

A Representationalist Approach to Generality

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Abstract: There are no unicorns, but there are representations of them, hence motivating an explanation of discourse about the *property* 'unicorn' in terms of discourse about *representations* of unicorns. I show how to extend this strategy to apply to any kind or property terms. References to property instances may be explained as references to *comprehensive representations* of them, which represent *all* of the (supposed) properties of such an instance--unlike 'ordinary' representations, which are distinctive in that they represent only some limited subset of such properties, through use only of some proper subset of their own (supposed) properties. This representationalist approach results in a very economical naturalist ontology, which has no need for properties.

Realist, conceptualist and nominalist approaches to the traditional 'problem of universals', concerning how or whether it is possible for more than one particular object to have the same property, or be of the same kind--or fall under the same concept, or be linguistically named or described similarly--are familiar.¹

But there is another possible approach to such problems, apparently previously unexplored, which has much to recommend it as an alternative explanation of various kinds of generality. This alternative approach makes use of the concept of representation, and it offers a distinctive '*representationalist*' approach to issues concerning generality. But in this introductory essay on the topic I shall primarily be concerned to demonstrate the possibility and coherence of such an approach as an alternative to metaphysical realism, rather than to argue for its truth. Nevertheless, the discussion should also serve to extend and clarify the concept of representation itself, so that the conceptual structures introduced should be of some value even to realists who reject the main findings of the paper.

I shall introduce the representationalist approach via consideration of a familiar feature of, or criterion for, the standard concept of representation. It is that representations are not themselves *real* cases or instances of what they represent, whether they represent a particular object, or some property or universal. Thus if object A *represents* object B then A is not identical with B, while if object A represents a *kind* of object X, then A is not itself a *real* X.

But representation of one *object* by another can itself be regarded as a case of *property* representation. Any particular object B is such that it has the *unique property* of being *object B*. Then my point about the non-identity of objects A and B if A represents B is as follows: that A can *represent* B's property of being object B, but it cannot itself be an *instance* of that property, i.e., it cannot itself *be* object B. Hence it is not necessary to view the representation criterion as being made up of two separate criteria, one for objects and one for properties.

Consider representations involving some *general* kind of entity such as 'the goat' (a natural kind): clearly a representation of a goat (such as a painting of one) is not itself a real goat, whether it is interpreted, as before, as being 'of' some particular real goat, or instead as simply being a representation of *a* goat, that is of some goat or other, or of the kind 'goat'.

However, at this juncture it might be thought that the current point about representations--that a representation of an X cannot itself be a real X--is already sufficient to undermine a representational explanation of generality involving kinds or qualities. For how could one explain how a real goat relates to the kind 'goat' in representational terms, given that no *representation* of a goat could be a *real* goat?

But perhaps the answer to that question may already have struck those having some sympathy with various conceptualist and nominalist alternatives to realist theories of universals. A representationalist approach to universals, if it is to be viable at all, must adopt an *anti-realist* (or 'irrealist') stance to supposed 'real' examples or instances of kinds or qualities--that is, it must *deny* that there are any real or genuine instances of kinds or qualities,² and hence deny that objects genuinely *have* or *possess* such properties. Thus for example, those objects generally assumed to be real goats must each be held merely *to represent* a goat, rather than itself to *be* a goat.

To be sure, realists may differ as to whether a property is genuinely *present in* all of its instances, or whether instead each instance is merely related to the property by an ontologically and logically unique relation of *exemplification* or *instantiation*: the language of objects 'having' or 'possessing' properties, or of being 'instances' of them, could be interpreted either way. My alternative to realism would equally replace either version: thus in arguing that there are no genuine instances of properties, I am both claiming that there are no properties that are *present in* objects, and that there are no properties to which objects are related by an *instantiation* relation. I shall also assume

that, though perhaps there might be *some* properties without instances, there could not be properties if *none* of them have instances, and hence that properties in general may be dismissed if property instantiation can be undermined or replaced.

Returning to the representationalist view, its anti-realist stance does raise another problem for it, namely that the initial contrast between representational versus real cases of a universal would then itself be in question: how then could we distinguish 'ordinary' or 'normal' representations, such as pictures, from whatever representational substitutes for instances of universals are provided by the approach?

Here is an initial answer to that question, which will be refined as the discussion proceeds. As a preliminary, define a 'natural kind' as a kind that has *actual* instances (that is, of course, *supposed* actual instances)--as opposed to conceptually or culturally defined kinds such as unicorns or centaurs, which have no actual instances.

Then in the first place, there is a perhaps obvious explanation as to why *normal* representations of a natural kind of object X are not themselves Xs, namely that they do not have *a sufficient quantity of the properties of Xs* to qualify as themselves being Xs. For example, a painting of a child is not itself a child because it was not born of human parents, lacks those human organs possessed by a child, and so on. Thus normal representations of natural Xs fail to be Xs for the same reason as any other non-Xs, namely that they lack the required range of properties possessed by (supposed) genuine instances of X.

At the same time, and for reasons related to the just-discussed insufficiency of properties of normal representations, it is an important and little-remarked fact that such normal representations of a natural X do not represent *all* of the properties of a natural X, but only *some* of them. Thus an average picture of a child in an everyday setting would represent the child, but not the internal structure of her organs, or her blood type. Or in other words, normal representations of instances of natural kinds are *incomplete* representations, in that they fail to represent *all* of the properties of that which they represent.

Another significant fact about normal representations of instances of natural kinds has also received little attention. It is that many of their properties have *no representational significance or role* in what they represent. For example, typical properties of the canvas on which a painting is painted, such as that of its having a certain specific chemical composition, normally play no part in representing the subject matter of the painting. Thus paintings etc. are only *partial* representations--or only partially representations--in that not all of their properties have a representational function. Thus normal representations of a natural X are both *incomplete* representations of X, and also *partial* representations in the sense just defined. (Though other kinds of normal representation will be introduced in the next Section).

