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RECONFIGURING THE PROBLEM OF UNIVERSALS

DISSERTATION

Presented in Partial Fulfillment of the Requirements for
the Degree Doctor of Philosophy in the Graduate
School of The Ohio State University

By

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*****

The Ohio State University
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ABSTRACT

The problem of universals traditionally consists of three inter-related sub problems: the ontological problem of resemblance, the linguistic problem of predication, and the semantic problem of abstract reference. One persistent assumption is that any adequate solution to the problem of universals must consist of some theory which simultaneously addresses each of these sub-problems. Part of my goal is to challenge this assumption, and to explore the consequences of abandoning it.

The traditional debate is dominated by three philosophical positions: Metaphysical Realism, Nominalism, and (more recently) Trope Nominalism. The Realist, unlike either form of nominalist, accepts universals; The Nominalist, unlike the Realist and Trope Nominalist, refuses to countenance abstract entities. The Trope Nominalist, Unlike the Realist and Nominalist, accepts particularized properties. Despite divergences, these positions share a commitment to singularism: the view that there exists a single sorts of entity (whether universals, classes, paradigms, or tropes) in terms of which an adequate solution to the three sub-problems may be formulated.

I argue that singularism is mistaken: none of the proffered entities can do all of the required work. Rather, we must divide the problem to conquer it. Some of the requisite work is done by Quine’s syncategorematic account of predication; some is done by construing property possession as basic and resistant to further “analysis”; some is done by accepting an ontologically
robust (but non-problematic) notion of kinds. The final result is not merely another solution to
the problem of universals, but a reconfiguration of the problem as traditionally construed.
To Louise J. Robertson, my wife and friend.
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Chapter 1:  
An Introduction to the Problem of Universals

Evidently, however, none of these arguments are really decisive, and the position is extremely unsatisfactory to any one with a real curiosity about such a fundamental question. In such cases it is a heuristic maxim that the truth lies not in the two disputed views but in some third possibility which has not yet been thought of, which we can only discover by rejecting something assumed as obvious by both disputants.

- F.P. Ramsey, The Foundations of Mathematics

Though Ramsey wrote the above quote in commenting on a dispute between Russell and Johnson in the philosophy of mathematics, its force is not diminished by its application to the problem of universals. The problem of universals is as venerable a topic as can be found in philosophy. Historically, the origins of this problem are found in the writings of Plato and Aristotle. It is Plato who first poses the problem of resemblance and asks how we are to understand the claim that objects may resemble one another in respect to their properties.¹ It is Aristotle who gives us our first philosophical definition of a universal.² Despite these auspicious beginnings and the attention of such later day luminaries as Russell, Wittgenstein, Ramsey, Marcus, and Lewis it is arguable that no real progress towards a solution has been made. Certainly solutions have been claimed. Loux claims to solve the problem in Substance and Attribute; Nicholas Wolterstorff offers a solution in On Universals; Keith Campbell offers his in Abstract


Particulars; and David Armstrong claims to provide a solution in Nominalism and Scientific Realism. Providing solutions to the problem of universals has become a sort of cottage industry. Such an industry, however, can only last if no real solution is ever offered. The very abundance of solutions becomes, then, an indication of a lack of progress.

§1. The Problem of Universals

The problem of universals is not a single problem. Armstrong in *Universals* claims it is the "philosophical problem posed by sameness of type." C.A. Baylis in "Universals, Communicable Knowledge, and Metaphysics" claims it is the problem of shared meanings. Care must be taken here. We want in formulating the problem to give it the broadest formulation possible while remaining historically accurate. Neither Armstrong's nor Baylis' definition of the problem is entirely adequate. Armstrong engages the problem of universals as an ontological problem. How do we account, ontologically, for the fact that items can seemingly share their properties? Even so, Armstrong's discussion is not isolated from linguistic concerns. Universals, if they exist, are for Armstrong the denotata of abstract singular terms. And one argument he employs against alternative views is that they are unable to provide referents for such terms.

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Baylis engages the problem of universals at the level of language. "The existence of communicable knowledge," he writes, "requires shared meanings." Continuing, he writes, "such knowledge, in its simplest form, is knowledge of the common characters exhibited by various objects and events." One is led in one's articulation of the problem first to ontological concerns, then to linguistic concerns, and then back again. There is no single concern that by itself constitutes the problem of universals.

Superior to either Baylis' or Armstrong's formulation of the problem is the formulation offered by Loux in Substance and Attribute. According to Loux, the problem of universals is constituted by three inter-related problems: The ontological problem of predication, the linguistic problem of predication, and the problem of abstract reference. This is a superior formulation for the following reason: Though Armstrong and Baylis may each concern themselves with all three of these issues, Loux's formulation makes clear that the problem of universals is not a single problem, but is, rather, a network of problems. This is to our advantage. Where a problem is portrayed as being a single problem, one searches for singular solutions. Solutions, perhaps, that proceed in terms of the acceptance of a single kind of entity. Once a problem is recognized as a conjunction of smaller difficulties, however, the need for a single solution evaporates. This is not to say that there might not be such a solution; there might. Each of the host of problems that constitute the problem of universals might be able to be solved

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8 Ibid., p. 182.

in the same manner. There is no *prima facie* reason, however, for thinking that this will be the case. Individual problems may have individual solutions. Loux's formulation is superior in that it allows us to see options we might otherwise miss. It is also historically accurate. His way of formulating the problem captures the concerns of the majority of individuals who have written on this problem, including the concerns of Armstrong and Baylis. According to Loux, any adequate response to the problem of universals must be able to satisfactorily tend to three problems — the ontological problem of predication, the linguistic problem of predication, and the problem of abstract reference.

§1.1 *The Ontological Problem of Predication.*

The ontological problem of predication is the problem of how we are to understand the phenomenon of property possession, or the fact that objects can and do have properties. Clearly, there is one sense in which we all accept that objects have properties. The paper on which this is written has the property of being white. Every author stands in a certain relation to his or her own work, namely the relation of authorship. So much should be uncontroversial. There is a benign way of talking about properties that the metaphysical realist, nominalist, and trope nominalist can all accept. Properties are the vehicles by which the world forces itself upon us. We must recognize properties in order to make sense of the world. To this extent, properties have the status of Moorean fact. However, once this benign way of talking about properties is accepted, there are still deeper questions we can ask. To what does an acceptance of properties commit us? How are we to understand the claim that properties exist? Must we recognize properties as constituting a distinct type of existent, or is the claim that properties exist simply a difficult and troublesome way of claiming that particulars exist? To ask these questions is to engage the ontological problem of predication. Whatever our answers to these question may be, in order for
those answers to be judged satisfactory, they must do justice to the observational data that objects may seemingly share the same property either by upholding this intuition or by explaining why it is that we have it. Armstrong’s concerns with sameness are a variant of these worries.\textsuperscript{10}

\textbf{§ 1.2 The Linguistic Problem of Predication.}

Closely related to the ontological problem of predication is the linguistic problem of predication. This is the problem of how to best understand the linguistic phenomenon of predication. Predicate claims are claims in which some property is attributed to an individual — claims such as “\(\phi\) is F.” One worry regarding such claims is how we are to understand their truth values. Though this is a worry having to do with language, it is not independent of ontological concerns. It is intuitively plausible to think that one’s answer to the ontological problem of predication will play a role in one’s answer to the linguistic problem of predication. For example, if one understands the ontological phenomenon of predication to involve, even in the case of monadic properties, a relation between individuals (e.g. The exemplification of a universal, or membership in a particular class), then it will seem natural to regard predicate claims as expressing a relation between entities. On such a construal a specific claim such as “\(\phi\) is F” will be true if and only if there is an entity, \(\phi\), denoted by “\(\phi\)”, an entity, F, denoted by “F,” and \(\phi\) stands in the appropriate relation to F. If, however, one rejects the notion that the phenomenon of monadic property possession is best explained in terms of a relation between objects, then one will more than likely reject the above understanding of predication. After all, if property possession is not explained in terms of a relation between objects, then there is little reason for adopting a referential treatment of predicates. Though the ontological problem of predication

\textsuperscript{10} This follows, I think, from Armstrong’s treatment of sameness. He explicates sameness of property by first explaining what it is for an individual object to possess a property and only, then, explaining what constitutes the phenomenon of similarity or sameness of property.
and the linguistic problem of predication are separate problems they are not unconnected to one another. Answers to the ontological problem suggest certain answers to the linguistic problem. Moves in one domain may necessitate certain compensatory moves in the other. More will be said on these matters later.\textsuperscript{11} For now it is enough to indicate, in a general way, the natures of each of these problems.

