibres, a group of which collectively exemplify the complex relational property of thread-ness, being thread; I shall leave it to the reader to work out the details of this way of talking about a shirt.

Now there is nothing ontologically wrong with conducting an analysis in the manner of (a), (b) or (c). They represent alternative ways of deploying the categories of substance and attribute. In any of these ways the same facts can be described, with greater or less convenience and with more or less precision. The everyday statement that the shirt is dirty, for instance, would become, under (a), a statement that all or some of the component parts are dirty. Under (b) it would become an account of the presence of foreign matter in or between

Kant, Prolegomena To Any Future Metaphysics, ed. Paul Carus (LaSalle, Ill.: Open Court, 1945), p. 99.
threads. (a), (b), and (c) yield descriptions that are progressively more complex and more precise; but if one is interested only in the question whether or not to send the shirt to the laundry, such detail is superfluous. Thus the issue of how to deploy the concepts of substance and attribute is to be settled on grounds of convenience; the question whether to treat the shirt as a particular or as a relational property of the threads is to be decided on pragmatic grounds. To opt for the latter alternative is not to embrace Platonism, and to opt for the former is not to be committed to ultimate particulars. Similarly the decision between treating actions as particulars or as properties is not fraught with deep ontological significance; it is to be settled on grounds such as convenience, simplicity and naturalness.

III

Now I shall argue on pragmatic grounds that in the logical analysis of action sentences, a version of the property approach is superior to an account in terms of particulars. In his "The Logical Form of Action Sentences," Davidson sets out "to get the logical form of simple sentences about actions straight." He seeks a formal analysis that will preserve the entailments of the original sentences and justify claims that two sentences describe "the same action". His theory employs the device of regarding an action sentence as including a covert reference to an event, a reference which is made explicit in logical translation. Thus in 'Shem kicked Shaun', 'kicked' is regarded as a three-place predicate; the form of the sentence is:

(1) (Ex) (Kicked (Shem, Shaun, x)).

Davidson confesses there is no English sentence "that directly reflects this form". His best approximation is "There is an event x such that x is a kicking of Shaun by Shem"; this, as he observes, has the drawback that 'a kicking' is not a singular term. Surely this is a very serious drawback indeed. But I shall sketch the outlines of Davidson's analysis before criticizing it or proposing an alternative. One of his main examples is:

(2) 'I flew my spaceship to the Morning Star',
which is analysed as,
(3) (Ex) (Flew (I, my spaceship, x) & To (the Morning Star, x)).

As (2) entails 'I flew my spaceship', so (3) entails (Ex) (Flew (I, my spaceship, x)). This entailment of (2) would be lost were we to symbolize it in the ordinary way as:

27. *LDA*, p. 92.
(4) Flew (I, my spaceship, to the Morning Star).

Moreover, given that the Morning Star is identical with the Evening Star, there is a mutual entailment between (3) and

(5) (Ex) Flew (I, my spaceship, x) & To (the Evening Star, x)),

so that (3) and (5) can be said to refer to the same action.

In commenting on Davidson's analysis, H.N. Castaneda observes that (2) also entails, 'I flew to the Morning Star' which, in turn, entails 'I flew'; these entailments are not preserved by (3). Davidson replies that although these entailments exist, it is not by virtue of logical form. Although 'I flew my spaceship' entails 'I flew', 'I sank the Bismarck' does not entail 'I sank'. In general, says Davidson, simple sentences containing transitive verbs do not, as a matter of logical form, entail sentences with intransitive verbs. Castaneda makes a more telling point when he notes that (3) entails,

(6) (Ex) (To (the Morning Star, x))

although (2) does not entail

(7) There was a to the Morning Star.

To avoid this unfortunate consequence, Castaneda suggests that the second component of (3) be rendered,

(8) Flying-to (x, the Morning Star).

Davidson resists this suggestion, arguing that (6) should be understood as 'There was an event involving motion toward the Morning Star'.

Whatever may be the best analysis in this idiom, my present claim is that Davidson's project can be better realized by treating actions as properties. By 'better' I mean more simply and naturally; there is no need to posit a covert reference to an event not mentioned in English. Moreover, the property approach yields logical schemata that are clear in their meaning and easily translatable into ordinary language. Davidson's schemata are neither clear nor translatable. It is clear what is meant by

(9) Flew (I, my spaceship);

but it is far from clear what can be meant by

(10) (Ex (Flew (I, my spaceship, x)).