Let us initially use the term '*non-comprehensive* representation' (NR) for this combination of incompleteness and partiality,³ as found in normal cases of representation of instances of natural kinds.

Then, a contrary concept of a *comprehensive* representation (CR) of an X by object A may be defined, as any case in which A is both a *complete* representation of all of the properties of an X, and also a *non-partial* or *whole* representation of an X, in that *all* of A's properties play a role in representing an X. Thus normal representations are NR cases--but what of CR cases?

I claim that an appropriately refined and qualified form of the distinction between NR and CR cases can provide a viable substitute for the old distinction of representations of Xs versus real Xs: supposedly real Xs are, on this view, *comprehensive* representations of natural Xs, which characteristic of comprehensiveness provides the representationalist substitute for the supposed joint property of a 'real' X of being such that *all* of its properties are properties of an X (non-partiality or wholeness) and also being such that it possesses *all* of the properties of an X (completeness). Thus an initial form of our desired result has been achieved. (See the next Section for refinements).

To summarize, we have outlined one possible representationalist strategy for reinterpreting realist views about the relations of kinds and their instances in purely representational terms. And in doing so it has not been necessary to change the usual concept of representation itself--as involving potential representation both of particulars

and of universals--in that the needed distinction of NRs from CRs merely involved distinguishing different *ranges* of properties, both of the representing object (partiality versus wholeness), and of the object represented (incompleteness versus completeness).

1. Refinements of CR and NR

First, a logical and terminological interlude: since the somewhat unwieldy term 'representation' will continue to be much needed throughout this paper, I shall abbreviate it where appropriate as 'rep', which may be used in verb form ('A reps/is reping/repd B' for 'A represents/is representing/represented B') or noun form ('A is a rep of B' for 'A is a representation of B', or 'a rep analysis' for 'a representational analysis'). Then a *comprehensive* rep (CR) is a C-rep, and a non-comprehensive rep (NR) is an N-rep. (These new forms are also usable in verbal forms--such as 'A C-reps B'--unlike 'CR' and 'NR' themselves). As for my general *representationalist* approach or view itself, I shall describe it as the *RT* view.

Returning to more substantive matters, it is first necessary to conceptually distinguish issues about the nature of *actual or real existence* of entities, from issues about whether we can find *an adequate RT substitute* for talk about kinds or properties, whether in describing any real, actually existent entities or non-real entities such as unicorns. It is not primarily the job of an RT theory to analyze the nature of existence or reality as such, so that a working substitute for common realist (or everyday) intuitions on such matters is

as much as can be hoped for in an initial treatment. (However, I shall tentatively identify one necessary factor below, to be called 'comprehensive specificity').

Second, so far the only cases of CR that have been discussed are C-reps of instances of *natural kinds*--that is, of kinds having actual instances. But I shall show below that there can also be C-reps of instances of *non-natural kinds*, such as of items from categories of mythological, non-existent creatures such as unicorns or centaurs.

That some such cases of rep of non-existent things occur is only to be expected on an RT approach, which is attempting to replace supposedly *actual* properties and instances with *reps* of them: to the extent that the approach is successful, the relevant represented properties and instances must be regarded as not existing, or as not being real.

As initial examples of more commonplace reps of non-existent things, certainly there can be representations of *mythical figures* such as Santa Claus (a particular individual), or mythological beasts such as unicorns (a kind), even though there is no Santa Claus, and there are no unicorns.

Now, here is an illustration showing how an object apparently possessing all the properties of an X could nevertheless fail to be an X, that is, fail to be a real X. Imagine that some future geneticist creates a unicorn-like species of animal--of *runicorns*, to give them a name--instances of which have *all* of the properties attributed to mythological unicorns--of having one horn, of being horse-like, and so on. Animals belonging to this

new species of 'unicorn' would have all of the properties of unicorns, but nevertheless they would not *be* genuine or real unicorns--not genuine instances of the kind 'unicorn'--since (as a summary reason) unicorns are merely mythological animals.⁴

Now, how would an RT analysis of this case proceed? To begin with, it seems undeniable that an individual unicorn does rep *all* the properties of a unicorn. But what is more, *all* of the properties of a unicorn are involved in its reping of a unicorn--as opposed to a case of a more conventional rep of a unicorn, such as a *painting* of one, which is such that only *some* of its own properties (those connected with the painted area of its front side) are involved in reping the unicorn. Hence a unicorn is a *comprehensive* rep (C-rep) of a unicorn. But then it follows that not all C-reps of a kind X are cases of a real X (i.e., of an RT substitute for a real X).

What has gone wrong here is not the RT analysis itself, since both realists and RT theorists can agree that unicorns fail to be genuine unicorns. It is rather something about the nature of existence or actuality, in connection with whatever the reasons are that some kinds (whether analyzed realistically or in an RT way) can *fail to have actual examples*, that produces the failure.

Call the missing reasons or factors '*existence-making*' factors. Then an amended RT account of what it is for an object A to be a '*real*' instance of kind X is that A C-reps *an* X, for any kind X that possesses the relevant *existence-making* factors--the primary

evidence for the presence of which is that kind X is a *natural* kind as previously defined, namely a kind having actual instances.

However, it seems likely that one necessary existence-making factor is (what could be called) *comprehensive specificity*: that, for any general kind of property possessed by an X, X should possess some *completely specific value* of that property (using standards for complete specificity derived from relevant sample cases of actual objects). It seems plausible that unicorns are mythological (without any real examples) at least in part because we cannot describe with complete specificity the properties of any individual unicorn.⁵

Having appropriately circumscribed the RT application of the concept of C-rep, I shall now extend the concept of *N-representation* (NR or N-rep). Currently it is defined as covering only partial reps that incompletely rep some instance of a natural kind X.

