

How Not to Define *Substance*

A Comment Upon Hoffman and Rosenkrantz

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Ratio **18** (2005), 107–17

(3.896 words, including notes & bibliography)

Abstract:

The article is a critical examination of Joshua Hoffman's and Gary Rosenkrantz' approach to the traditional category of individual substance. On several places they offered an analysis of the concept of a substance in terms of some highly sophisticated notion of generic independence. Though ingenious, and even though it might be extensionally adequate, their account cannot provide an informative *analysis* of the concept in question, because it exhibits a peculiar kind of *circularity*. It is shown that one cannot establish, on the basis of their analysis, that a given entity is a substance, if one does not already know that it is one in advance. The circularity of their account is examined in detail, and it is explained how it could have arisen.

I.

They did it again – in their recent monograph on God and His attributes, Joshua Hoffman and Gary Rosenkrantz (in what follows: H&R) among other subjects also addressed the question of God’s substantiality, and they proposed an ingenious analysis of the concept of a substance.¹ Readers of their earlier works will be familiar with H&R’s analysis, since they proposed it repeatedly during the last decade.² Their account of the concept of a substance deserves closer investigation for at least three reasons: (i) it is a highly original approach to a category which (ii) has been of continuous philosophical interest for centuries, and (iii) H&R’s account becomes wider distributed each time they present it. To investigate and evaluate it is the purpose of this paper.

II.

H&R offer an analysis of the concept of a substance, I said, but it might be better to say: of *one* concept of a substance. The perennial debate which pivots about the expression “substance” should not be regarded as concerned with just one concept. Rather, there are many senses which philosophers have given to the notorious eight letter-word “substance”, and thus there are many concepts associated with it. *H&R’s* substances are (more or less) ordinary, individual *things*; important examples of substances are (or would be if there were such entities – we may leave this question undecided here)

- (i) *bodies*, whether organic, lifeless but natural, or artificial ones, secondly
- (ii) *persons* – which is to say, immaterial *souls*, if classic substance-dualism dualism is right (as H&R suggest) – and thirdly
- (iii) *parts* of bodies, which might even be too small to call them bodies anymore.

I agree with H&R that a concept like the intended one seems to figure prominently in everyday thinking and thus it is worthwhile to be examined by philosophers (and indeed, at least since Aristotle’s *Categories*, philosophers’ interest for this concept has never expired).

¹ H&R 2002: chapter 2.

² H&R 1991, 1994, 1997.

Now H&R aim to provide an *analysis* (or, as they put it: a definition) of the concept, which exploits some historically important ideas about the concept of a substance but which differs crucially from other accounts. However, it has at least two disadvantages: the first and minor one is simply that H&R's definition is a somewhat clumsy construction involving three rather complicated clauses and accordingly hard to comprehend. So I shall try to convey the main idea of their account in the next section. The second and major disadvantage lies beneath the surface. I will show in section IV that H&R's definition exhibits a peculiar kind of circularity, and therefore fails to achieve its purpose.

III.

While H&R pursue the traditional idea that the concept of substance should be defined in terms of *independence*, they think that a definition of substance in terms of some notion of *individual* independence is bound to failure. The standard way of defining individual dependence is in terms of *modality* and *existence*, such that an entity *x* can be said to depend upon another entity *y* iff necessarily, if *x* exists, so does *y*. A substance is then defined as an entity not depending upon any other entity.³ The basic, and maybe lethal problem of this account is that there may well be pairs of necessarily coexisting entities of which one is a substance while the other is not; three candidates for such pairs are (i) Socrates and singleton Socrates, (ii) Socrates and Socrates' life, and (iii) Socrates and Socrates' particularised property of being human.⁴

Now H&R eschew definitions of *Substance* in terms of individual dependence but still content that it is *some* kind of independence which makes an entity a substance – it is some kind of *categorial* independence. For their definition H&R now presuppose a conception of ontological *categories*, which they take to be properties of a certain (ontologically significant) sort.⁵ Categories come, H&R hold,

³ A definition in this style, though refined by some additional clauses, can be found in Simons 1987: 309.

⁴ However, such examples can also be taken to indicate that the notion of dependence employed is insufficient, and an approach to dependence in other terms than existence and modality should be pursued (see for example Fine 1995 and Lowe 1998: ch. 6).

⁵ On the face of it, talk about categories resembles talk about *kinds* (you can belong to a category as well as to a kind) much more than talk about *properties* (you have or possess properties but you do not belong to them). It seems that H&R would want to reduce kinds to properties by identifying the kind *k* with the property of being a *k*, so

in levels of increasing specificity and form a tree-like structure. While the first two levels are rather sparsely populated (level *A* is solely occupied by the category *Entity* and level *B* divides into *Abstract Entity* and *Concrete Entity*) the third level has more inhabitants: Here we find the categories of *Property*, *Event*, *Trope*, *Space* and *Time*, *Proposition*, *Collection* and more of that sort. Among them we also meet the category of *Substance*.

