Ontological Categories

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I am delighted to be able to participate in this conference in honor of my friend

Jonathan Lowe.

Aristotle famously described metaphysics as "First Philosophy" or "first science."

In a similar vein, Jonathan has described metaphysics as "the systematic study of the

most fundamental structure of reality."[1] As such, metaphysics examines the more general

categories of being, and the more general ways in which entities are related to one

another. Accordingly, metaphysics includes *ontology*, the science of being, concerned

with the categorization of what exists, and *cosmology*, the science of reality as an orderly

whole, concerned with characterization of reality as an ordered law-governed system.[2]

As we shall see, these ontological and cosmological enterprises are intertwined.

The metaphysical concerns with the general order in which entities are related and

with the organization of entities by their ontological categories reflect the *systematic*

character of metaphysics. In particular, metaphysics seeks to develop a system of

ontological categories that organizes *everything there is*, or *everything there could or*

might be. One of the ultimate goals of metaphysical inquiry is to validate an ontological

theory that specifies which categories these are.

In the first chapter of *The Possibility of Metaphysics*, Jonathan defends "serious" or

traditional-style metaphysics against a legion of opponents, including Kantians and

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[1] *The Possibility of Metaphysics* (Oxford: The Clarendon Press, 2002), p. 2.
[2] One should distinguish cosmology in this sense from the [more specialized] astrophysical study of the history, structure, and basic dynamics of the universe. Nevertheless, cosmology as a branch of metaphysics may utilize the findings of this branch of astronomy.

positivists of various sorts. One of the grounds upon which serious metaphysics may be attacked is that its central notion of an ontological category, highlighted by Jonathan in yesterday's keynote address, is unintelligible or, at least, not sufficiently well understood. A traditional-style ontologist may reply that the notion of an ontological category is presupposed by the sciences, even if it is primitive or analyzable. Still, I believe that a further reply which provides a viable analysis of an appropriate conception of an ontological category in terms of logical, modal, semantic, and epistemic notions would be helpful to the cause of serious metaphysics and, thus, welcomed by Jonathan.

Recent examples of systems of ontological classification include Jonathan's, Roderick Chisholm's, and Hoffman & Rosenkrantz's. Each of these systems involves a fundamental ontological divide. In Jonathan's system, it is the division between *particulars* and *universals*, in Chisholm's, the division between *contingent beings* and *necessary beings*, and in Hoffman and Rosenkrantz's, the division between *concrete entities* and *abstract entities*. In each case, it is necessarily true that everything falls on one side of the divide or the other, and impossible that anything falls on both. In Jonathan's neo-Aristotelian four-category ontology, the species of particulars are *individual substances* and *tropes,* and the species of universals are *insubstantial universals* (whose divisions are *sharable properties* and *relations*) and *substantial universals* (also known as *natural kinds*). In Chisholm's system, the divisions of contingent beings are *contingent states* (having *events* as a sub-category) and *contingent individuals* (whose divisions are *contingent substances* and *boundaries*) and the divisions of necessary beings are *necessary states* and *necessary non-states* (whose divisions are *attributes* and *necessary substance*). Finally, in the system of Hoffman and Rosenkrantz,

the species of concrete entities include *substances* (whose divisions are *physical objects* and *souls*), *events*, *times*, *places*, *tropes*, *boundaries*, *collections*, and *absences*, and the species of abstract entities include *properties*, *relations*, *sets*, and *propositions*.

As we have seen, philosophers have proposed various schemes of ontological classification, involving *different* fundamental ontological divides, and therefore, *different* ontological categories. Nonetheless, it is possible for a number of such schemes to be *equivalent* in the sense that each of them *necessarily* organizes *the same entities* as the others. As Jonathan has observed, "there is often more than one way to organize what is in effect the same categorial scheme, just as there are different axiomatizations of the same system of geometry."[3] An account of ontological categories should be compatible with this observation.