Now the concept of a *comprehensive* rep (C-rep) already covers cases that are both *whole* (non-partial) and *complete* reps of instances of a kind. Thus there are still two logically possible combinations of partial/whole and incomplete/complete reps that are currently *unused* or *uninterpreted--partial* reps that are also *complete* reps, and *whole* reps that are also *incomplete* reps. I shall now show that there are actual cases of both combinations, and argue that both deserve to be regarded as N-reps.

First, as to *partial but complete reps* (PCRs or PC-reps). The most convincing cases in my view are those that make some use of traditional artistic media, such as photography or drawing, some examples of which are *artworks*, but arguments implying the existence of such cases (as being PC-reps) are very recent--see the next footnote--and hence perhaps controversial. I have argued that artworks themselves are *represented* entities, having no actual existence independent of reps of them.⁶

Now whether or not that view of artworks is true, it seems plausible that at least in most artistic cases the results of an artist's creative effort (the finished artwork) has a *limited, finite list of properties*, such as in the case of a poem, musical work or drawing, so that it is possible to rep *all of the artwork's properties*--as in a good performance of a musical piece or play, or a reading of a poem.⁷

However, if my speculation above about *comprehensive specificity* being necessary for real existence is correct, artworks with a limited or finite list of properties cannot really exist, i.e., there cannot be *real* instances of them. If this view is correct, it would provide a significant argument against 'type' theories of artworks, which regard at least some artworks as being types or kinds having real instances.⁸

Assuming then that performances or readings are not real instances of the relevant artwork, it still needs to be decided whether they are partial or complete reps. I would argue that they are partial reps. For example, a concrete performance by a pianist of a piece of music involves many more events than simply the production of the desired

sound: her repeated playing of a certain key, for instance, will inevitably involve mechanical stresses on the key that will result in a slight increase in its temperature, but such physical changes in the key play no role whatsoever in reping the music. Or the height and weight of an actor playing Hamlet have no representational role in his reping of Hamlet, because the play Hamlet is non-specific about Hamlet's height and weight. Hence, to sum up this part, I conclude that reps of artworks can be both *partial* and *complete*--and they definitely qualify as NR cases, because the reps themselves do not qualify as real instances of the artworks they rep. (So that they are 'PC N-reps': see also Section 3).

Turning now to *whole but incomplete reps (WIRs or WI-reps)*, familiar examples are already available--indeed, *examples* or *samples* themselves provide such examples. A boat is not only a real boat (an instance of the kind boat), but it can also serve as an *example* of a boat--as a representative sample of the class of boats. As a sample or example, all of its properties are relevant to what it reps, so it is a *whole* (rather than partial) rep, but at the same time it is only an *incomplete* rep, for example because, as a sample, it must *represent* each and every boat, but it cannot rep *all of the properties* of each and every boat. Thus samples are examples of *plural* rep--of one object reping many others. And since an example is not itself a real case of the whole collection of entities that it plurally reps, whole but incomplete reps are also cases of NR (as with partial but complete reps).

Thus the category of N-reps has now been expanded to cover all non-CR cases of reps. Also noteworthy is that all N-rep cases involving singular rep are *partial* reps (either partial/incomplete or partial/complete), the significance of which point will be explored in Section 7.

2. More RT Theory

It is now possible to be more explicit about some central features of the present RT account. To begin, the RT account is itself centered round the notion of a rep of a *particular instance* of a universal or property. One very good reason for this feature is that without it no sense could be made of the basic notion of a *comprehensive* rep (CR) of an instance, which is defined in terms of rep of all of the properties *of the instance* in question.

I have used the concept of a *rep* of an object or property as a basic or relatively *primitive* concept, defined only by the characteristic that a rep of X is not itself an X --whether an object or a property. (Later in this Section I clarify basic rep of properties as *specific* rep--i.e., rep of a property in its most specific form). Thus each property is repd in the same basic sense, independently of the secondary concepts of NR or CR.

Second, for any given property that is repd in the basic sense, the concepts of NR and CR themselves concern properties *associated with* that given property--namely, either some

of, or the whole range of, *other* properties that would co-occur in some instance of the given property. For example, a C-rep of a genuine instance of redness would require rep of *all* of the properties associated with redness in the particular case of that instance of redness, such as (most relevantly) its specific hue, saturation and brightness. A (purportedly) genuine instance of redness would rep *all* those properties, whereas an NR case, such as a black and white photograph of a red surface, would only rep *some* of those properties, such as by omitting rep of the specific hue associated with the color.

An intermediate case should also be mentioned, namely that of how such a black and white or 'grayscale' photograph reps the *saturation* and *brightness* of a color. Some colors such as yellow are inherently brighter than others such as blue, so that an increase in saturation of the blue hue might *decrease* the average brightness of a black/white rep of it, while a similar increase for yellow would instead lead to a corresponding *increase* in brightness. As a result, a grayscale rep of a color cannot rep a *specific* saturation and brightness of a given color (since the hue is unknown or unrepd), but only an *equivalence-class* of such cases, which map onto the same shade of gray in the grayscale rep of the color.

Thus, though the grayscale rep does, in a sense, '*represent*' the saturation and brightness of a color, it does so only in a 'fuzzy' or generic way by reping *generic* rather than *specific* values of saturation and brightness for colors. Hence of course my CR requirement, for 'real' or any other Xs, must be understood as requiring that such an object reps all of the properties of an X *in their most specific form*, so as to avoid 'false

positive' cases in which all properties are repd, but some of them merely generically. And more generally, the concept of basic rep itself must be limited to *specific* reps, since only this concept captures the desired sense of *singular* rep of a given specific property (as opposed to 'fuzzy' or generic rep of an equivalence-class of specific properties).⁹

Furthermore, the account I have given of NR and CR is general enough--in terms of a property versus its relative complement in a given instance--to apply to any kinds of properties, whether generic or specific, determinable (such as color) or determinate (such as red), and complex (such as goathood) or simple (such as brightness).