29 Cf. LDA, p. 105-6.
30 LDA, p. 117.
31 LDA, p. 108.
32 Cf. LDA, p. 118.
Multi-place predicates normally stand for relations; but what exactly is the three-term relation, 'Flew' which holds among myself, my spaceship, and an event, x? Since my flying the spaceship is an event, it would be plausible to think that x is an event such that I fly my spaceship. But this is emphatically not the sense of (10), in which x occupies one place in a three-place predicate. Here x is not to be identified with my flying the spaceship; it is, rather, an event having the 'flew' (or 'flying'? ) relation to myself and the ship. It is far from clear what this could mean. Moreover, one wonders how (10) could be instantiated. Could we use an event-constant and get

(11) Flew (I, my spaceship, a)?

If so, what sort of name could we put in for a? This is the same difficulty that Davidson mentioned in saying there is no English sentence that directly reflects (1) since there is no singular term to substitute for 'x'. So this line of analysis does violence to the rules of logic in giving us quantified statements that cannot be instantiated. The advantage of Davidson's analysis in terms of an event variable lies in preserving the needed entailments; but in doing so it creates formidable difficulties.

How does Davidson arrive at this position? His analysis begins with the example,

Jones did it slowly, deliberately, in the bathroom, with a knife, at midnight. What he did was butter a piece of toast. 33

The "it", so he tells us, "seems to refer to some entity": we might call it 'x' and say,

"There is an action, x, such that Jones did x slowly, Jones did x deliberately and Jones did x in the bathroom ... and so on." 34

This is his crucial, initial move. In my view it is a wrong move, since 'it' need not refer to an entity; this ubiquitous pronoun can equally well refer to a property. When a house on our street was painted baby blue it was true to say, 'The owners like it, but the neighbours hate it.' Here 'it' refers to the colour of the house. In referring to Jones' action as 'it', I suggest that we regard the referent of this pronoun not as an entity but as a property of Jones.

Identifying reference to properties and quantifying over properties are shunned through fear of Platonistic commitments. I think these fears are greatly over-rated; but I cannot pursue this large issue in the present context. Suffice it to say that we do, unashamedly, refer to and quantify over properties in ordinary speech.

33LDA, p. 81.
34Ibid.
We say things like,
(12) Red is a more exciting colour than green;
or (13) There are colours that are more exciting than green;
or (14) Any colour is more exciting than black.
It might be thought that (12) could be understood as referring to red and green things and thus equivalent to
(15) Red things are more exciting than green things.
But this will not do. Compare a red-bound copy of The Critique of Pure Reason with a voluptuous green-skinned maiden from Mars. Perhaps we can avoid such counter-examples through a type-specification such as:
(16) Red things are more exciting than green things of the same type (or kind).
But we need a criterion for sameness of type or kind. Perhaps it is safe to say that all Easter eggs are things of the same type. If so a green Easter egg twenty feet high and a red Easter egg of normal size are things of the same type; but the former is surely the more exciting. So we need a statement that is tightly and exclusively qualified, such as,
(17) Red things are more exciting than green things that are otherwise the same.
Have we at last achieved a nominalist analysis of (12)? But what is meant by 'otherwise the same'? This means, of course, 'the same except for colour'. It is specified that the difference in disposition to excite has to do with the difference in colour and with nothing else. This specification amounts to an assertion of (12). This example illustrates the fact that everyday identifying references to types such as colours, numbers, or qualities of character, are extremely resistant to translation into equivalent statements about things. This being the case, our logical symbolism should provide the resources needed for handling such references. The following passage, in which Davidson describes the aims and assumptions behind his study of the logical form of action sentences, is relevant to the present point.

I dream of a theory that makes the transition from the ordinary idiom to canonical notation purely mechanical, and a canonical notation rich enough to capture, in its dull and explicit way, every difference and connection legitimately considered the business of a theory of meaning. The point of canonical notation so conceived is not to improve on something left vague and defective in natural language, but to help elicit in a perspicuous and general form the understanding of logical grammar we all have that constitutes (part of) our grasp of our native tongue.35

35 LDA, p. 115.
In my "better analysis" of action sentences, I use the conventions set forth by Copi\textsuperscript{36}, which allow for predicating attributes of attributes. Thus, in symbolizing action sentences, we can both treat actions as properties and include the properties that characterize actions. In this paper, the second-order predicates will be italicized. I shall begin with preliminary examples, to introduce the conventions. 'Red is an exciting colour' is symbolized,

(18) \text{CR} & \text{ER},

and 'Red is a more exciting colour than green', as

(19) \text{CR} & \text{CG} & \text{MRG}.