\section*{§ 1.3 The Problem of Abstract Reference.}

Finally, the problem of abstract reference is the problem of how to best understand the reference of singular terms. This is a worry that, like the linguistic problem of predication, originates in language. One feature of predicate expressions is they can, with little trouble, be turned into singular terms — usually with the addition of some suffix such as "-ness" or "-ity."\textsuperscript{12} To illustrate, consider the predicates "red" and "triangular." Each can with the addition of a suffix be transformed into a singular term. "Red" with the addition of "-ness" becomes "redness"; "triangular" with the addition of "-ity" becomes "triangularity." And "redness" and "triangularity," as I shall argue elsewhere, function in all respects as singular terms.\textsuperscript{13} Thus, as these terms appear within true sentences, and as singular terms appearing within true sentences are understood to be object denoting, there is a need to say to what it is that these terms, and others like them, refer. One possible answer (but by no means the only answer) is that they refer to universals. Later I will evaluate this answer.\textsuperscript{14} Again, this is a concern that may be pursued

\textsuperscript{11} See: Chapter 3.


\textsuperscript{13} See: Chapter 4, pp.145-153.

\textsuperscript{14} See: Chapter 4, pp.159-162.
independently of the others. Even if we were to adopt a dismissive attitude towards the dual
problems of predication, the problem of abstract reference would remain. So long as we
understand singular terms to be object denoting, then there will be a need to say to what it is terms
like 'redness' and "triangularity" refer. As David Lewis writes, "if we are to do compositional
semantics in a way that is best developed, we need entities to assign as semantic values to
words." 15


The debate over the problem of universals has been dominated by three positions:
metaphysical realism, nominalism, and (more recently) trope nominalism. In this section I want,
in as brief a space as possible, to present the details of each sort of theory. For the present,
criticism of these theories will be delayed. It is enough, at this juncture, simply to present a
philosophically precise characterization of each of the theories in question. I begin with an
examination of metaphysical realism.

§ 2.1 Metaphysical Realism.

As with "nominalism" and "trope nominalism," "metaphysical realism" denotes not a
single theory, but rather a family of theories unified by their acceptance of a common assumption
or thesis. In the case of metaphysical realism, this thesis is that the problem of universals is best
solved through an acceptance of universals into one's ontology. Accordingly, I count Armstrong,
Loux, and Russell all as metaphysical realists. Each explicitly accepts universals as a solution to
the problem of universals:

15 David Lewis, "New Work for a Theory of Universals," Australasian Journal of Philosophy, 61,
Armstrong:

It is not possible to give an account of properties and relations purely in terms of particulars. That is the error of Nominalism. It is not possible to give an account of particulars purely in terms of properties. That is the error of Universalism. We must admit both particulars and universals. 16

And;

Basing myself upon the work by Pap and Jackson, I argue that [statements containing abstract singular terms] cannot be analyzed in a way which removes their ostensible reference to universals...17

Loux:

Since it is obvious that abstract singular terms enter into many true sentences, I conclude that it is plausible to assume that universals exist. 18

And;

Two or more objects agree in attribute because they jointly exemplify a universal. 19

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19 Ibid. p. 89.
Russell:

...a universal will be anything which may be shared by many particulars, and has those characteristic which, as we saw, distinguish justice and whiteness from just acts and white things.

When we examine common words, we find that, broadly speaking, proper names stand for particulars, while other substantives, adjectives, prepositions, and verbs stand for universals. More, however, still needs to be said on the notion of a universal.

The term "universal" makes its first appearance in its philosophical usage in Aristotle's De Interpretatione. In this work, Aristotle defines a universal as an entity that is of a nature as to be predicatable of a multiplicity of individuals. He writes,

Some things are universal, others individual. By the term 'universal' I mean that which is of such a nature as to be predicated of many subjects, by 'individual' that which is not thus predicated. Thus, 'man' is a universal, 'Callias' an individual. And this conception of a universal is both the traditional conception of such entities and the predominant one. It is important to recognize in reading this definition that the predication relation to which Aristotle refers is an ontological relation and not simply a linguistic one. If we accept the above definition, then we may talk of there being two sorts of predication relations — a linguistic relation that holds between terms and an ontological relation that holds between entities. Moreover, it would seem, in the above quote, that Aristotle is evincing a belief that the linguistic relation can be explained in terms of the ontological one. If this is so, then the sentence "Callias is a man" will be true if and only if the universal man is predicated, ontologically, of Callias.


According to the metaphysical realist, universals will perform at least three kinds of work. First, universals will provide an answer to the ontological problem of predication. Since properties may be had by more than one object, properties will be ontological predicables, and thus universals. Hence property possession will be explained in terms of universals. According to the Metaphysical Realist, an individual \( o \) will have a property \( F \) if and only if \( o \) exemplifies the universal \( F \)-ness. For example, Callias will be pale if and only if Callias exemplifies Paleness. And the relation of exemplification is to be understood here in the following manner: an individual \( o \) exemplifies \( F \)-ness if and only if \( F \)-ness is present in \( o \) as a constituent. Thus, when Armstrong addresses the topic of exemplification in *Universals* he writes the realist about universals will say that universals are "really there in the world as constituents of things."22 Similarly, when James Moreland addresses the topic in *Universals, Qualities, and Quality Instances*, he writes "when Socrates is red, Socrates has the universal redness in it where "in" means is a constituent of."23

On this view, sameness of property will be taken as a matter of strict identity. Two individuals will have the same property if and only if they each exemplify the same universal. Universals, are multiply exemplifiable entities. It is this notion of multiple exemplification that sets universals apart from particulars. Where a particular, for example Callias, can only be in one place at a given time, a universal may be fully present in many places at the same time. Hence,


while there can be only one Callias, there can be many pale objects. And one manner in which the many pale objects resemble one another is through their exemplification of the very same universal.

The second sort of work universals seem *prima facie* well equipped to perform is that of explaining or "grounding" the truth of certain linguistic predication claims. To illustrate, think of a simple subject predicate sentence of the form "ο is F." Such sentences attribute a property or quality to a subject. But if property possession is best understood in terms of the exemplification of universals by individuals, then the theory of universals will have an effect on our understanding of the semantics of predicate claims. It will provide a framework for understanding the truth conditions of those claims. A sentence of the form "ο is F" will be true just in case "ο" names an entity ο, "F" names a universal F-ness, and F-ness is exemplified by ο. The linguistic relation of predication, then, is taken by the metaphysical realist to be a mirror on the world — a true predication claim mirrors in its expression of an attribution of a property to an individual the exemplification of a universal by an individual. Hence, an acceptance of universals suggests a referential understanding of predicates. Predicates will, for the person who accepts universals, be denoting terms; they will denote universals. Thus, not only does the admission of universals into one's ontology appear to help solve the ontological problem of predication, it also appears to solve the linguistic problem of predication.