Thus, though an RT theory denies that there are any *actual instances* of properties, and hence denies that there are any actual or real *properties* as such as well, the theory need not deny that there can be *reps* of properties. Thus, from a meta-theoretic perspective, an RT theory would claim that the concept of 'an instance of a property' is *empty* (in that no actual entity satisfies the concept), as is too the concept of 'a property'. But we can still have *reps* (including linguistic reps) of *non-actual* (including *potential* or *possible*) members of the extension of such concepts, even though their actual extensions are empty.

As for the general form of my argument against properties, it could be expressed as follows: if there are properties, then there are (at least some) instances of properties. But there are no instances of properties. Hence there are no properties. Or, in more qualified form: it is not necessary to assume that there are instances of properties, since a

satisfactory rep substitute is available. Hence it is not necessary to assume that there are properties.

An extended formulation would make use of the concept of 'being a property' as being a *third* or higher order entity;¹⁰ for example, since goathood (a second order entity) is a property, then 'goathood' must be an *instance* of the third order entity '*being a property*', or *propertyhood*.

Then my argument is that goathood, as with other second order properties, have been shown not to be genuine properties because they have no instances; hence they cannot themselves be genuine instances of propertyhood. Hence the extension of the concept of propertyhood is empty.

Thus, in sum, on the RT theory a particular 'goat' may correctly be described as 'a goat' in virtue of its being a *CR* of *a* goat, whose (represented) properties are those conventionally assumed to be instantiated by the supposed actual goat. (Further issues as to the status of a represented goat itself will be discussed in the next Section).

3. Generality, Particularity and Indiscernibility

Among other things, here is a brief discussion of an important metaphysical issue that was not raised in the previous Section. Suppose that there are two objects that are

indiscernible (having exactly the same properties). A realist view of the situation is that there are two numerically distinct particulars, each being an instance of exactly the same specific kind X. Thus on a realist analysis this is a genuine example of *generality*, that is, of more than one object being an instance of the same specific kind. But what should an RT view say about this case?

The pattern of translation from realism to RT constructs so far has been: any features a realist attributes to actual instances should be attributed to repd instances instead. Thus on this model (or translation scheme), if a realist has numerically distinct but indiscernible entities, then the RT translation should be that the two objects in question each C-rep *numerically distinct* particulars having the same properties.

However, the two objects of course also C-rep *the same properties* in each case, including each numerically distinct repd particular's property of being an X. So the RT account does preserve the 'intuition of generality' that both objects are C-reps of the *same property or kind*.

Nevertheless, the RT analysis also enables us to analyze away the concept of *numerical identity*, which concept is complementary to that of qualitative or property identity. For on the RT analysis, rather than having to say that two objects are themselves *actually numerically distinct*, in spite of their having the same properties, we can instead say that they are distinct or non-identical--without the identity in question being qualified as either numerical or qualitative--because each *C-reps* a numerically distinct particular. Or

in other words, on an RT theory we do not need any *actual* cases of *numerical* distinctness or identity any more than we need actual cases of *property* distinctness or identity.¹¹

This concludes my discussion of issues concerning C-rep, generality and particularity. However, an RT theory also permits the introduction of another significant category of generality, which involves *N-reps* of *particular objects* rather than C-reps of them. As has just been seen, in effect, *any* C-reps of particular objects are such that there could be at most *one* C-rep of a given particular (since on the RT theory, any object C-reps a *numerically distinct* particular from that C-repd by any other object, instead of its being a numerically distinct particular itself). However, there is no such restriction for N-reps, of which there could be *many* for any given particular object.

As an example of N-rep of a particular object such as an actual person, the president of a country might decide not to attend an international conference herself, but instead to send a *representative* in her stead, who would then *represent* her at the conference. But of course she could also have *multiple* representatives to represent her in different countries, for example.

Or, to introduce a very different kind of N-rep, there could be many different *photographs* of the president in question, each of which is another kind of N-rep of her. (Which may or may not specifically be photographic *artworks*, as discussed in Section 1).

As for the various distinct physical prints or copies of a particular such photograph, I have argued elsewhere that such prints are *instances* of a visual *design type* associated with, though not identical with, the photograph in question.¹² Each such print is also an N-rep of *the photograph itself* (a partial but complete rep).¹³

Thus, to summarize these points, on my view a photograph--some but not all of which are artworks--is not itself a type or kind that can have actual instances (even though it is associated with a design type), but instead it is an abstract *particular*, of which there can be many prints or copies, which are partial complete (PC) N-reps of it--and which photograph typically will itself in turn be an N-rep of some other particular entity such as an actual person or scene.

4. External, Quasi-External and Internal Representation

There is one further important aspect of the concept of representation that still needs to be discussed. Consider a painting of a lake. Now there are two kinds of paintings of lakes: those in which the lake in question actually exists, versus others in which there is no actual lake that is represented by the painting.¹⁴

But all of these paintings--of both kinds--are nevertheless representations of *a* lake, whether or not there is some actual lake represented by a given painting.

Thus there clearly is a need to distinguish the *actual* subject X (if any) of a rep, such as an actual lake, from 'the X', such as 'the lake', *represented in the painting*, which is repd by the painting whether or not there is an actual subject X. I shall distinguish these two aspects or varieties of representation as *external* versus *internal* representation (ER versus IR).

External rep could also be described as *relational* rep, since if A externally reps B then there is an actual relation of representation that holds between actual entities A and B; whereas internal rep involves no such actual relation. However, it is theoretically convenient to regard internal rep as also relational in a broader sense, as relating the reping object A to *what it reps* B, even if there is no such actual object B.