Now the main insight of H&R's definition of *Substance* is that the category of substance has some unique feature which distinguishes it from all other level *C* categories. This feature has three components, the principal component being this: The category of *Substance* may have a *comprising* instance, an entity which for some time is (apart from its own parts) the *only instance of the category*. Most other categories quite likely do not share this feature. There could not be, for example, a lonely natural number (for every natural number has, of necessity, a successor), nor a lonely proposition (for if there is one proposition, *p*, there must be the negation of *p*) nor finally a lonely property. And to defend that there may nevertheless be *comprising* numbers, propositions or properties, entities of this sort which have all their categorical comrades as parts, would surely lead to some ontological extravaganza which need not be bothered much.

But still one might think that at least *some* categories other than substance could have comprising instances. May there not be a comprising event? One might even reckon that it takes place right now and we sometimes refer to it by the label "the course of things". And might there not be a comprising collection which contains all other collections as parts? Since H&R concede the plausibility of some such considerations, they come up with the two other clauses of their definition. The category of substance may be instantiated, this is the observation at the heart of H&R's second clause, while no other category which can have a comprising instance is instantiated. And, thirdly, substances are necessarily *categorically homogenous*, i.e. they are entities such that, if they have any parts at all, these parts must belong to the same category; applied to substances this means that parts of substances must be substances themselves. The second condition might be false of

that humankind, for example, is the property of being human, and the category *Substance* is the property of being a substance (cp. for example H&R 1994: 17 (note) and 140, where they tentatively classify *types* of sentences as some sort of properties). For simplicity's sake I will simply follow them in this respect, while noting that there may well be reasons not to conflate kinds and properties in this way (see for example Wolterstorff's discussion of kinds in his 1970: chapter 11, where he presents statements about kinds which are hardly translatable into talk about properties).

events (if, as many a philosopher assumes, there could not be events in a world without substance), and the third doubtless is false of collections: the parts of which a collection is composed may be entities of any categorical belonging whatsoever.

What I have said so far gives the meaning of H&R's predicate "is-capable-of-having-an-independent-instance", which may be defined as follows:⁶

(Df. Ind-Inst) A category c of level C is-capable-of-having-an-independent-instance \leftrightarrow_{df}

- (i) c can have a comprising instance &
- (ii) c can be instantiated, while no other category, which might also have a comprising instance, is instantiated, &
- (iii) necessarily, c has only categorically homogeneous instances.

It is H&R's contention that the category of substance is the only category of level C which meets this definition. Now they make use of this insight and provide the following definition of the concept of a substance:⁷

(Df. Sub) x is a substance \leftrightarrow_{df} x is an instance of a level C category which is-capable-of-having-an-independent-instance.

This is, in a nutshell, H&R's account of the category of substance.

IV.

H&R spent much efforts of proving that the category of substance has indeed the special status which they ascribe to it. I do not want to quarrel about this issue. I simply grant them that they are right. (Df. Ind-Inst) defines a predicate which uniquely applies to the category of substance. It might look as if this were all that H&R needed; (Df. Sub) itself is neither hard to understand nor does it seem to run into any troubles. But here, appearances are defective. I shall argue that their

⁶ Cp. 1994: 94. H&R also propose a variant of this definition which presupposes the possibility of there being, for a certain time-span, *exactly one* substance (which then had to be atomic). The criticism I present in the following is without any difference applicable towards both versions of H&R's definition.

⁷ The definition of the predicate "is-capable-of-having-an-independent-instance" could of course be integrated into the definition of substance directly, thus contracting both definitions into one – H&R did this in their 1997: 65 (where they relied on the alternative definition of "is-capable-..." mentioned earlier).

definition exhibits a peculiar kind of circularity, for we cannot avail ourselves of it if we do not have a prior grasp of the concept of substance. But I shall not maintain that the analysis is *directly circular*, which would mean that the concept to be analysed is employed by the definiens, i.e. it enters into the propositional meaning expressed by it.⁸ Rather it is *indirectly circular*, i.e. the concept that is to be analysed does not enter into the propositional meaning expressed by the definiens, but a grasp of it is nevertheless required for the ability to make use of the analysis. The failure of their definition thus provides us with a lesson in rather unusual definitional shortcomings.