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24 Essentially the notion of providing a "grounds" for predication claims is tied up with notion of truth makers. Every true descriptive sentence it is claimed is made true by its relation to the world. Predicate claims are descriptive. Hence, if they are true, there must be conditions in the world that make them true. To ask for a ground is to ask after the condition that make a certain sentence true. The metaphysical realist will claim the exemplification of a universal by a particular a ground for a predicate claim that attributes to that particular a certain quality. Additional material on the notion of Grounding can be found in: Alex Oliver, "The Metaphysics of Properties;" *Mind* 105 (1996) pp.68-74; Herbert Hochberg, "Truth Makers," in *Language, Truth, and Ontology*, ed. Kevin Mulligan, London, Kluwer Academic Publishers, 1992, pp.87-117.
Finally, the third sort of work the metaphysical realist claims universals perform is that of solving the problem of abstract reference. I noted earlier that many predicates can, with the addition of a suffix, be transformed into terms that function in all respects as singular terms. What makes such terms interesting is the fact that singular terms appearing within true sentences have long been regarded to be object denoting. Thus, if "redness" and "triangularity" function as singular terms, then, as they appear within true sentences, there must be some object each denotes. The problem of abstract reference is the problem of articulating the types of objects denoted by such terms. For the metaphysical realist the solution to this problem is thought to be simple. Such terms refer to universals. They refer, in fact, to the very same universals, as do the predicates from which they were formed.

Drawing these three kinds of work together we can improve somewhat on Aristotle's definition of a universal by making the kinds of work such entities are claimed to perform more explicit in the statement of the definition. In the remainder of this work I shall understand a universal to be a multiply exemplifiable entity, predicable of many subjects, that may also serve as the denotatum of one or more singular terms.

§2.1.1 Ante Rem & In Re Universals.

Once we have articulated a nature for universals, we must still determine under what conditions entities of that kind may be said to exist. It is in the articulation of these conditions that the differences between various metaphysical realist theories begin to emerge. There are three
chief metaphysical realist positions: in re realism, ante rem realism, and Armstrong's theory of sparse universals. In what follows I will consider each. I start by drawing a distinction between an ante rem and in re conception of universals.

In the literature there are two ways in which the distinction between ante rem and in re universals has been drawn. We may call these two ways The Way of Location and The Way of Exemplification. According to The Way of Location, the distinction between ante rem realism and in re realism "turns on the question of whether universals have a spatial location." Ante rem universals it is claimed are platoic entities existing wholly outside of space and time. In re universals it is claimed exist within space-time. In re universals have, then, a spatial locatedness that ante rem universals lack. The second way of drawing a distinction between in re realism and ante rem realism, The Way of Exemplification, focuses not on the spatio-temporal location of universals but rather on the notion of exemplification. According to The Way of Exemplification, what is constitutive of ante rem universals is that they may exist in a world even if they are never exemplified in that world. Ante rem universals it is claimed are necessary existents. They exist in every world just in case they are exemplified in some world. For example, F-ness may exist in our world even if no object of our world is ever F. In contrast, in re universals are said to require exemplification. An in re universal exists in a world if and only if it is exemplified in that world.


The Way of Location and The Way of Exemplification are not equivalent methods for drawing this distinction. The Way of Location rules out a spatio-temporal existence for ante rem universals. According to this method what is constitutive of ante rem universals is that they do not enjoy a spatio-temporal location. Advocates of The Way of Location are committed then to the following claim:

(I) For all $x$, if $x$ is an ante rem universal, then $x$ necessarily lacks any spatio-temporal location.

Initially, it might seem that The Way of Exemplification has the same result. It does not. According to this method of distinguishing ante rem and in re realism, what is constitutive of ante rem universals is that they may exist in an unexemplified form. The spatio-temporality of ante rem universals is never mentioned. Now clearly a universal that is never exemplified will lack a spatio-temporal position. On this matter The Way of Location and The Way of Exemplification agree. What, though, should we say of exemplified universals? It is in answering this question that these two ways of distinguishing ante rem and in re realism diverge. Prima facie, there is no reason to think that The Way of Exemplification is inconsistent with thinking that some exemplified universals might enjoy a spatio-temporal position. After all, if we take the notion of exemplification seriously and understand it to require that the universal be in the object that exemplifies it as a constituent, then there seem to be good reasons for thinking that some universals, when exemplified, will enjoy spatio-temporal locations. Whiteness, for instance, as exemplified by my car might well be thought to enjoy such a location. It is, one might say, wherever my car is. Those who accept The Way of Exemplification need not accept (I). They are committed to a weaker claim, namely (II), below:

(II) For all $x$, if $x$ is an ante rem universal, then it is possible that $x$ lacks a spatio-temporal positions.
And the acceptance of this claim does not entail the denial of a spatio-temporal location for all *ante rem* universals.

A great deal turns on which of these two methods we choose to base our understanding of *ante rem* realism. If we choose The Way of Location, then it seems, existing outside of space and time, such universals will be unproblematically abstract. As I shall explain, however, such a construal of *ante rem* universals is costly. If *ante rem* universals exist outside of space and time, then it becomes difficult to see how they could play a role in accounting for either property possession or resemblance. After all, the properties they are meant to explain exist in time — they are constituents of the objects that possess them. If we choose The Way of Exemplification, this problem need not arise. It is compatible with The Way of Exemplification that property possession and resemblance be explained in terms of the possession by an object of one or more universals. On this reading some universals would be spatially located — exemplified universals would be in the objects that exemplify them as constituents. This reading, too, comes at a cost. Conceding a spatial locatedness to some universals will make difficult the preservation of the thesis that all universals are abstract. What we must ask is this: Are there any good reasons for choosing one of these ways of understanding this theory over the other? If so which should we choose? I will argue that we ought to prefer The Way of Exemplification to The Way of Location. I claim there are two benefits to such a preference. First, The Way of Exemplification preserves to a greater degree than does The Way of Location each theorist's right to the interpretation of his or her own theory. Second, and perhaps more importantly, The Way of Exemplification allows us to preserve the notion that an *ante rem* theory of universals is really a theory of universals. Endorsement of The Way of Location, I argue, requires one to abandon this notion.
One feature of this debate is the degree to which proponents of The Way of Location and proponents of The Way of Exemplification differ in their ontologies. Most of those who endorse The Way of Location as a method for understanding the distinction between \textit{in re} and \textit{ante rem} realism are not \textit{ante rem} realists. The chief proponent of The Way of Location is David Armstrong.\textsuperscript{28} Many of the others who accept this construal of the distinction are merely following his lead.\textsuperscript{29} Among those who count themselves \textit{ante rem} realists there is a decided preference for The Way of Exemplification.\textsuperscript{30} Representative of the \textit{ante rem} realist position are the comments offered by Alan Donagan in his paper "Universals and Metaphysical Realism." In this paper Donagan not only characterizes the distinction between \textit{ante rem} realism and \textit{in re} realism in terms of exemplification, but argues that there is "nothing incoherent in the notion of a universal that is never exemplified."\textsuperscript{31} Additionally, Donagan argues in this paper for what I think is absolutely the right conclusion, namely that some universals are capable of spatio-temporal positions. He writes:

you can verify the statement that Russell is in his room by looking into it and seeing him there. When you look, you see not only him and his room, but also that he is in it. It is true that it is not good English to say that you see in, along with Russell and his room; but as the late J.L. Austin once pointed out neither is it good English to say that you do not see it, or that you intuit it. "I [see] what in English is


described by means of two demonstrative pronouns and an adverbial phrase. To look for an isolable entity corresponding to the latter is a bad habit..." Now, if what you see includes what is described by the adverbial phrase "...is in..., " i.e., a universal, must it not be where you are looking? And if one man was to see that Russell was in his room at the same time as another was to see Moore in his, would it not follow that the universal in was in the two different places where the two were looking?^32

The first reason I claim a preference for The Way of Exemplification is this: Philosophical exegesis should be ruled by a principle of charity. Unless there are good reasons for thinking otherwise, authors and theorists should be thought of as enjoying a privileged position within the project of interpreting their own works and theories. In identifying _ante rem_ realism as the view that universals lack a spatio-temporal position, Armstrong violates this principle of charity. So long as the interpretations the _ante rem_ realist gives of his or her own theory are coherent, they should be honored. We honor these interpretations most closely by choosing The Way of Exemplification over The Way of Location.33

A second reason for preferring The Way of Exemplification to The Way of Location is this: If one accepts that _ante rem_ universals necessarily lack spatio-temporal positions, then it becomes difficult to see how it is that an _ante rem_ theory of universals can be a theory of universals at all.