In one *very broad* sense of 'category', *any* predicate which denotes a non-empty class, or which [while retaining its actual meaning] could or might denote such a class, expresses a category. In this *weak* sense of 'kind' or 'category', predicates such as '*sweet*', '*red sock*', '*horned horse*', '*cube*', '*table*', '*cat*', '*cat or eagle*', and '*substance or event*' express categories. However, in a much *narrower* and *stronger* sense, predicates of this sort do *not* express categories. Rather, *ontological categories* in the traditional sense are expressed by predicates such as '*concretum*', '*abstractum*', '*universal*', '*particular*', '*necessary being*', '*contingent being*', '*substance*', '*body*', '*soul*', '*property*', '*proposition*', '*event*', '*relation*', and '*boundary*'. Although it can be said that such categories are those kinds which are more *basic* or *general,* this observation falls quite short of providing a substantive analysis of the relevant notion of an ontological category. Another approach is to attempt to analyze this notion by

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[3] *The Possibility of Metaphysics*, p. 204.

providing a non-circular set of logically necessary and sufficient conditions which explicates the relevant notion of a predicate's expressing an ontological category. The *analytical task* of attempting to construct such an analysis differs from the *ontological task* of determining the *category* to which categories belong, for example, *properties*, *concepts*, *sets*, or *collections*. I believe that the analytical and ontological tasks are independent of one another.

One important goal of metaphysics as traditionally understood is the development of a system of ontological categories. However, the categories comprising such a taxonomic system can be intuitively understood in at least four different, interrelated, ways. In what follows, I will describe and attempt to provide an account of these four conceptions of categories.

The first conception requires that a category have an *actual* instance at some time. This requirement appears natural given that the primary goal of ontology is to categorize what exists. An alternative conception (as Jonathan acknowledged yesterday) adopts a weaker requirement to the effect that it is *possible* for a category have an instance. Among other things, this alternative permits a greater degree of neutrality in the face of ontological controversies and uncertainties. The other two alternative conceptions adopt even weaker requirements to the effect that it is *epistemically possible* for a category to have an instance. Such weaker requirements allow for even more ontological neutrality.

My account of ontological categories presupposes the notion of a meaningful well-formed predicate's *expressing* a kind. For example, the meaningful well-formed predicate '*event*' expresses the ontological category *event*, a kind to which all and only events belong. Moreover, this predicate may be said to express that ontological category

without *gratuitous complexity or redundancy*, something that clearly could not be said of a predicate such as '*event and event*' or '*event or non-cubical cube*'. Analyzing this central notion of a predicate's *expressing* or *connoting* an ontological category without gratuitious complexity or redundancy is my main goal in this paper. Note that what a predicate expresses or connotes is its *intension*, as opposed to its *denotation* or *extension*. I will presume that necessarily equivalent predicates with the same *denotation* may differ in their meaning or *connotation*. For example, necessarily equivalent predicates such as '*the successor of 5*' and '*the smallest perfect number*' have the same denotation, in this case, the number 6, but differ in connotation.[4] Thus, my analysis of a predicate's expressing a category will be consistent with the possibility of there being two predicates that are necessarily equivalent, only one of which expresses an ontological category. Below, I present my proposed analysis within the context of *the first* conception of an ontological category; it should be noted that certain temporal and linguistic indexes are left implicit for expository ease.

> **(D1) A meaningful well-formed predicate, '*F*', expresses an ontological category [without gratuitous complexity or redundancy][5] =df. (1) something is *F*, & (2) it is impossible for something to be *F* contingently, & (3) '*F*' is a *non-relational substantival* predicate, & (4) either '*F*' expresses a kind which is *more general or basic* than *any kind of artificial entity*, *any kind of social entity*, *or any natural kind*, or '*F*' expresses a kind which is *not* at a *lower level***

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[4] Two predicates '*F1*' and '*F2*' are *necessarily equivalent* if and only if they are mutually entailing. A predicate '*F1*' *entails* a predicate '*F2*' in the relevant sense if and only if in *any* possible world, *W*, in which '*F1*' and '*F2*' have the *same meaning* as they do in *the actual world*, something satisfies '*F1*' only if it satisfies '*F2*'.