A similar distinction is needed for properties: if A reps property B, then since my thesis is that there are no actual or real *instances* of properties, of course there cannot be *external* reps of property instances, i.e., objects actually having properties. Hence the concept of an *internal representation* is an indispensable component of an RT theory of generality, since it is needed in the case of at least some references to objects and properties.¹⁵

A concept related to that of internal rep is common in the literature, namely that of the *subject matter* or *representational content* (RC) of a reping object,¹⁶ which the object in some way possesses, or which characterizes it, whether or not there is any corresponding actual subject of the rep.

Another common way to describe the 'representational content' or RC of a rep A that reps X, is to say that it consists of those properties that *A represents X as having*. However, this characterization does not adequately distinguish cases in which the 'X' in question involves a reference to an actual entity that is *externally* repd by A, as opposed to an object internally repd by A,¹⁷ and so I shall continue to use the more precise concept of internal rep (IR) where appropriate. Nevertheless there is still a useful role for the concept of rep content (RC): the *representational content* of an object is made up of the object (or objects) that are internally repd (I-repd) by A, plus their properties that are I-repd by A.

One further concept is needed. Though there cannot be ERs of properties for the reasons already given, we still need a concept to allow for the pre-theoretical sense in which one object can rep *the properties of another object*. On my account, these are cases when one object A reps property items in the RC of the other object B; I shall describe such cases as cases of *quasi-external* rep (QER or QE-rep)).¹⁸

The concepts both of IR and QER (and the auxiliary concept of RC) are also needed because they plays an indispensable part in explaining how *incorrect* rep of an actual object X is possible--for A may rep an actual object X *as having* properties which in fact X does *not* possess. Hence, though it is primarily object A that externally reps X, there is a derivative sense in which it is *the properties in A's RC* that QE-rep (the relevant properties of) X. For example, if A incorrectly reps the water of an actual lake X as being red, then it is the 'red water' properties in the RC of A that are *incorrectly*

representing the relevant color properties in the RC of X, that pre-theoretically are 'the actual color' of the water of lake X.

5. A Clarification of Comprehensive Representation

In the case of *comprehensive reps* (CRs), I have claimed that these are cases such that *all* the properties of an object play a role in representing *all* the properties of a kind or universal. But that statement now needs to be reinterpreted or clarified in the light of the Section 4 distinction between internal and external representation.

To begin, recall from the Introduction that a representationalist (RT) approach to universals, if it is to be viable at all, must adopt an *anti-realist* (or 'irrealist') stance to supposed 'real' examples or instances of kinds or qualities--that is, it must *deny* that there are any real or genuine instances of kinds or qualities, and hence deny that objects genuinely *have* or *possess* such properties. (Thus for example, those objects generally assumed to be real goats must each be held merely *to represent* a goat, or goathood, rather than itself to *be* a goat). Also, if no universals are ever instantiated, then a thoroughgoing anti-realism must reject the *whole picture* of there being entities--universals or properties--that have instances, and hence it must reject both the instances *and* the universals. Hence an RT view must deny that objects ever *externally* represent universals or properties.

An RT view will instead regard properties either as being '*internally represented*' by an object A, that is, as being part of the object's *representational content* (RC), or--in the case of N-reps of actual objects--as being quasi-externally repd (QE-repd) properties in the RC of some other object B, as discussed in the previous Section.

But we have not yet integrated these points with the demand that objects should be *comprehensive* reps (CRs) of the properties or universals associated with a given repd object. In what sense can *all* the properties of an object play a role in representing *all* of the properties associated with a given instance of a kind or other universal?

Clearly the concept of a CR needs to be reinterpreted in light of the fact that now, strictly speaking, there are *no* actual properties whatsoever (whether as independent universals or as associated with instances), so that any apparent reference to a property is really a reference to part of the *representational content* (RC) of some object. Hence now *all* the properties of an object are part of its RC (so that an object 'has' any properties just in the sense that it *internally represents* them, or has them as part of its RC). Thus the RC in question is a *comprehensive* RC (a CRC), a concept that will be useful in distinguishing the RC of CRs from that of NRs (see the next Section).

This new understanding of properties is consistent with the demand that a CR should represent *all* of the properties associated with a kind or quality, because the CRC of an object will include *all* of the rep content that, on a realist view, would consist of all of the properties associated with the relevant kind or quality.

A reinterpretation--or at least a clarification--is also needed for the requirement that *all of the properties* of an object A should play a role in representing the relevant kind or quality. This now needs to be interpreted in a minimal way such that the concept of a property 'playing a role in representing X'--or of *functional relevance* to X-rep--is satisfied by a property being itself *part of the relevant comprehensive RC (CRC) of the object*. For this minimal interpretation still enables a clear distinction to be made between singular CR and NR cases, in that in NR cases, *some* of the properties of an object are *irrelevant* to its rep of a given thing X, while others are *representing* rather than *represented* properties, and hence both groups are *not* part of the relevant RC associated with the object's being a normal rep of X--on which more in the next Section.

6. Normal Representations Again

At this stage it is necessary to clarify the theoretical situation with respect to *normal* or non-comprehensive representations (NRs), given the recent developments in comprehensive representation (CR) theory. The following property-related entities must initially be distinguished, for a *normal* rep A of some actual object X.

- 1) Those properties of A that are irrelevant to A's representing of X--its *irrelevant* properties or IPs.

2) Those properties of A that play some *relevant* part in its representing of X--its *representing* properties or RGs.

3) Those properties of A that are included in A's *representational content* with respect to its representing of X--its *represented* properties (RDs).¹⁹

Now at this stage there are two fundamentally different ways to proceed. The first would take the line that the properties referred to in 1) and 2) are those included in the *comprehensive rep content* (CRC) of A, so that NR cases make use of those same repd properties. On such an analysis, the properties in an N-rep's own RC, as referred to under 3) above, would be *doubly* repd properties--repd by properties that are *themselves* repd properties. Call this the '*joint RC*' approach.