We have claimed that universals are multiply exemplifiable objects. In doing so we have followed

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33 This is not to say that we cannot understand why it is that Armstrong chooses the first of these two readings. My suspicion is that he is at pains not only to portray Plato as a fore-runner of _ante rem_ realism but also as the father of the view. Hence, he treats Plato's forms as being paradigmatic of the view in question. And the forms Plato accepts are wholly outside of space and time. If I am right in my arguments, however, Plato's theory of forms, at least as articulated in the _Phaedo_ and _The Republic_ cannot be a theory of universals. It is essential to the notion of a universal that it be multiply exemplifiable. Plato's forms are not capable of exemplification. No object has a form as a constituent. Hence, Plato's theory of forms, while important to the development of metaphysical realism is not a metaphysical realist theory.
well established conventions by explicating the notion of exemplification in terms of the notion of constituent. If a universal is exemplified, I wrote, then it is in the object that exemplifies it as a constituent. We have also seen how in the case of some exemplifications a prima facie case is established for a universal’s having a spatial and temporal position. Additionally, we may assume that it is through exemplification that in re universals gain their spatio-temporal status. Hence, a legitimate reading of “multiply exemplifiable” (at least as it applies to the properties of spatio-temporal particulars) is “multiply locatable” — locatable either in space, time or space-time. But then, if we accept The Way of Location, ante rem universals are not genuine universals. Consider: The ante rem realist says redness is a universal. But according to The Way of Location ante rem universals cannot enjoy a space-time location. Hence, the ante rem universal redness cannot be a constituent of red objects. Hence, as exemplification is understood in terms of the notion of constituency, redness is not multiply exemplifiable. It is not exemplifiable at all. But this means that it is not a universal. To preserve the notion that ante rem universals are genuine universals one must accept The Way of Exemplification and reject The Way of Location. Accordingly, throughout the remainder of this work I reject The Way of Location. Ante rem realism, as I shall understand it, consists in the acceptance of the thesis that a universal need not be exemplified in a world in order to exist in that world. Formally, we may say that the existence

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36 I take this to be fairly uncontroversial. To deny this and to yet maintain that in re universals have spatio-temporal locations would require that one maintain the universal itself has a location apart from its instances - this though would be lunacy.
criterion \textit{ante rem} realism accepts is this:

For all universals \(x\) and worlds \(W\), \(x\) exists at \(W\) if and only if there is a world \(W^*\), not necessarily identical to \(W\), such that \(x\) is exemplified at \(W^*\).

Further, I will understand this theory to allow that some exemplified universals might enjoy, in virtue of their exemplifications, spatio-temporal locations.

Though we have now arrived at a characterization of \textit{ante rem} realism, we have yet to arrive at one of \textit{in re} realism. It may still be the case that \textit{in re} universals are best understood in terms of spatio-temporal locatedness. There are, however, problems with this suggestion. First, it implies that every \textit{in re} universal is exemplified by a spatio-temporal entity. What though should we say of higher order universals? Universals, that is, that are exemplified solely by other universals. Are these entities spatio-temporally located? It's not clear why one would think so. Must we then reject such universals? If so, then how are we to account within the realist framework for the properties of universals? Second, there is a difficulty in understanding what is meant by the claim that \textit{in re} universals have a spatio-temporal location. Universals, if they have a location, have it in virtue of their being exemplified. Most \textit{in re} realists will grant that it is not the case that every universal is exemplified at every moment. As Armstrong writes, "we certainly should not demand that every universal be instantiated now. It would be enough [for the universal to exist presumably] if a particular universal was not instantiated now, but was instantiated in the past, or would be instantiated in the future."\footnote{Armstrong, \textit{Universals as Opinionated Introduction}, London, Westview Press, 1989. pp.75-76.} But if this is so and if I am right that a universal gains its spatio-temporal status through exemplification, then what are we to say of \textit{in re} universals that are not currently exemplified? Do they violate the stricture that \textit{in re} universals must have a spatio-temporal location? If not, why not? It is better I think to bypass
these questions altogether. Focusing on exemplification rather than spatio-temporal location, we can characterize in re realism as follows: In re realism requires for a universal’s existence its exemplification in the actual world. The criterion of existence the in re realist accepts is as follows:

For all universals $x$ and worlds $W$, $x$ exists at $W$ if and only if $x$ is exemplified at $W$.

And this criterion is to be interpreted tenselessly. A universal tenselessly exists just in case it is ever exemplified. In this way we distinguish in re realism from ante rem realism while nonetheless leaving open the questions of whether in re realism can allow for higher order universals and what the status of temporarily unexemplified universals should be. One way in which in re realism will differ from ante rem realism is this: The ante rem realist will recognize a larger class of predicates as being meaningful than does the in re realist. This is so because the meaningfulness of a predicate will be a matter of its relation to a universal. A predicate will be meaningful if and only if it names a universal. Hence, as the ante rem realist accepts into his or her ontology universals the in re realist must reject, the ante rem realist will countenance a larger class of meaningful predicates than does the in re realist.

§ 2.1.2 Armstrong’s Theory of Sparse Universals.

A third theory of universals that merits our attention is David Armstrong’s theory of sparse universals. In many of its details Armstrong’s theory closely resembles an in re theory of universals. For instance, Armstrong agrees with the in re realist that a universal cannot exist unless it is exemplified. Hence, every universal is for Armstrong necessarily exemplified at one time or another in the existence of the world. Nonetheless, there are differences between the in re realist and Armstrong that necessitate a separate consideration of Armstrong’s theory. Chief among these
difference is that Armstrong does not think that every predicate truly applicable to individuals within the world necessarily refers to a universal. One cannot, he writes, identify universals with propositional predicates. The question of which universals exist is not a question for a theory of semantics to answer, but rather is the “task of total science.” The world, he claims, is completely describable in terms of a completed physics. Such a physics will determine, for Armstrong, which universals exist. Only those universals needed to serve as the referents of predicates within the language of a completed physics will be countenanced. But then, it is not the case that Armstrong rejects semantic analysis as a method for determining what universals might exist. Rather, he accepts such analysis only within the framework of a completed physics. One difference between Armstrong’s theory and in re realism, then, is that Armstrong is scientifically biased in a way in which the in re realist need not be. In this sense, one might think Armstrong is merely an extreme sort of in re realist. Such a representation of Armstrong’s theory is, I think, accurate.

A second way in which Armstrong merits our attention is this: Armstrong explicitly denies that exemplification or instantiation is relational. The basic constituents of Armstrong’s ontology are states of affairs, where states of affairs are likened to Wittgensteinian facts. Facts such as a’s


39 Ibid. p.xiii.

40 Ibid. p.126.

having R to b, or a's being F. The basic units of Armstrong's ontology are particulars that have properties.42 Such particulars admit of conceptual analysis into units of particularity and universality.43 These units, though, cannot exist separately except in thought.44 Hence, in Armstrong's metaphysics we are not to think of universals and particulars as separate constituents which are then related to one another through a relation of exemplification. We may continue, Armstrong asserts, to talk of exemplification or instantiation but such notions as employed within the framework of his theory are non-relational — his is a non-relational form of in re realism.45 He writes “it is concluded therefore that, although particularity and universality are inseparable aspects of all existence, they are neither reducible to one another nor are they related. Though distinct their union is closer than relation.”46 How exactly this is possible is made clear in Universals. In this work, Armstrong endorses the notion of a fundamental tie or nexus.47 That is, he admits into his ontology the notion of a non-relational tie or bind. It is this bind that unifies the


43 Ibid. p.114.

44 Ibid. p.111.


particularity of a state of affair with its universality. Later we shall have the opportunity to evaluate this sort of theory both for its coherency and to see whether it successfully avoids the problems Armstrong attributes to those theories that accept a relational view of exemplification.\(^48\)