[5] '*F*' is a schematic letter which should be replaced by an appropriate predicate expression.

of generality **than the** *summum genera* **of** *the a priori sciences*, **& (5) '*F*' is either an** *atomic predicate*, **a** *negative predicate*, **or a** *conjunctive predicate*, **& (6) if '*F*' is a** *negative predicate*, **then '*F*' is the negation of an atomic predicate that expresses a kind as in (4) above, & (7) if '*F*' is a conjunctive predicate which has another non-atomic predicate as a** *part*, **then such a part is** *either* **a** *negative predicate as in (6) or* **a** *conjunctive predicate*, **& (8) if '*F*' is a** *conjunctive predicate* **having one or more** *negative conjuncts*, **then, for** *no* **pair of un-negated predicates, *P*, such that each member of *P* is part of '*F*', does there exist a taxonomy, *T*, such that both members of *P* express kinds at** *the same level of generality* **within *T* & (9) '*F*' is** *not* **synonymous with a non-atomic predicate of any of the sorts ruled out in (5)-(8) above, & (10) '*F*' is** *not* **a conjunctive predicate such that one of its conjuncts entails another one of its conjuncts (***except for* **a conjunctive predicate which has a single conjunct expressing the most general notion of an entity and which is such that just one of its conjuncts entails another one of its conjuncts.)**

According to the first conception of ontological categories, predicates with empty extensions do not express such categories. For example, according to this conception, if every entity were concrete, then the predicate '*abstract entity*' would *not* express an ontological category. Condition (1) of D1 disqualifies predicates of this kind.

Condition (2) of D1 disqualifies any predicate expressing a kind to which an entity could belong contingently. It appears that no such predicate expresses an ontological category. Examples of such predicates include '*looks red*', '*square*', '*my*

favorite property', and '*prime or prim*'. Some predicates which satisfy condition (2) of D1 are '*substance*', '*self-identical*', and '*such that if it is red, then it is colored*'.

Although predicates such as '*self-identical*' and '*identical with Socrates*' satisfy condition (2) of D1, they fail to satisfy condition (3) because they are relational. Moreover, a negative predicate such as '*not belonging to any of Smith's favorite categories of abstracta*' is relational and therefore fails to satisfy condition (3). It is appropriate that D1 disqualifies all relational predicates; predicates which appear to express ontological categories, for example, '*substance*' and '*event*', are *non-relational*. Generally, such non-relational predicates have a *substantival* use, that is, they are used as *nouns* to signify an entity or being of some sort, whereas non-relational predicates such as '*sweet*', '*green*', and Quine's favorite predicate, '*Socratizes*', are used *non-substantivally*, that is, as *qualifiers*, for example, as adjectives or adverbs.[6] For example, while it is grammatical to say '*That is an event*' and '*That is green*', it is ungrammatical to say '*That is a green*' and '*That is event*'. Accordingly, it is appropriate that D1 disqualifies predicates such as '*green*', '*sweet*', and '*Socratizes*' when used non-substantivally.[7] However, predicates such as '*substance*', '*event*', '*green sock*', and '*sweet candy*' do meet condition (3) of D1. But, even so, not all such predicates express ontological categories.

As indicated earlier, *ontological* categories are more *general* or *basic* than other kinds or categories, for example, the less general kinds *green sock* and *sweet candy*. Condition (4) of D1 attempts to specify the characteristic degree of generality or basic-ness of an ontological category. Intuitively, there are *levels of generality* such that one

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[6] Note that '*Socratizes*' is formed from the *name* '*Socrates*' and names are *not* predicates.
[7] Note that I would concede that the predicates '*green*' and '*sweet*' can be used substantivally, e.g., "Yesterday, I had greens for dinner and sweets for dessert."

category may either be at the *same* level of generality as another, or be at a *higher* or lower level of generality than another. For example, *abstract entity* and *concrete entity* seem to be at the same level of generality, as do *substance*, *event*, *time*, *place*, *property*, *relation*, and *proposition*, whereas *abstract entity* seems to be at a higher level of generality than *property*, and *soul* seems to be at a lower level of generality than *substance*.[8]

I will attempt to specify the level of generality or basic-ness in question by making use of comparative criteria of an epistemic nature. According to these criteria, an ontological category is either *more general or basic* than any kind of artificial entity, any kind of social entity, or any natural kind, or an ontological category is at a level of generality that is *no lower than* the *summa genera* of any of the *a priori* sciences. In particular, kinds of artificial entities such as *ship*, *table*, *dance*, and *baseball game* are not at a *high enough* level of generality to qualify as ontological categories. And the same is true of a kind of social entity such as a *spontaneous market*, natural kinds such as *gold* and *piece of iron*, and kinds of mathematical entity such as *irrational number* and *prime.*