Now there is no logical difficulty in this 'joint' approach,²⁰ and it does conform to the intuition that an object's ability to N-rep other things depends on a proper analysis of what its 'real' properties are. But it would also introduce an *asymmetry* into the relations of CR and NR cases, in that it would no longer be strictly true that it is a *physical object* A that both C-reps a kind A, and is also capable of itself N-reping something else.

Further, since a major point of an RT theory is to regard actual objects, events and processes as ontologically primary and self-sufficient without properties, it would, if possible, be best to assign the very basic function of N-reping things *to such primary*

objects, events and processes themselves, rather than to repd substitutes. Hence I shall do so, as follows. This alternative approach could be called the '*distinct RC*' approach.

As a first point, the intuition mentioned above--that an object's ability to N-rep other things depends on a proper analysis of what its 'real' properties are--can be defused. On the RT view, talk about an object's properties is not talk about anything real or substantial, and so the pre-theoretic view that N-rep depends on an object's properties is itself in need of analysis.

Here is a rough schema for such an analysis. Objects have physical *parts* or *aspects*, so that one can distinguish, for instance, between those parts of a three-dimensional object--such as various configurations of its molecules--that are found on its front side, versus those parts that instead are found on its rear side.

Now the C-rep by object A of *an A*--which is A's CRC, including an object and its properties--will by definition involve all A's properties, and hence all of A's parts that, severally or in various combinations, rep items in A's CRC. But an *N-rep* by A, on the other hand, need only involve *some* of those parts (with pictorial rep, typically those parts on one side of the object, but not those on its other sides).

This proper subset of A's parts can be used to explain the sense in which 1) above--those properties of A that are irrelevant to A's representing of X, i.e. its *irrelevant* properties or IPs--is true for N-reps: strictly speaking it is not that A has some *properties* that are

irrelevant to an N-rep, but that some of A's physical *parts* are irrelevant (even though those same irrelevant parts are relevant to A's *C-rep* of an A).

More importantly, a related analysis can explain the sense in which 2) above--those properties of A that play some *relevant* part in its representing of X, i.e. its *representing* properties or RGs--holds true for N-reps. Instead of relevant *properties*, it is, strictly speaking, certain relevant *parts* of A that N-rep X.

An example may help to clarify how this 'distinct RC' (DRC) approach would work. Suppose that A is a painting--so that it C-reps a painting--which is also an N-rep of a yellowish beach X. A natural way of describing the situation is to say that there is a *yellowish area* on the front of painting A which reps the yellowish beach X. Now the DRC approach would accept this natural description as being correct: it is a subset of the *parts* of A, namely the *yellowish area* on the front of A, that N-reps the beach X.²¹ Thus the DRC approach uses the fact that one important function of property terms (though not the only function) is to identify or pick out such parts or aspects of a concrete object. (I shall briefly discuss this example further in Section 10).

7. A Logical Difference Between C-Reps and Partial N-Reps

I shall now briefly show how my analysis of kinds in terms of C-rep can preserve an important logical feature of kinds or species, and also show how kinds, thus analyzed, differ from singular N-rep cases with respect to that feature.

Kinds or species are such that there could not be a single instance A of a kind X which was simultaneously an instance of some *other* specific kind Y, if Y is of the same general kind as is X. For example, consider the species horses and dogs: both are of the same general kind, namely animals. The logical feature in question shows itself in the fact that a *single animal* cannot both be a horse and a dog, on pain of the two species 'horse' and 'dog' not being distinct species after all. Thus distinctness of species requires disjointness of extensions for each particular species of the same general kind. Call this the 'disjointness condition'.²²

The RT analysis of kinds in terms of C-rep can preserve this important disjointness condition in the following way. C-rep holds only when *all* the properties or parts of an object X rep *all* of the properties of an X. Thus to begin with, that X reps *all* of the properties of an X, and in their most specific form (see Section 2), guarantees that (what could be called) a *definiteness of repd species* requirement holds: a given case of C-rep rps an object belonging to *one particular species* of X, and not any other particular species of the same general kind X.

But there is more that needs to be said. Realist views involve a *uniqueness* requirement, namely that there must be a unique set of all of the properties of an object (so that there could not be two distinct such sets of properties for the same object). An equivalent RT theory uniqueness principle is needed to rule out the abstract possibility that a given object A might support *two distinct cases* of C-rep: one in which one particular species of object is C-repd by (all the properties or parts of) A, and another in which a distinct particular species of object is C-repd by the same object A.

Now in both realist and RT cases, more is needed to secure uniqueness than an *objectivity postulate*, namely that there is some fact of the matter as to what properties an object has, or what properties it reps. Why should it not be objectively true that an object has two distinct property sets, or that it C-reps two distinct particular species?

The answer in both cases is that a requirement of *logical consistency* or *compatibility* would be violated, that hence serves to enforce uniqueness in both theoretical perspectives. For two distinct maximal property sets for an object would be such that any differences in each could be resolved into pairs of *incompatible properties*, such as yellow in one but blue in the other. No object can be both yellow and blue, and hence the internal integrity of either set would be undermined by the existence of the other.

But a similar point holds for RT constructs too: a claim that object A C-reps yellow would similarly be *undermined* by a claim that the object also C-reps blue (since it would be being claimed that an object both C-reps yellow *and* C-reps not-yellow). Hence I

conclude that uniqueness holds for RT constructs just as much as for realist constructs, so that, as in the corresponding realist case, no object could C-rep more than one particular species of the same general kind, so that the *disjointness condition* holds for C-rep too.

Turning now to N-rep cases, I claim that a corresponding disjointness principle for N-reps--that no object could *N-rep* more than one particular species of the same general kind--is *false*. The reason is simple: singular N-reps, since they are *partial* reps (see Section 1) use only a *proper subset* of the parts or aspects of an object A in their N-reping of the properties of some other object. Now to be sure, for a given *particular* subset A1 of A's parts, the logical consistency principle invoked above requires that it N-rep only *one* particular species of some general kind (because different species have conflicting properties). However, this does not prevent some *other*, distinct proper subset A2 of A's parts from N-reping some *other* particular species, which is of the same general kind as the particular species that is N-repd by subset A1. Hence the disjointness condition does *not* hold for singular N-reps.