Now let me show why I think so: If (Df. Sub) were a proper analysis of the concept of a substance, it should tell us what it takes to be a substance, and thus it should provide us with the means to determine, at least in principle, whether a given candidate falls under the analysed concept or not.⁹ So let us try to find out whether my purse proves to be a substance by H&R's account (which it should). To see whether it does, it is for a start helpful to reflect upon the *form* of the definiens of (Df. Sub): it has the form of an *existential quantification*. An entity x is a substance, according to (Df. Sub), if *there is* a category with certain properties; the following notational variant of (Df. Sub) makes this more explicit:

(Df. Sub*) x is a substance $\leftrightarrow_{df.} \exists c$ (c is a category of level C & x instantiates c & c is-capable-of-having-an-independent-instance).

Thus, to determine by means of (Df. Sub) whether my purse is a substance we must know something about the existence of a category (of level C) which it instantiates. Now the most straightforward method to justify an existential quantification consists in giving an instance of it. To show that a claim of the form

There is something, which is F ,

⁸ Notice that direct circularity, thus defined, is not necessarily *evident* from staring at the proposal: If someone proposed to analyse “ x is true” as “ x can be known by some sentient being” then, if the traditional analysis of knowledge is at least correct in spirit, he produced a directly circular analysis. But his proposal does not wear its circularity at its sleeves.

⁹ In what follows I will try to show that H&R's account cannot tell us about any entity whether it is a substance or not. When Mackie remarks in a review of H&R 1994 that their definition cannot serve the purpose “of explaining what unifies the category” (Mackie 2000: 151) she seems to point in a similar direction (while she did not work out her criticism thoroughly).

holds, the best that we could do is to know some thing which is *F* and mention this fact. It can be done by producing a namely-rider for the quantification, as in: There is an even prime number, *namely the number 2*.

With regard to (Df. Sub) and my purse it follows that we were in a good position to establish the substantial character of my purse if we could formulate a statement of the form:

There is a category of level *C* which is instantiated by my purse and which furthermore is-capable-of-having-an-independent-instance; *namely category c*.

Which category could this be? A great candidate would of course be the category of substance itself.¹⁰ It fulfils both demands: my purse should be an instance of it and furthermore, if H&R are right, it is-capable-of-having-an-independent-instance. So my purse does instantiate a category of level *C* with the required feature.

But, alas, though correct this consideration is surely not adequate to establish on its basis that my purse is a substance by the standards of (Df. Sub). Of course, if we know that something *instantiates the category of substance*, we know that *it is a substance*; this is not very spectacular. And it is not suitable to establish on its basis that my purse is a substance. Otherwise we would live in definitional paradise. We could produce conceptual definitions in a row:

x is a set $\leftrightarrow_{df.}$ x instantiates the category of a set

x is a virtue $\leftrightarrow_{df.}$ x instantiates the category of a virtue.

Evidently, nothing is gained by this procedure. So if the only way in which we can, by recurring to (Df. Sub), establish that a given entity x is a substance, presupposes the knowledge of whether x belongs to the category of *Substance*, then we should better forget about this definition. Is there another way? Surely there are other possibilities of establishing an existential quantification than by producing a correct instance of it. There are non-constructional existential proofs. But how could we proceed in the case discussed? H&R leave us with less than a hint;¹¹ I content that

¹⁰ It would even be the only candidate, if not for H&R's quite fine-grained conception of properties which allows for necessarily coextensive properties (cf. 1994: 16f.). I take it that relying on some category necessarily coextensive with the category of substance (as for example, the category of being either a simple or a compound substance, if this is a category different from *Substance*) will not be of any help here.

¹¹ There is at least one way that I could think of: It is plausible that every entity must belong to at least one (or maybe: exactly one) category of level *C*. If we then knew what categories there are on that level, we could simply go them through. My purse, for example, is neither a number, nor a proposition, nor an event, etc. If we exclude in this

this is not surprising, for there simply is no way to proceed. This is to say, H&R's definition is indirectly circular in the sense specified at the beginning of this section.

V.

This section is dedicated to a clarification of how the circularity of (Df. Sub) arises. It certainly has got something to do with the unusual structure of the definition – but a comparison with H&R's definition of *concreteness* will show that the structure alone cannot be the troublemaker, since both definitions exhibit the same structure while not suffering from the same defect.

An entity's being *concrete*, H&R contend, should not be defined as its having temporal or spatial parts, for there might be concrete entities lacking both, as for example souls (as conceived of by classic dualists) or instantaneous events of some sort. However, even these entities belong to some categories which *may have* instances with spatial and/or temporal parts (after all, most *events* do have temporal parts and most *substances* have spatial parts). Thus H&R propose the following definition which is structurally similar to (Df. Sub):

(Df. Concrete) x is concrete $\leftrightarrow_{df.}$ x belongs to a category of level C that may have instances with spatial and/or temporal parts.

way all categories except of one, we could know that the remaining one must be the category of substance. But obviously H&R do not think of such a procedure; they claim the merits of ontological neutrality for their account, that is, they do not want to rely on any ontological scheme in particular to get their definition off the ground. Furthermore, the method described would render their definition redundant. If categorial knowledge of all level C categories were presupposed for the application of the definition, we could help ourselves to a much more straightforward definition in the following style:

(Df. Sub-Bolzano) x is a substance $\leftrightarrow_{df.}$ x is neither a number, nor a proposition, nor a ... (just complete the list according to your favourite categorial scheme).