In the relevant sense, for a kind, *K*, to be *artificial* is for *K* to be such that: necessarily, for any *x*, if *x* is of kind *K*, then *x* has a function or purpose, *f*, and necessarily, for any *x*, if *x* is of kind *K*, then *x*'s having *f* causally depends upon there being at least one contingently existing person who intends that entities of kind *K* be used for *f* at some time. Thus, artifact-kinds, for example, *ship*, *table* and *statue*, are artificial kinds. And in the relevant sense, for a kind, *K*, to be *social* is for *K* to be such that: (i) *K*

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[8] A kind, *K1*, is more general than a kind, *K2*, if *K1 subsumes K2*. The relevant notion of subsumption can be understood in terms of the following example: Boundary *subsumes* Surface just because, first, necessarily, a surface is a boundary, and second, possibly, some boundary is not a surface. It follows that, strictly speaking, if it is impossible for anything to belong to a certain kind, then that kind cannot be more general than any other kind.

is not artificial, (ii) necessarily, for any *x*, if *x* is of kind *K*, then *x* stands in some natural causal relation to one or more intentions, and (iii) *K* is not a kind of the most general sort that satisfies conditions (i) and (ii). For instance, a *spontaneous market* is a social kind. Furthermore, in the relevant sense, for a kind, *K*, to be *natural* is for *K* to be such that: *K* figures in one or more natural laws, and necessarily, the extent to which we can explain what it is for something to be of kind *K* is a direct function of the availability of *a posteriori* theoretical discoveries in natural science. So, for instance, *piece of iron*, *carbon-based living organism*, and *electron* are natural kinds. Finally, the *summa genera* of *a priori* sciences such as logic, mathematics, or set theory[9] include kinds such as *proposition*, *property, relation*, *number*, or *set*.

Accordingly, condition (4) of D1 has the desirable consequence that kinds of artificial entities such as *ship*, *table*, and *statue*, a kind of social entity such as a *spontaneous market*, and natural kinds such as *gold*, *DNA*, *piece of iron*, *carbon-based living thing*, and *electron*, do not qualify as ontological categories. It also follows that if a kind is at a lower level of generality than any kind of artificial entity, social entity, or natural kind, then it does not qualify as an ontological category. On the other hand, if a kind is at a higher level of generality than any kind of artificial entity, social entity, or natural kind, then it does qualify as an ontological category. Examples of such more general kinds are *concretum*, *substance*, and *physical object*. For each of these kinds, we can explain what it is for something to be of that kind, at least to some extent, without utilizing *a posteriori* theoretical discoveries in natural science concerning the nature of a thing of that kind. In other words, for each of these kinds, we can explain what it is for

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[9] Note that for these purposes, more specialized branches of these *a priori* sciences may also be counted as *a priori* sciences, e.g., Propositional Logic, Modal Logic, Euclidean Geometry, Elementary Arithmetic, and so on.

something to be of that kind, at least to some extent, through the use of *a priori* reasoning alone. Furthermore, a kind that figures in one or more natural laws, but which is such that we can explain what it is for something to be of that kind, at least to some extent, by *a priori* reasoning alone, is more general or basic (in the relevant sense) than any natural,. artificial, or social kind, and thus qualifies as an ontological category; *place*, *time*, and *body* seem to be such kinds. Alternatively, it can be argued that the *summa genera* of natural science which figure in *all* natural laws (when fully stated) are more general or basic (in the relevant sense) than any natural, artificial, or social kind; *place* and *time* (though not *body*) seem to be *summa genera* of this sort.

What of abstract entities, for example, mathematical entities such as numbers or sets? It appears that entities of this sort are not artificial, social, or natural. Nevertheless, given the plausible assumption that the *a priori* sciences, like the natural sciences, are *more specialized* than ontology, there is good reason to classify kinds of abstract entity that are more specific than the *summa genera* of such sciences as *scientific kinds* (broadly speaking), and *not* as ontological categories. So, for example, on the assumption that *number* is a *summmum genus* of an *a priori* science, this *summum genus* counts as an ontological category, whereas a species of *number* such as *irrational* or *prime* does not. And of course, any kind which is at a higher level of generality than *number*, for instance, *abstract entity*, counts as an ontological category.