I have argued elsewhere that this logical difference between the logic of kinds or types, versus the logic of normal singular representations, is of critical importance in understanding the logic and ontology of *artworks*, in that views which regard artworks as being types or kinds are committed to the holding of the disjointness condition for them, even though it can be shown in various ways that artworks need *not* satisfy the disjointness condition.²³

8. N-Adic Properties

I shall now briefly embed the previous discussion in a broader logical framework.

Logically speaking, my thesis has been that ordinary property ascriptions, as expressed by monadic predications of the form 'F(a)', are ontologically misleading, in that their form could more perspicuously be expressed as $\text{IRep}(a, \text{IR}(F(a)))$, i.e., that 'a internally reps an object a' such that F(a)', or that a dyadic relation of internal rep holds between a and a', where a' is such that F(a').

But what then of ordinary dyadic relational predications such as 'a is the father of b', of form $R(a,b)$? These are cases where, instead of one object reping something, *two* objects *jointly* rep something, namely *a* case of the fatherhood relation--and so on for n-adic relations of higher adicity. Or, in symbolic form, $R(a,b)$ is more perspicuously expressed as $\text{IRep}((a,b), \text{IR}(R(a',b')))$, and so on.

Thus, if one adopts a broader usage of the term 'property', according to which rep relations are themselves dyadic properties, then an RT approach does not deny that there are *any* properties at all, but instead it denies that there are any *non-representational* properties.

9. An RT View of Recognition and Information

As further (though here necessarily brief) intuitive support for the RT approach, consider two concepts that are important in realist explanations of generality: those of recognition and information (or knowledge). Realist theories explain how it is possible to *recognize* different objects as each being an X in terms of recognition of a common property in each case. But this ignores the fact that recognition of an X works just as well in *N-rep* cases, such as recognizing a horse when one sees a picture of a horse--and indeed, children can learn to recognize all kinds of things through first learning to recognize pictures of them. Thus an RT account of recognition is more general, and more cognitively realistic (in terms of how cognitive recognition skills are actually acquired and used) than is a comparable realist account of it.

And second, a realist theory of properties presumably is intended also to explain how we can epistemically acquire certain kinds of *information* about objects--that we can come to know that an object is red because of the causal effects of its property of being red on our perceptual apparatus, for example. But an RT account can provide a fully equivalent view: one perceptually acquires sufficient information to recognize that an object C-reps the color red by means of the same causal process, but *without* having to say that the causal process involves an object's property of being red--equally good science, but without the metaphysical baggage of properties.

10. The Representational Function of General Terms

To conclude with some additional defense of the present RT approach, here is an RT view of the *utility* of our using property-related concepts and terms in our descriptions of the world, beginning with some further discussion of picture A from Section 6.

Recall that the 'distinct RC' approach accepts the natural description of painting A, according to which there is *a yellowish area* on its front, which area (or subset of parts of A) reps the yellowish beach X--so that one important function of property terms (though not the only function) is to identify or pick out such parts or events connected with a concrete object.

Now in order for property concepts to successfully fulfill that function, there has to be some *objective correlation* between a given property term (or combination of terms) and some relevant object parts. But the primary insight of an RT theory is that the correlation in question is not dependent specifically on the existence of *real properties instantiated by things*, for the correlation can be obtained just as well by making use of some *other* kind of objective fact about objects and their parts.

The objective fact used by an RT theory is that certain objects, or their parts, *represent--* whether in CR or NR ways--certain other objects and properties. Now of course, there is a large cultural or interpretive overlay to such objective, basic cases of rep--but the same

is true for claims about the *properties* of objects too, so reps are no worse off than properties in the face of this perturbing factor.

Thus a language-user who can learn to recognize which objects, or combinations of parts, *represent* which other objects or repd properties, can then use the language of properties--reinterpreted as a language about *repd* properties--to *identify* the relevant objects and parts, *just as well* as could a language-user in a world in which there were real properties and instances of them.

So far we have considered only a 'coarse-grained' function of property terms--of their use to identify parts or physical aspects of objects. Turning now to other functions of property terms, of course the same terms may also be used to identify more *fine-grained* aspects of such parts, such as the *intensity* or *hue* of the light involved in a given event of light refraction by an object.

But here too an RT analysis can achieve an equivalent result to a realist analysis: just as property terms can identify finer-grained aspects of objects or events, so too can *reps* (by the relevant parts or physical aspects of an object) *of such properties* achieve the same result. Hence, in sum, the positing of real properties of objects of objects is revealed as an unnecessarily rich hypothesis, ripe for representationalist pruning, whether in coarse-grained or fine-grained uses of property terms.

A final comment. It might be thought paradoxical that an RT theory, which is broadly nominalist in spirit, is yet rooted in a free positing of virtual represented objects and properties. However, nominalists of all people should appreciate that it is better to posit useful reps of such virtual objects and properties than it is to suffer the presence of unnecessary, supposedly real ones--with all their accompanying metaphysical problems—particularly if they can only be eliminated via appropriate applications of such virtual posits. And since representational concepts are already both unavoidable and ubiquitous in many areas of science and the philosophy of science (especially the human sciences), it is both parsimonious, and an appropriate generalization, to thus put them to work in an RT theory in metaphysics and ontology as well.

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Notes

¹ I shall use the terms 'property', 'universal' and 'kind' interchangeably to include both substantive sortal properties, such as being a biological species, and also *qualities* such as that of something's being red or square.