\section*{§ 2.2 Nominalism.}

Having defined metaphysical realism as that family of theories that accept universals as a solution to the problem of universals, it is tempting to regard nominalism as constituted by the rejection of such entities. Such an identification of nominalism is, however, overly simplistic. While all nominalist theories may reject universals, every theory that rejects universals is not nominalistic. It is far better I think to identify nominalism with the acceptance of the following two theses: 1) that everything that exists is a particular; and 2) that if abstracta exist at all, then the only kinds of abstracta that exist are sets and classes. While it may not be the case that every nominalistic theory accepts both of these theses, it is certainly the case that the majority of such theories do. Consider, for instance, the following characterizations nominalists have offered of their own theories:\(^49\)

\textbf{John Locke:}

All things that exist are only particulars...\(^50\)

And;

To return to general words, it is plain, by what has been said that \textit{General and universal}, belong not to the real existence of Things; but \textit{are the Inventions...}

\footnotesize{\(^{48}\) See Chapter 2, pp.61-69.}

\footnotesize{\(^{49}\) Similar characterizations of nominalism are to be found in the following works: Some characterizations at odds with the one I am articulating can be found in these works: Paul Gochet, \textit{Outline of a Nominalist Theory of Propositions}, London, D.Reidel Publishing Co., 1980, pp.5-7.}

and Creatures of the Understanding, made by it for its own use, and concern only
signs, whether words or Ideas...the signification they have, is nothing but a
relation, that by the mind of man is added to them.\textsuperscript{31}

Ruth Barcan Marcus:

The nominalist set himself the task of arguing that abstract 'entities' such as
numbers, minds, propositions even where categorically construable as
individual, are in the least otiose or, alternatively, not the abstract objects they are
claimed to be. Numbers for example may be seen as constructable out of
inscriptions; propositions may be seen as an outcome of confusion between the
material and the formal mode and the like. In summary nominalism has
traditionally moved along two tracks. First, there are not two sorts of things,
universals and particulars, that bear an irreducible relation to each other. Second
(the empirical thrust), individuals are in one way or another held to be
encounterable objects.\textsuperscript{32}

Rolf Eberle:

Although it is difficult to discover views common to all contemporary nominalist,
the following appear to be widespread: 1) criticism of the notion of a class, in as
much as a class differs from the individual whole composed of its elements, (2)
refusal to postulate the existence of an infinity of objects, (3) an aversion to treat
predicates as expression which designate non-individuals, (4) objections to the
use of such entities as concepts, meanings, senses, and propositions in the theory
of meaning, (5) preference for a syntax where expression are construed as non-
repeatable inscriptions, (6) efforts to reconstruct or reinterpret portions of
mathematics in such a fashion that reference to numbers or classes is replaced by
reference to concrete objects...(7) advocacy of parsimony with regard to the
number of distinct categories of entities to which a theory makes reference...(8) A
tendency to identify individuals, if possible with phenomenal data or with
observable macroscopic things or event. Concrete things are preferred to abstract
items, actual entities to possible ones, occurrent qualities to dispositional ones,
and observable to theoretical constructs.\textsuperscript{33}

\textsuperscript{51} Ibid., Bk.III, Chp.III, §11.

\textsuperscript{52} Ruth Barcan Marcus. ''Nominalism and The Substitutional Quantifier, "in Modalities: Philosophical

Quine and Goodman:

Any system that countenances abstract entities we deem unsatisfactory as final philosophy.54

Hence, while it may be a stretch to think these two theses definitive of nominalism, they do go quite a ways towards capturing nominalism's distinctive flavor. And they do provide some basis for understanding nominalism as a family of theories that share something in common. Consequently, I shall focus on nominalism as a set of theories unified by their bias against universality and abstracta.55 It is within the constraints these biases impose that nominalism seeks its answer to the problem of universals.

There are three nominalist theories that merit our attention. They are: Predicate nominalism, class nominalism, and resemblance nominalism. In what follows, I will illustrate each theory's general approach to the problem of universals by discussing, in a general way, how each attempts to solve the dual problems of predication and the problem of abstract reference. Once again, criticism of these theories will be delayed until later.

§ 2.2.1 Predicate Nominalism.

Perhaps the most well recognized version of nominalism is predicate nominalism. According to the predicate nominalist, the phenomenon of property possession is best understood in terms of the application of a predicate to a subject. According to this view, an


55 Note that to say this is not to characterize all nominalist theories as rejecting abstracta or universality. After all, one might find reasons for overcoming one's biases towards certain objects. Such a characterization does, however portray nominalists as reluctant to admit such entities — this, though, is, I think, an accurate portrayal.
individual will have a certain property just in case it falls under a certain predicate. Formally, we may express the predicate nominalist’s answer to the ontological problem of predication in the following way:

For all individuals $a$ and properties $F$, $a$ has $F$ if and only if $a$ falls under the predicate “$F$.”

For such a nominalist, there is no linguistic problem of predication. The application of a predicate to a subject will be a matter of brute fact. As Armstrong describes it “the fundamental fact in this situation, which cannot be further explained, is that predicates do apply.” Hence, the predicate nominalist solves the dual problems of predication by first claiming that the linguistic relation of predication is more basic than its ontological counterpart, and, second, by claiming that the linguistic relation is a fundamental relation admitting of no further analysis.

As regards the problem of abstract reference, the predicate nominalist has several alternative answers to choose from. First, she might interpret abstract singular terms as referring to classes of entities falling under particular predicates. Thus, “redness” might be interpreted as referring to the class of entities falling under the predicate “red.” Alternatively, she might interpret abstract singular terms as referring to linguistic types — this appears to be the solution Wilfrid Sellars embraces. According to Sellars abstract singular terms will, very roughly, refer to the roles played by certain linguistic expressions. Accordingly, sentences in which such terms appear will be interpreted as sentences about these roles.


§2.2.2 Resemblance Nominalism.

In *Nominalism & Realism*, David Armstrong writes that "resemblance nominalism is the most carefully articulated form of nominalism." According to the resemblance nominalist, the phenomenon of property possession is best understood in terms of the resemblance of an entity to some paradigm or exemplar. Formally, we will understand this claim as follows:

For all individuals \( \varnothing \) and properties \( F \), \( \varnothing \) has \( F \) if and only if \( \varnothing \) suitably resembles a paradigm case of an \( F \).

While there may be problems in articulating what is meant by the phrase "suitably resembles" the general idea behind resemblance nominalism should be clear. Property possession is, according to the resemblance nominalist, to be understood, in most cases at least, in terms of an object's resemblance to some paradigm case.

An object's resemblance to some paradigm will also serve as the basis for the resemblance nominalist's understanding of the linguistic phenomenon of predication. According to the resemblance nominalist's analysis, a predicate claim express a relation of resemblance between an individual and an exemplar. Hence, predicates will, for the resemblance nominalist, denote paradigm cases and the copula will express a relation of resemblance. Under this interpretation, a claim such as "\( \varnothing \) is \( F \)" will be true just in case "\( \varnothing \)" names an individual \( \varnothing \), "\( F \)" names an exemplar \( F \), and \( \varnothing \) suitably resembles \( F \).

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58 Ibid., p.15.

59 I say "in most cases" here because we will not be able to explain the paradigm's possession of a property in this way. Thus, in most worked out resemblance theories there exists more than one paradigm. Other objects possess properties in virtue of their resemblance to the paradigms. The paradigms possess their properties in virtue of their resemblance to one another.
As regards the problem of abstract reference the resemblance nominalist has several answers available to him. First, he could interpret abstract singular terms as referring to paradigms. Under this interpretation, a term such as "redness" would be taken as referring to the paradigm case of a red object, and sentences such as "redness is a color" would be interpreted as claims about this paradigm case of a red object, namely that it suitably resembles the paradigm case of being a colored object. Second, if this attempt should fail, he could, so long as he accepts classes, interpret abstract singular terms as referring to resemblance classes. Under this interpretation "redness" would be interpreted as referring to the class of objects that closely enough resemble the paradigm instance of a red object to be considered red. The sentence "redness is a color" would then be interpreted as saying of each member of this resemblance class that it suitably resembles the paradigm of a colored object.