I concede that this comparative criterion for determining the appropriate level of generality of an ontological category is imprecise. However, since I believe that the same degree of imprecision attends the notion of an ontological category itself, I do not think that the imprecision of this comparative criterion is objectionable as such.

Notice that the disjunctive predicate '*substance or proposition*' meets conditions (1)-(4) of D1. But, intuitively, such a predicate does not express an ontological category, but rather the arbitrary union of categories that are not relevantly similar. However, it may be suggested that a disjunctive predicate expressing the union of relevantly *similar* categories, say, '*physical object or soul*', *expresses* an ontological category. However, with respect to the predicate in question, the suggestion is plausible only if either that predicate is *synonymous* with '*substance*' or that predicate *expresses* a *philosophical analysis* of the ontological category expressed by '*substance*'. But, surely, even if '*substance*' is necessarily equivalent to '*physical object or soul*', these predicates are not synonymous. Nor does it appear that '*physical object or soul*' expresses a *philosophical analysis* of the ontological category expressed by '*substance*'. After all, there is a plausible Platonic intuition to the effect that a philosophical analysis of a general concept does not consist of a complete *list* of the specific instances which fall under that concept. Unlike a genuine philosophical analysis, such a disjunctive list of specific instances does not explain what those specific instances have in common. I conclude that a disjunctive predicate such as '*physical object or soul*' does not express an ontological category. Since a disjunctive predicate fails to express an ontological category even when it unites relevantly similar categories, it follows that, generally speaking, a disjunctive predicate does not express an ontological category. According to condition (5) of D1, a predicate expresses an ontological category, and does so without gratuitous complexity or redundancy, only if that predicate is either an atomic, negative, or conjunctive one. This condition has the desirable consequence that a disjunctive predicate either does not

express an ontological category at all, or if it does, then it does so in a gratuitously complex or redundant way, for example, '*substance or substance*'.

(6) is an appropriate condition in the light of the fact that if an atomic predicate expresses an ontological category at a certain level of generality, then the negation of that atomic predicate expresses an ontological category at the same level of generality. For instance, if the atomic predicate '*substantial entity*' expresses an ontological category, then its negation '*insubstantial entity*' also expresses an ontological category. Condition (6) ensures that the negation of some atomic predicate expresses a kind which is at a *sufficiently high level of generality* to count as an ontological category. Recall that there is a sense in which different systems of ontological classification may be necessarily equivalent. Given this, if a kind is general enough to count as an ontological category, then it and its negation may, or at least might, serve as the fundamental ontological divide in some admissible system of ontological classification. For example, *material entity* and *immaterial entity*, *physical entity* and *non-physical entity*, and *substantial entity* and *insubstantial entity* may, or at least might, so serve. It should also be noted that because condition (6) entails that a negative predicate expresses an ontological category only if it is the negation of an atomic predicate, condition (6) appropriately disqualifies a gratuitously complex predicate such as '*non-non-event*'.

In the light of condition (7), we can say that conjunctive predicates such as '*contingent non-state*', '*non-necessary non-state*', and '*non-physical thinking substance*' express ontological categories. However, as appropriate, condition (7) disqualifies conjunctive predicates having non-atomic parts which are neither negative nor conjunctive, for example, a predicate such as *'(substance or event) and (time or place)'*.

To see the point of condition (8), consider the conjunctive predicate '*non-concrete and not a property and not a relation and not a proposition*.' Such a predicate does not appear to express an ontological category. First, there does not seem to be an atomic predicate which expresses an ontological category and which is *synonymous* with this conjunctive predicate. In particular, it is not plausible that a predicate expressing an ontological category such as '*set*' is synonymous with this conjunctive predicate. Second, it does not seem plausible that the conjunctive predicate in question expresses a *philosophical analysis* of an ontological category expressed by some atomic predicate. As noted earlier, it is intuitively plausible that a philosophical analysis of a general concept does not consist of an exhaustive *list* of specific instances that fall under that concept. Similarly, it is intuitively plausible that a philosophical analysis does not consist of an exhaustive list of the kinds to which a certain kind of entity does *not* belong. Unlike a genuine philosophical analysis, such a list of negatives does not *explicate* the nature of the kind in question. In the light of these intuitions, it is plausible that the conjunctive predicate in question does not express an ontological category.