A predicate can appear in a schema both as characterizing and as characterized. 'The Easter egg is an exciting red colour' becomes,

(20) \text{Re} & \text{ER}.

'Tom's loyalty to his country is a good quality' is translated,

(21) \text{Ltc} & \text{GL}.

The capital letters, of course, are predicate constants; hence in (20), for example, it is clear that the property, \text{R}, which characterizes \text{e}, is the very same property that is characterized by \text{E}. Moreover, it is important to note that the schemata, (18) to (21), preserve the entailments of their English originals.

Copi also allows for quantification over predicates; for instance, 'Some colour is more exciting than green', which follows from (19), is symbolized,

(22) (\text{EF}) (\text{CF} & \text{CG} & \text{MFG}).

My approach, however, does not depend upon quantification in the way that Davidson's does; the task of showing the logical form of action sentences is accomplished through the use of predicate constants.

Now let us turn to action sentences. Assuming that an action is a property of the agent, 'I washed this shirt yesterday' is symbolized as,

(23) \text{Wis} & \text{YW}.

Perhaps we can most felicitously think of \text{W} as standing for 'washing'. The act of washing is treated as a binary relation between the agent and the article washed. The time at which the act occurs is treated as a property characterizing the act. This is surely no less plausible than the popular strategy of treating the time as an individual member of a triadic relation, and it has the advantage of preserving entailments of the English sentence that are not preserved when a three-place predicate is used. Thus (23) entails

(23a) \text{Wis} ('I washed this shirt')

and

(23b) \text{YW} ('Washing occurred yesterday').

Moreover, the entailments by quantification that are preserved through the more usual approach are also preserved through this one. For instance we can move from (23) to any of:

\text{Wis} & \text{YW}.

Following similar principles, 'I flew my spaceship to the Morning Star' becomes,

(24) Fis & MF.

The past act of flying is treated (a) as a binary relation between
the agent and his spaceship and (b) as being characterized by its
destination. Consequently, entailments of the English sentence such
as 'I flew my spaceship' and 'There was a flight to the Morning Star'
are preserved. The former is not preserved under symbolization by a
three-place predicate. But since a flight, in this context, is a flying
of something by someone, this is not true of the latter entailment.
From the schema

(25) Fism

there follows

(25a) (Ex) (Ey) Fxym.

'Someone flew something to the Morning Star' appears to be equivalent
to 'There was a flight to the Morning Star'.

Now what of the fact that the original sentence, in conjunction with
'The Morning Star \(\equiv\) The Evening Star', entails 'I flew my spaceship
to the Evening Star'? In order to get from (24) to

(26) Fis & EF,

we must assert

(27) MF \(\equiv\) EF.

Now it is surely uncontroversial that any two simple sentences are
equivalent if they have the same subject and co-extensional predicates.
On this principle, 'Jane is a sister of Bertha' is equivalent to 'Jane
is a female sibling of Bertha'; and 'The number of persons in Jane's
family is nine', the equivalent to 'The number of persons in Jane's
family is the number of the planets'. The latter equivalence is based
on the contingent fact that the number of the planets is nine, the
former on the synonymy of 'sister' and 'female sibling'. The latter
example is more similar to (25), in which the co-extensionality of the
predicates is based on the contingent identity of the Morning Star and
the Evening Star. On account of this identity, a statement that some­
thing (for instance, a flight) is directed to the Morning Star cannot
have a truth-value different from that of the statement that that same
entity is directed to the Evening Star. That is to say,
(28) \((F) (MF) \equiv EF\).

(27) follows from (28). Thus, given the uncontroversial rule that simple statements with the same subject and co-extensive predicates are equivalent, and given the identity of Morning and Evening Stars, (24) entails (26). Thus it appears that the version of the property idiom I am proposing does indeed reveal the logical structure of action sentences in a more simple and natural way than does Davidson's analysis in terms of events.

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