Incidentally, there has been at least one proponent of a definition of substance which exhibits this form: Bernard Bolzano adopts a classic two-categorial ontology of the actual world, according to which every actual entity is either a particularised quality ("Adhärenz") or a substance. He then defines the concept of substance in recourse to the concept of a particularised quality as some actual entity which is not a quality (see for example his *Athanasia*: 21).

Of course, applying (Df. Concrete) to some entity x requires one to activate knowledge about x 's categorial belonging. One can determine whether an entity x is concrete by (Df. Concrete) if one (i) knows what category (of level C) x instantiates and (ii) knows whether this category may have instances with spatial and/or temporal parts. And H&R are quite aware of the fact that their definition presupposes such categorial knowledge. This can be seen from the following quotation, in which they show how a soul (an entity neither having spatial nor temporal parts) qualifies as a concrete entity by their definition:

[...] notice that a disembodied spirit instantiates the category of Substance. [...] However, the category of Substance possibly has an instance having spatial parts, that is, a complex material substance. Hence, a disembodied spirit [...] satisfies [(Df. Concrete)]: it instantiates a level C category which possibly has an instance having spatial parts. Thus, [(Df. Concrete)] has the welcome implication that a disembodied spirit [...] is a *concretum*. (H&R 1994: 185)

Now one had to proceed exactly like that to establish that my purse counts as a substance in the light of (Df. Sub): The purse instantiates the category *Substance*, and this category is-capable-of-having-an-independent-instance. Hence, my purse satisfies (Df. Sub), and the definition has the welcome consequence that my purse is a substance. But this reasoning is unfortunately quite uninformative due to its illegitimately presupposing a grasp of the concept of substance.

The way which was feasible in the case of (Df. Concrete) is barred in the case of (Df. Substance). The important difference between the definitions is that in (Df. Concrete) belonging to a category of level B is defined by presupposing knowledge about the categorial belonging with respect to *another level*, namely level C . But in the case of (Df. Sub) the level of the category which is to be defined and the level in respect to which knowledge about the categorial belonging is presupposed simply coincide.

Though being circular, H&R's account might nevertheless incorporate some important insight about substances, namely that the category of substance has a unique feature, it is-capable-of-having-an-independent-instance. This is doubtless an interesting and non-trivial claim, a claim about *the category* of substance, and if it is correct it even serves to pick out this category uniquely. And this claim can, of course, be expressed as a claim about substances in the following way:

(Sub) Something is a substance *if and only if* it belongs to the category *Substance*, which is a category that is-capable-of-having-an-independent instance.

But here it easily meets the eye that this thesis can yield nothing but a circular definition of the concept of substance. In H&R's definition the explicit employment of the concept of substance in the definiens is avoided only by quantifying it away and thus by the step to:

(Sub*) Something is a substance *if and only if* it belongs to a *category*, which is-capable-of-having-an-independent instance.

The circularity is only veiled, since to establish the existential statement (Sub*) we should know about the appropriate instance.

VI.

It may remain puzzling that, albeit H&R may manage to pick out the category of substance with their concept of *being-capable-of-having-an-independent-instance*, they still lack the means to define it – how is that possible? The puzzlement results from a confusion about two relevant kinds of conditions; H&R can describe the category of substance by providing necessary and sufficient conditions for it. Now these conditions lay down whether something *is* the category of substance (or, if this is the same, whether something *is* the property of being a substance), and leave it entirely open whether something *instantiates* it (or: whether something *has* the property of being a substance). But settling the latter question is exactly what a definition of the concept of substance is designed to do. It should answer the question “What is a substance?” and not the question “What is the category *Substance* (or: the property of being a substance)?” An answer to a question of the latter kind does not provide us *eo ipso* with an answer to the corresponding question of the first kind. It does so if we are told what the property is *by* being told what things possess the property, as for example in:

(Df. B) Being a bachelor is that property which, of necessity, all and only all men who were never married have in common.

Whoever understands this explication will not only know conditions which lay down the identity of the property of being a bachelor, but he will also know what a bachelor is. But this is only because it is just this knowledge which is used in

singling out the property. Since H&R's attempt differs in this respect from (Df. B) it does not provide us with the desired knowledge.¹²

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¹² For helpful comments I am indebted to Miguel Hoeltje, Wolfgang Künne, and Alexander Steinberg.