However, it is not difficult to see that such a conjunctive predicate fails to meet condition (8) of D1. According to this condition, if '*F*' is a *conjunctive predicate* having one or more *negative conjuncts*, then, for *no* pair of un-negated predicates, *P*, such that each member of *P* is part of '*F*', is there a taxonomy, *T*, such that both members of *P* express kinds at *the same level of generality* within *T*. But it is clear that there is a taxonomy in which *property*, *relation*, and *proposition* are at the *same level of generality*. Thus, the conjunctive predicate in question fails to meet condition (8) of D1.

On the other hand, consider conjunctive predicates such as '*necessary non-state*', '*non-contingent non-state*', and '*non-physical thinking substance*'. Predicates of this kind appear to express ontological categories and meet condition (8) of D1. In other words, the un-negated predicates which are parts of such a predicate express kinds at *different level of generality*. This fits with an intuitive Aristotelian idea that conjunctive categories with one or more negative conjuncts consist of conjunctions of *genera* and *specific differences* that must be at different levels of generality.

Condition (9) of D1 presupposes the notion of an *atomic predicate* being synonymous with a *non-atomic predicate*. Quinean doubts about synonymy to the contrary notwithstanding, it seems clear that synonymies could be generated by linguistic stipulations. For instance, it is clear that one could stipulate that the *atomic predicate* '*substeven*' will *abbreviate* or *go proxy for* the non-atomic predicate '*substance or event*'. Moreover, it appears that if synonymies could arise as the result of such idiosyncratic stipulations, then they also could arise in the natural course of the development of a language. For example, it appears that pairs of predicates such as 'substance' and '*substantial entity*', '*abstractum*' and '*abstract entity*', and '*concrete entity*' and '*concrete being*' are used as synonyms of this kind. However, used in the way stipulated, an atomic predicate such as '*substeven*' does not express an ontological category, since it is synonymous with a non-atomic predicate which does not express an ontological category. Fortunately, an atomic predicate of this kind fails to meet condition (9) of D1.

Conjunctive predicates such as '*substance and non-surface*', '*substantial body*', '*boundary and boundary*', and '*property and such that if it is red, then it is colored*' are gratuitously complex or redundant. Condition (10) of D1 excludes a conjunctive

predicate of this kind on the ground that one of its conjuncts *entails* another of its conjuncts.[10]

However, there is a special case which is covered by the parenthetically expressed part of condition (10) of D1. Including this part of that condition has the advantage of allowing us to capture the intuition that predicates such as '*abstract entity*', '*insubstantial existent*', and so on, express ontological categories without gratuitous complexity or redundancy, even if, as it may appear, these are conjunctive predicates whose first conjunct entails their second conjunct. This is because, on that assumption, such a predicate has just one conjunct expressing the most general notion of an *entity* and is such that just one of its conjuncts entails another one of its conjuncts. For instance, the predicate '*abstract*' entails the predicate '*entity*', but not vice versa; in other words, being abstract entails being an entity, but being an entity does not entail being abstract. Moreover, since within this context the predicate '*abstract*' is *non-substantival*, *strictly speaking*, this predicate does *not* express an ontological category, as contrasted with predicates such as '*abstractum*' and '*abstract entity*'. Alternatively, it might be argued that a predicate such as '*abstract entity*' is not genuinely conjunctive, in other words, that '*entity*' does not function as a predicate within the context of a predicate such as '*abstract entity*'. In that case, a predicate of this kind does not raise any special issues for D1's treatment of redundant conjunctive predicates and the parenthetically expressed part of condition (10) of D1 is not needed. Moreover, if predicates like '*abstractum*' and '*substance*' simply mean *abstract entity* and *substantial entity*, respectively, then

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[10] A predicate '*F1*' *entails* a predicate '*F2*' in the relevant sense if and only if in *any* possible world, *W*, in which '*F1*' and '*F2*' have the *same intension* as they do in *the actual world*, something satisfies '*F1*' only if it satisfies '*F2*'. Two predicates '*F1*' and '*F2*' are *necessarily equivalent* in a correlative sense if and only if they are mutually entailing.

predicates such as '*abstract entity*' and '*substantial entity*' are neither gratuitously complex nor redundant and the parenthetically expressed part of condition (10) of D1 is not needed.   That completes my explanation and justification of the conditions of D1.