§ 2.2.3 Class Nominalism

Class nominalism is the most permissive of the various nominalist theories — and for this very reason might well be thought to be the most powerful version of nominalism. Where the resemblance theorist sets out to explain the phenomenon of property possession in terms of an individual’s resemblance to some paradigm or exemplar, the class nominalist seeks an explanation of property possession in terms of class membership. According to this theory, the classes to which an individual belongs determine that individual’s properties. Formally, we can put this point as follows:

For all individuals $\varnothing$ and properties $F$, $\varnothing$ has the property $F$ if and only if $\varnothing$ belongs to the class of $F$’s.

And just as the metaphysical realists’ answers to the ontological problem of predication determine their answers to the linguistic version of this problem, so too will the class nominalists'
answer to the linguistic problem of predication be determined by their answer to the ontological problem. According to the class nominalist, predicates refer to classes. Hence, a predicate claim such as "o is F" will be true just in case there is an individual o denoted by "o," a class F denoted by "F" and o belongs to the class of F's.

Similarly, the notion of a class will play an important role in the class nominalist's solution to the problem of abstract reference. Abstract singular terms will, according to this view, designate classes. Hence, a statement such as "redness is a color" will be interpreted by the class nominalist as expressing a relation between classes. In this sentence, "redness" will be understood as denoting the class of red things, the predicate will be understood as naming the class of colored things and the sentence as a whole will be understood as an expression of the claim that the class of red things is a proper subset of the class of colored things.

§ 2.3 Trope Nominalism.

Finally, the third family of theories I wish to consider are those that fall under the name "trope nominalism". Though trope theories are often thought of as nominalistically inspired, they differ dramatically from the other nominalist theories we have considered. Hence, I will treat them separately. Trope theories seek to solve the problem of universals through the

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61 I do, nonetheless, think that trope theories deserve to be called nominalistic. Though tropes are abstract they are still particular and not ones over many. Hence, in so far as nominalism is sometimes identified simply as the rejection of multiply exemplifiable entities trope nominalism may be thought deserving of the label "nominalistic."
acceptance of particularized properties or tropes. The notion of a trope is a difficult one to grasp — it is best understood in contrast with the notion of a universal. Consider the metaphysical realist’s analysis of property possession. The metaphysical realist claims that property possession is best understood in terms of the exemplification of a universal. \( \theta \) is \( F \) if and only if \( \theta \) exemplifies \( F \)-ness. Hence, the metaphysical realist is a realist about properties. According to his analysis properties just are universals. Similarly, the trope theorist is a realist about properties. Properties exist. According to the trope theorist, however, properties are not universals. Instead, they are tropes. Tropes are particularized non-repeatable properties. No two objects can share the same trope. Hence, no two objects can share the exact same property. If our two cars are white, then the whiteness of my car differs from the whiteness of your car in that my car’s color is explained by a particular trope while your car’s color is explained by its possession of an altogether different trope.

Initially, it is a bit difficult to see how this theory could possibly hope to offer an account of property resemblance. After all, it denies that two particulars can have exactly the same property. Nonetheless, it is able to offer an account of resemblance. It does so in terms of classes of resembling tropes. Talking of the trope nominalist’s need to account for resemblances among objects, Keith Campbell writes,

Tropes are all we need, tropes that resemble one another more or less closely. What is it about two objects in virtue of which they are both red? Each includes a red trope. What is it about those tropes in virtue of which they are both red tropes? Their likeness to one another is what makes them tropes of the same kind. Their natures make this the red, rather than the blue, or oblong kind. It is in virtue of the likeness of the tropes in question that it is appropriate to use resembling word tokens, each a case of ‘red’, in describing these objects or, more specifically, their colour tropes.62


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Hence, sameness of property will be explained in the following terms: two objects may be said to have the same property if and only if they both have tropes that belong to the same kind — and this will be determined not through the resemblance of the objects, but rather through the resemblance of the tropes those objects possess. Two tropes will belong to the same kind if and only if they resemble one another to some degree or another. All red tropes will resemble all other red tropes more than they resemble any green trope. All crimson tropes will resemble one another more than they resemble any other red trope, and so on, until we generate classes of tropes unified through the relation of exact resemblance. The phenomenon of property possession, then, including the phenomenon of property similarity, is explained by the trope theorist through his use of tropes.

The trope theorist will answer the problem of predication in a similar manner. According to the trope theorist, predicates will denote classes of tropes. Hence, sentences such as “ο is F” will be understood in the following way:

“ο is F” is true if and only if ο possess a trope that belongs to the trope-class F.

Essentially, the thought behind a trope theory is this: tropes and constructions out of tropes can fill all of the roles the metaphysical realist has traditionally called upon universals to fill. Tropes become then a sort of economical substitute for universals. For each universal “a class of

6.3 Tropes are more economical than universals in the sense that the admission of tropes into one’s ontology does not require one to give up the notion that everything that exists is a particular. Tropes then do not require one to admit into one’s ontology the category of the universal - for obvious reasons universals do.
exactly resembling tropes can be postulated as a substitute. A trope theory's strength is that it can do everything that a theory of universals can do. It's weakness, however, is that it is susceptible to many of the same criticisms as is a theory of universals.

Finally, just as classes of tropes figure prominently in the trope theorist's answers to the ontological and linguistic problems of predication, so too will classes of tropes play a pivotal role in the trope theorist's answer to the problem of abstract reference. According to the answer the trope theorist gives, abstract singular terms refer to classes of tropes.

§3. A lack of Progress.

Earlier, I claimed that the problem of universals might be thought to be a topic on which there has been a lack of any real progress. At the time this might have seemed an odd claim to make. After all, a great deal has been written on the problem of universals. And in contemporary philosophy the topic is enjoying a type of renaissance after having survived various attempts at assassination. How could it be the case that no progress has been made? Though I am not yet in a position to defend this claim, I am in a position to explain it. What I mean by "a lack of progress" is this: neither metaphysical realism, nominalism, nor trope nominalism have solved the problem of universals. Thus, if progress is measured in terms of solutions, then we are no closer to a

65 See Chapter 2, pp. 55-57 and Chapter 4, pp. 195-197.
solution today than we were one hundred, a thousand, or two thousand years ago. Adequate solutions are the barometer by which progress is measured. What I shall argue is that none of the above attempts to provide a solution are adequate.


According to one conception of the debate, the answers offered by the metaphysical realist, the nominalist, and the trope nominalist are all very different sorts of answers. The metaphysical realist accepts universals into his or her ontology. Neither the nominalist nor the trope nominalist accept such entities. The nominalist has a bias against abstracta. Both the metaphysical realist and the trope nominalist willingly accept abstract objects into their ontology, and regard such objects as they admit as being unproblematic. The trope nominalist accepts particularized properties. Both the nominalist and the metaphysical realist reject such entities. Diagraming these differences we may construct a chart of the various similarities and differences that hold between these views.

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<th>Universals</th>
<th>Particulars</th>
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<tr>
<td>Nominalism</td>
<td>Rejects</td>
<td>Accepts</td>
<td>Has bias towards</td>
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<tr>
<td>Trope Nominalism</td>
<td>Rejects</td>
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<tr>
<td>Met. Realism</td>
<td>Accepts</td>
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Figure 1.1: Diagram of Positions: Nominalism, Trope Nominalism, and Metaphysical Realism
Such a chart can be a useful tool. If, for instance, it is regarded as a tool for measuring the theoretical economy of a theory, nominalism may be thought the most economical of the three — followed closely by trope nominalism. There is little doubt these three families of theories differ from one another.

According to a very different conception of the debate, however, nominalism, metaphysical realism, and trope nominalism all closely resemble one another. Each of these views may be thought of as advocating what I will call a singularist solution to the problem of universals. A solution, that is, that proceeds exclusively in terms of a single entity. Each is committed to the view that there is a single entity the acceptance of which will solve both the dual problems of predication and the problem of abstract reference. To illustrate, consider the solution posed by the metaphysical realist. According to the metaphysical realist, universals solve the problem of universals. They do so in the following way:

1) Universals explain property possession. It is because an entity exemplifies Redness that it is red.