² Of course, a sentence such as 'there are no genuine instances of kinds' is potentially ambiguous between 'no ordinary object is a genuine instance of a kind' (my intended meaning) and 'no kind has any genuine instances', which might be taken as implying that there are no ordinary objects. Throughout this paper it is the former sense that is intended by uses of such sentences. (Hence further references in this paper to properties, universals, instances etc. may be assumed to be intended as references to 'supposed properties', 'supposed instances', and so on).

³ Though as noted, the term will be extended in Section 1 to cover other cases as well.

⁴ The property of being mythological is applicable only to the *kind* 'unicorn', rather than to individual unicorns, and so it does not count against unicorns being able to rep all the properties of individual unicorns.

⁵ But distinguish this kind of specificity from that required for C-reps: see Section 2.

⁶ See my "A Representational Theory of Artefacts and Artworks," *The British Journal of Aesthetics*, vol. 41 no. 4 (October 2001): 353-370, "Theater, Representation, Types and Interpretation", *American Philosophical Quarterly*, vol. 39 no. 2 (April 2002): 197-209, "Three Depictive Views Defended," *The British Journal of Aesthetics*, vol. 42 no. 3 (July 2002): 259-278, and "The Fictionality of Plays," *The Journal of Aesthetics and Art Criticism*, vol. 60 no. 3 (Summer 2002): 263-273. A more comprehensive version of the material in these papers is also included in my forthcoming book *The Double Content of Art* (Prometheus Books).

⁷ For arguments concerning the finiteness of stories see Ruth Lorand, "Telling a Story or Telling a World?" *The British Journal of Aesthetics*, vol. 41, no. 4 (October 2001): 425-443.

⁸ Support for a 'type' view as applied to at least some works of art is provided by (among others) N. Carroll, *A Philosophy of Mass Art* (Oxford: Oxford University Press, 1998), G. Currie, *An Ontology of Art* (New York: St. Martin's Press, 1989), J. Margolis, *Art and Philosophy* (Brighton, Sussex: Harvester, 1980), and R. Wollheim, *Art and Its Objects*, 2d ed. (Cambridge ; New York: Cambridge University Press, 1980).

I have argued against such views in "Artworks Versus Designs," *The British Journal of Aesthetics*, vol. 41 no. 2 (April 2001): 162-177, and also in my "A Representational Theory of Artefacts and Artworks" and "Theater, Representation, Types and Interpretation".

⁹ However, it is important to distinguish this kind of complete specificity, with respect to the properties of a *particular object*, from the more metaphysical concept of *comprehensive specificity* (as an 'existence-making' factor) discussed in Section 1. For some repd objects may themselves be '*incomplete*' objects in a metaphysical sense, i.e., have only a limited or finite range of properties, yet nevertheless have *all* of their properties repd in their most specific form by some object. Artworks provide an example, on my account of them: again see Section 1.

¹⁰ Actually things are more complicated. Since the property of goathood can itself have properties, such as that of being mentioned in a certain paragraph, with further iterations for properties of those higher-order properties etc., the concept of propertyhood itself is of *indefinite* order, since supposed properties of any order are putatively instances of it.

¹¹ Potentially this may also help to solve various contentious issues concerning numerical identity and 'Leibniz's law' (on which see, e.g., Stewart Candlish, "The Inexplicability of Identity," *Australasian Journal of Philosophy*, vol. 49, no. 1 (1971): 23-37). For example, on an RT account all distinct objects differ in their *representational* properties, in that no two of them C-rep the *same set* of entities, because of the distinct particulars repd by each.

¹² See my "Artworks Versus Designs," and also "A Representational Theory of Artefacts and Artworks".

¹³ See the Section 1 discussion of N-reps of artworks, and also my "A Representational Theory of Artefacts and Artworks".

¹⁴ In this connection, Richard Wollheim distinguishes representations of *particular* objects, or events, from representations of objects or events "...*that are merely of some particular kind*", and thus of *a* man etc., rather than of some particular man; Richard Wollheim, *Painting as an Art* (Princeton, N.J.: Princeton University Press, 1987), p. 67-71.

¹⁵ I have further defended the distinction in a paper "Internal Versus External Representation," forthcoming in *The Journal of Aesthetics and Art Criticism*, which is also included in my forthcoming book *The Double Content of Art*.

¹⁶ On the distinction of representational content from (actual) subject see Dominic Lopes, *Understanding Pictures* (Oxford; Oxford University Press, 1996), pp. 3-4.

¹⁷ See again my paper "Internal Versus External Representation".

¹⁸ Strictly speaking, it is theoretically possible to have QE reps of *objects* also, since object A might QE-rep not only the properties in B's RC, but also the repd object there (*a* B) that has those properties.

¹⁹ In addition, there are also possibly non-internal properties, namely those properties of X that A *quasi-externally* represents (if X is some actual object), in virtue of A's having the relevant RG and RD properties.

²⁰ For example, my theory of art, as discussed in the papers cited in fn. 6, regards artworks as represented entities that themselves represent their subject matter.

²¹ To be sure, I have argued elsewhere that a more complicated account is needed in the case of *pictorial* rep or *depiction*, namely one in which a physical object first reps a *picture*, which then in turn reps its subject matter (see Section 3, and also the papers cited in fn. 6). However, that account is still in the DRC camp, in that its account of N-rep starts with *a physical object* rather than with the normal *properties* of that object.

²² See, e.g., my "Artworks Versus Designs," in which I argue that artworks such as sculptures can violate the condition.

²³ See the previous fn., and also my "A Representational Theory of Artefacts and Artworks". Additional relevant discussions may be found in my papers "A Counter-Example to Theatrical Type Theories," *Philosophia* vol. 31 nos. 1-2 (October 2003), pp. 165-170, and "Ariadne at the Movies" and "Ariadne Revisited", each in *Contemporary Aesthetics* 1 (2003), available online at

<http://www.contempaesthetics.org/pages/article.php?articleID=203>

and <http://www.contempaesthetics.org/pages/article.php?articleID=211>