At this juncture, I would like to observe that there is much serious disagreement about which categories have actual instances. For example, there have been, and continue to be, serious debates about whether categories such as material substance, soul, property, number, and absence ever have any actual instances; the existence of material substances, souls, properties, numbers, and absences remains controversial within ontology. Moreover, given our epistemic limitations with respect to answering ontological questions, it is problematic whether any of us will ever be in a position to *know* whether entities such as material substances, souls, properties, numbers, and absences exist. Thus, if the categories comprising an ontological taxonomy were understood in the first way, then there would be two significant costs. The first is that the taxonomy in question would be highly controversial. The second is that it would be doubtful whether we would ever be in a position to settle decisively the relevant ontological controversies.

However, there is another way to understand the categories comprising an ontological taxonomy. This second conception of ontological categories requires merely that the categories in question *possibly* have instances, in the sense of *broadly logical* or *metaphysical possibility*. Because a universal law has implications about the character of all relevant *possible cases*, there is a philosophically significant sense in which a *complete* general characterization of reality as an ordered law-governed system requires an ontological taxonomy that organizes not just all categories that are *actually*

instantiated, but organizes the conceivably broader class of all categories that are *possibly* instantiated. (For instance, conceivably, the category of [Cartesian] souls is *possibly*, but not *actually*, instantiated.)[11] Even though it is evidently a necessary truth that *all actually instantiated categories are possibly instantiated*, the converse claim that *all possibly instantiated categories are actually instantiated* is not at all evident.[12] I conclude that, given the broad goals of metaphysical inquiry, the second conception of categories is appropriate within the context of ontological taxonomy.

My proposed analysis, D2, of the second conception of an ontological category closely resembles D1. The difference between them is that while the first condition of D1 is '**something is *F***', the first condition of D2 is '**it is possible that something is *F***',

Still, there are significant disagreements about which categories possibly have instances, for example, about whether *the category of* [*Cartesian*] *souls* possibly has an instance. Insofar as materialists have questioned the intelligibility or coherence of the notion of a Cartesian soul, the question of whether [Cartesian] souls are even possible remains highly controversial within ontology. In the light of such examples, we can see that if the categories comprising an ontological taxonomy were understood in the second way, then there would be a price to pay that is at least very similar to the price of understanding those categories in the first way.

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[11] Alternatively, it might be argued that a complete characterization of reality as an ordered law-governed system requires an ontological taxonomy that organizes the class of all categories whose instantiation is *nomically possible*, or *consistent with the laws of nature*. Such a conception of the categories comprising an ontological taxonomy is equivalent to the second conception of such categories if *metaphysical possibility* is identifiable with *nomic possibility*. However, if there are metaphysically possible entities whose existence is not nomically possible, then no such equivalence holds and, in the philosophically significant sense referred to in the text, a complete characterization of reality as an ordered law-governed system cannot be given in terms of an ontological taxonomy comprised [wholly] of categories whose instantiation is nomically possible.

[12] Nevertheless, this converse claim has had defenders. If they are right, then a category is possibly instantiated if and only if it is actually instantiated. If so, then the first and second conceptions of categories are necessarily equivalent.

Now let us consider a third way to understand these categories. This third conception requires merely that the categories in question are such that their instantiation is logically consistent with everything anybody knows to be the case, and hence, is not *known* by anybody to be impossible, that is to say, are such that their instantiation is *epistemically possible*. The advantage of this conception is that it allows one to construct an ontological taxonomy that classifies everything that exists (or could exist) while remaining, to a considerable extent, *neutral* on the disagreements about what exists and what could exist. As noted earlier, neither the first nor second conception of categories allows one to construct such an *ontologically neutral* taxonomy.