2) Universals explain predication. It is because an entity, \( \phi \), exemplifies redness that the sentence “\( \phi \) is red” is true.

3) Universals explain abstract reference. It is because universals exist that sentences such as “redness is a color” are meaningful. “Redness” in such a sentence refers to a universal.

Nominalism and trope nominalism can be viewed in similar ways. In general, each of these proposed solutions accept the following schemata for solving the problem of universals:

1') X explains property possession. It is because an entity \( r's \) (exemplifies, falls under, belongs to...) X that it has the property it has.

2') X explains predication. It is because an entity, \( \phi \), \( r's \) (exemplifies, falls under, belongs to...) X that the sentence “\( \phi \) is P” is true.
3') X explains the phenomenon of abstract reference. Abstract singular terms refer to Xs.

According to this conception of the debate, there is little that separates these three views. There exists methodological agreement among the views. What differentiates one view from another are not methodological concerns, but rather each theories' candidate for X.

But what if there exists no single entity that can fill the role of X in each of the above contexts? This is the question I take myself to be asking. Now admittedly I have no argument for thinking that there could be no such entity. It would be nice if such an argument existed. Nonetheless, I do have arguments for the claim that no such entity has yet been found.

Universals, I argue, are ill equipped to explain the phenomenon of property possession or ground the phenomenon of predication. So too, I argue, are the entities nominalism and trope nominalism accept ill equipped for one or more of these three roles. The lack of an available singularist solution does not, however, render the need for a solution moot. Instead, it forces us to a reconfiguration both of the debate and our expectations. According to this reconfiguration where we originally went wrong was in thinking that there was a single entity the acceptance of which could solve all of these problems. Once we are freed from this conception of the debate, call it the traditional conception, our options for solution are considerably expanded. In accordance with these expanded options, I will later offer a solution to the problem of universals. According to the theory I articulate, the problem of universals may be solved through an acceptance of Quine's syncategorematic treatment of predication, the recognition of property possession as an ontological basic, and the acceptance of kinds. The dual problems of predication, then, receive separate treatment from the problem of abstract reference. This
solution is not, however, simply another solution to the problem of universals. It constitutes a 
dramatic departure from the other sorts of solutions we will consider. It is not a singularist 
solution. Its acceptance constitutes a rejection of the singularist myth.67

§ 5. An Itinerary

I have now touched on all, or nearly all, of the major themes of this work. Nonetheless, it 
might prove heuristically useful to provide the reader with an itinerary or road map to my 
arguments, listing the topics to be addressed and their order of presentation.

Adopting an issue based approach to the problem of universals rather than a theory based 
approach, Chapter II concerns the dual problems of predication: the ontological problem of 
predication and the linguistic problem of predication. A central feature of singularism is the 
claim that these problems admit of similar solutions and that such solutions involve the admission 
of a certain sort of entity into one’s ontology. Hence, the metaphysical realist admits universals 
into his ontology, while the trope nominalist admits tropes into her ontology. The central thesis 
of this chapter is that neither of these solutions are entirely adequate. Each, it is claimed, involve a 
thorist in an infinite and vicious regress. In the case of metaphysical realism this regress is a 
regress on the relation of exemplification. In the case of trope nominalism, there are two regress; 
one on the relation of instantiation, another on the relation of compeasse. Of course that 
regresses threaten these views is a fact that has long been appreciated. Solutions to such regresses 
have thus been suggested. I argue that none of these solutions are entirely satisfactory - even if 
they succeed in halting the regress they do so only at the expense of changing the metaphysical

67 It is in this discussion that the quote with which I open finds purchase. By rejecting singularist 
theories I take myself to be following Ramsey’s heuristic maxim.
realist's and the trope nominalist's projects. Nominalism, on the other hand, is able to respond to these two problems. It is consistent with a nominalist theory that one treat property possession as sui generis and adopt a syncategorematic treatment of predication. Such a view has come to be labeled "ostrich nominalism." Ostrich nominalism, I argue, is the theory we ought to accept in relation to the dual problems of predication.

In Chapter III, I turn my attention to the problem of abstract reference. Again, I begin with a consideration of the problem. In articulating the problem, I defend a criterion of singular term-hood. According to this criterion, terms such as "redness" or "triangularity" qualify as genuine singular terms. Hence, since such terms appear within true sentences and singular terms appearing within true sentences are held to be object denoting, there is a need to say to what it is such terms refer. It is here that nominalism stumbles. Nominalism, I argue, (even the ostrich nominalism I accept) is unable to answer the problem of abstract reference — it lacks the semantic resources necessary for fixing the reference of abstract singular terms.

Drawing the considerations from II and III together, I conclude that neither nominalism, trope nominalism, nor metaphysical realism is able to solve the problem of universals unaided. Nominalism and trope nominalism are inconsistent with the answers given to the dual problems of predication. Additionally, these views also stumble when trying to secure the referents of a certain limited class of abstract singular terms, namely those terms that ostensibly refer to kinds. Nominalism is unable to answer the problem of abstract reference. No available singularist solution, I conclude, is able to solve the problem of universals. Nonetheless, the problem of universals is able to be solved. What is required is a solution to the problem of abstract reference that is compatible with our answers to the dual problems of predication. Such an answer, I argue,
is provided by an acceptance of kinds. The later half of Chapter IV concerns the articulation of the notion of a kind, a defense of the claim that kinds are different from both tropes and universals, and, finally, an argument for thinking that an ostrich nominalism augmented by the admission of kinds is superior to the other views we have considered. I conclude that the view we ought to adopt is an ostrich nominalism augmented in this way.
Chapter 2:
A Problem with Properties.

Not every account is an analysis! A system that takes certain Moorean facts as primitive, as unanalysed, cannot be accused of failing to make a place for them. It neither shirks the compulsory question nor answers it by denial. It does give an account.

- David Lewis “New Work for a Theory of Universals.”

Singularism is the view that there exists a single sort of entity (universals, classes, paradigms, or tropes) in terms of which an adequate solution to all three sub-problems to the problem of universals may be formulated. One thesis of this chapter is there exists no theory (metaphysical realist, trope nominalist, or nominalist) that is able to meet the adequacy conditions for a successful singularist solution. Specifically, there exists no metaphysical explanation for the ontological phenomena of property possession or resemblance. Such phenomena must be accepted as sui generis. This being so, no theory can hope to meet the adequacy conditions articulated in Chapter I for a singularist solution. This follows from the fact that if property possession is sui generis, then no theory will be able to explain it in terms of a favored sort of entity. Indeed, all such attempts end in failure. They end either in infinite regresses or, equally troubling, by assuming the very thing they are meant to explain. The problem singularism seeks to address is at root an ill formed problem. This by itself should be of interest. The problem of universals has a distinguished and venerable history. If I am right, its

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1 Chapter 1, pp 2-7 & 32-36.

2 Chapter 1, pp 35-36.
persistence as a philosophical problem is due to a lengthy tradition of conflating the legitimate request for an account of predication and abstract reference with the illegitimate request for a metaphysical analysis of property possession and resemblance. It is with this topic that the second and third sections of this chapter are concerned.

But there is more. These conclusions concerning property possession and resemblance not only allow us to identify one reason the problem of universals has remained unsolved, but they also cast doubt on the fitness of universals and tropes to the other theoretical roles their proponents claim they fill. According to the orthodoxy concerning these entities, tropes and universals not only explain the phenomena of property possession and resemblance, they also explain the linguistic phenomenon of predication and serve as the semantic values of abstract singular terms. Even if there can be no analysis of property possession, there is still a need to offer an account of predication and to say to what abstract singular terms, such as “redness”, refer. Are tropes or universals helpful for these tasks? I answer “no.” My argument is that if universals and tropes are not needed for an explanation of property possession, then they are not needed at all. Their fitness to these other roles (i.e., the roles of explaining the linguistic phenomena of predication and abstract reference) is dependent, in ways that I will explain, on their ability to provide an explanation of property possession. Hence, once it is recognized that no such explanation is forthcoming and, moreover, that no such explanation could exist, then our reason for positing these entities evaporates. Metaphysical realism and trope nominalism are thus rejected. So too is singularism. How do we explain the linguistic phenomenon of predication? In the last section of this chapter I argue that we should explain predication through the acceptance of Quine’s syncategorematic treatment of predicates. A predicate \( \varphi \) is correctly predicated of a subject \( a \) if and only if \( a \) satisfies the open sentence “\( x \) is \( \varphi \)” — if and only if, that is, the subject is
of the kind indicated by the predicate. More will be said of this matter shortly. I begin, however, with an examination of the origins of singularism. I then proceed, in the second section, to give an argument for there being no metaphysical analysis of property possession.