My proposed analysis, D3, of the third conception of an ontological category closely resembles D2. The differences between them are that while the first condition of D2 is '**it is possible that something is *F***', the first condition of D3 is '**it is epistemically possible that something is *F***', and that while the fourth condition of D2 is '**either '*F*' expresses a kind which is *more general or basic* than *any kind of artificial entity*, *any kind of social entity*, or *any natural kind*, or '*F*' expresses a kind which is *not* at a *lower level of generality* than the *summum genera* of *the a priori sciences***', the fourth condition of D3 is '**it is epistemically possible that either '*F*' expresses a kind which is *more general or basic* than *any kind of artificial entity*, *any kind of social entity*, or *any natural kind*, or '*F*' expresses a kind which is *not* at a *lower level of generality* than the *summum genera* of *the a priori sciences***'**.

However, given the epistemic limitations of human beings with respect to answering ontological questions, it can be argued plausibly that no philosopher is in a position to *know* that entities of ontologically controversial categories such as material

substances, souls, properties, numbers, and absences are impossible, in contradistinction to having a false or inadequately justified *belief* that this is the case. However, if there are there philosophers who *know* that entities of a variety of ontologically controversial categories are impossible, then even our third conception of categories cannot be utilized to construct an ontological taxonomy that is sufficiently ontologically neutral. Still, even on the assumption that some philosophers know that entities of some ontologically controversial category are impossible, other philosophers do not. For instance, even if some materialists know that souls are impossible, idealists, dualists, and skeptics do not. Thus, even if there are materialists who know that various ontologically controversial entities are impossible, we can construct an ontologically neutral taxonomy by means of the following variation on the third conception of categories. This *fourth conception* of ontological categories requires merely that the categories in question are such that their instantiation is logically consistent with everything known to be the case by one or more particular individuals, and hence, not known to be impossible by those individual.

It is plausible that, necessarily, at a time, *t*, a person, *S*, *acceptably believes* that a category's (*C*'s) instantiation is *possible* if and only if at *t*, *S* grasps *C* and *C*'s instantiation is *epistemically possible* for *S*, that is to say, not known to be impossible by *S*. It is plausible that, in this sense, the second and fourth conceptions of categories are *epistemically equivalent*. Such an epistemic equivalence entails that an ontological taxonomy with its categories understood in the second way would be acceptable to a person, *S*, at a time, *t*, if and only if at *t*, that taxonomy were acceptable to *S* with its categories understood in the fourth way.

Whether a category figures in such an ontological taxonomy is relative to what one *knows* at a time, and hence, an ontological taxonomy of this kind is subject to revision as one's ontological knowledge changes over time. Such *epistemic relativity* is innocuous; unlike *ontological relativity*, it does not entail that a category's having an actual instance is relative to a conceptual scheme or belief-system.

Accordingly, my proposed analysis, D4, of the fourth conception of an ontological category resembles D3, with the following three changes. First, the *analysandum* of D3 is **'A meaningful well-formed predicate, 'F', expresses an ontological category [without gratuitous complexity or redundancy]',** whereas the *analysandum* of D4 is **'A meaningful well-formed predicate, 'F', expresses an ontological category [without gratuitous complexity or redundancy]** *for a person, S'.* Second, condition (1) of D3 is **'it is epistemically possible that something is** *F*'', while condition (1) of D4 is **'it is** *epistemically possible for S* **that something is** *F'.* Finally, condition (4) of D3 is **'it is epistemically possible that either 'F' expresses a kind which is** *more general or basic* **than** *any kind of artificial entity***,** *any kind of social entity***, or** *any natural kind***, or 'F' expresses a kind which is** *not* **at a** *lower level of generality* **than the** *summum genera* **of** *the a priori sciences'***,** whereas condition (4) of D4 is **'it is** *epistemically possible for S* **that either 'F' expresses a kind which is** *more general or basic* **than** *any kind of artificial entity***,** *any kind of social entity***, or** *any natural kind***, or 'F' expresses a kind which is** *not* **at a** *lower level of generality* **than the** *summum genera* **of** *the a priori sciences'.*

I conclude with the observation that, in the most general sense, a predicate '*F*'

expresses an ontological category if and only if '*F*' satisfies the conditions set forth in

D1, D2, D3, or D4.[13]