§ 1. The Roots of Singularism.

Historically, the roots of singularism are found in Plato’s treatment of the One Over Many Problem. This problem is capable of being formulated in two ways. There is a semantic version of the problem and there is an ontological version of it. Significantly, we find both versions of the problem in Plato.

First, consider the problem in its semantic guise. We recognize that subject-predicate sentences such as “Socrates is human” may be fact stating — that such sentences can tell us something about the world in which we live and the inhabitants of that world. “Concerning the subject term, ‘Socrates’, we know that there is something which it signifies, designates, or is the name of, viz., the Athenian philosopher Socrates.”³ And we say of the name “Socrates” that it derives its meaning from the relation of naming. It contributes to the meaning of the sentences in which it appears its referent. What though should we say of predicates? We know predicates can be meaningfully applied to more than one subject. Both “The White House is white” and “My car is white” are true. Does the predicate “white” derive its meaning in a fashion similar to the way in which the name “Socrates” derives its significance, i.e., through a relation of naming? If so what sort of entity do predicates name? Clearly it would have to be the sort of entity that justifies the applicability of a single predicate to a potential multiplicity of subjects. And if predicates are not

names, then how do we explain the significance of predicates within true sentences? Together these questions constitute the semantic version of the one over many problem. Each concerns the relationship that obtains between certain fragments of our language and the world.

In its ontological guise, the one over many problem is the problem of resemblance and of property possession. Consider the many beautiful objects the pursuit of which occupies the lover of sights and sounds in the Republic. Athena, Achilles, and Helen are all beautiful. How are we to explain this fact? Is there a single quality they all share? Is there a single entity to which they are all related in the same way, their relation to which explains their all being beautiful? Call this the ontological version of the one over many problem. The concerns expressed in this version of the problem are independent of concerns with language. What is sought in this articulation of the problem is an ontological ground for property possession and resemblance. And though one needs language to express these concerns, language, itself, plays no role in the genesis of this version of the problem.

The answer Plato gives to these problems is well known. In the middle period works, at least, the solution to both versions of this problem is provided by the theory of forms. Throughout this period of his thought, Plato assumes that “whenever we apply the same name univocally to a number of things, this name is the name of some entity which they have in common” that explains their having the attributes they have. Additionally, he assumes that wherever two or more objects resemble one another in some respect, there is a third object, a form, that serves as

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the ontological basis for that resemblance. Several examples from the texts of this period should suffice to illustrate these points.

1) As you know, we customarily hypothesize a single form in connection with the each of the many things to which we apply the same name. 6 (596a) Republic.

2) Now, the God, either because he did not want to or because it was necessary for him not to do so, didn't make more than one bed in nature, but only one, the very one that is the being of a bed. Two or more of these have not been made by the god and never will be.

Why is that?

Because, if he made only two, then another one again would come to light whose form they in turn would both possess, and that would be the one that is the being of a bed and not the other two. 7 (597c) Republic

3) The same is true in the case of the virtues. Even if they are many and various, all of them have one and the same form which makes them virtues, and it is right to look to this when one is asked to make clear what virtue is....If a woman is strong, that strength will be the same and have the same form, for by "the same" I mean that strength is no different as far as being strength, whether in a man or a woman. 8 (72c-e) Meno

4) You say you hold that there exist certain forms, of which these other things come to partake and so to be called after their names; by coming to partake of likeness or largeness or beauty or justice, they become like or large or beautiful or just? 9 (131a) Parmenides

Forms, then, serve two purposes. First, they ontologically underwrite the phenomena of property possession and resemblance. A thing is o if and only if it participates in or imitates the form of o-ness. And "wherever two things participate in the same form, they resemble each other

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7 Ibid., 597a.


in respect to that form; and wherever two things resemble each other, there is a form in which they both participate and this common participation accounts for their resemblance. 10 Hence, two or more things resemble one another in respect to \( \varphi \), if and only if each participates in or imitates the form of \( \varphi \)-ness. Second, forms underwrite and justify our use of predicates. The word "\( \varphi \)" is a name. It is a name of the form \( \varphi \)-ness. And in its adjectival use what the correct application of this predicate to a subject expresses is a relationship of participation or imitation between the subject of the adjective and form that is the being of the quality itself. Hence, true subject-predicate sentences are understood as involving the use of at least two referring terms — the first being the term that refers to the subject, the second a term referring to a form. "\( A \) is \( \varphi \)" is true if and only if there is an entity named by "\( a \)", a form named by "\( \varphi \)" , and a participates in the form \( \varphi \). And though Plato does not explicitly consider the problem of abstract reference, it is clear what his answer to this problem would be. Abstract singular terms are yet another way of making reference to forms — forms are the semantic values of abstract singular terms. Such an answer is substantiated by the ease with which Plato moves from talking of the many beautiful objects or the many large objects to talking of beauty itself or largeness itself.

In the middle period works, then, Plato espouses a view according to which both the semantical and the ontological versions of the one over many problem admit of the same solution. It is here in Plato’s metaphysical theorizing that we locate the birth of singularism. The objects of the sensible world require for a full understanding of them explanations beyond the

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scope of the sciences.\textsuperscript{11} So too, our ways of talking about these objects require explanation. For Plato such explanations are given by the forms — the immutable, eternal objects of the intelligible realm. The forms explain for Plato not only how the objects of the sensible world come to have the qualities they have and how they may resemble one another, but they also explain the multiple applicability of predicate terms and suggest an answer to the problem of abstract reference. Hence, in Plato we find one and the same kind of object, the forms, filling all the several explanatory roles necessary for answering the problem of universals. Singularism is thus embraced.

There are of course problems associated with the answers that Plato gives to the one over many problem. His acceptance of a principle of self-predication according to which every form participates in itself leads to the third man argument and an infinite regress.\textsuperscript{12} Equally problematic is Plato's notorious lack of clarity regarding the metaphor of participation. At times he seems gripped by the desire to think of participation in terms of a form being present in the object that participates in it. Hence, in the Parmenides the young Socrates is made to agree with Parmenides' statement that the objects that participate in a form have a share of the form either in part or in whole.

Then each thing that partakes receives as its share whether the form as a whole or a part of it? Or can there be any other way of partaking besides this?

\begin{itemize}
\end{itemize}
No, how could there be.\textsuperscript{13} (131a) \textit{Parmenides}

Such an understanding of participation, however, sits poorly with Plato's assertions elsewhere that sensible particulars are but poor and deficient imitations of the forms.\textsuperscript{14} After all, how could an object that contains the form of beauty be a poor imitation of beauty itself? At least one portion of the object, that constituted by the form, would have to exactly resemble the form of the beautiful. These passages are more in keeping with the second manner in which Plato often conceives of the relation of participation, namely as the relation of an object's resemblance to some paradigm or exemplar. According to this understanding of the forms, the forms are not literally in the objects that participate in them either in whole or in part, but are, rather, the exemplars or paradigms those objects imitate. This strand of Plato's thought is most easily evidenced when he talks of the nature of an artisan's craft. He often implies that the artisan, if properly trained, uses one or more forms as a kind of blueprint, reference to which allows the perfection of his or her craft. Consider, for instance, the following passages from the \textit{Cratylus} and the \textit{Republic}:

To what does the carpenter look in making the shuttle? Does he not look to that which is naturally fitted to act as a shuttle? And suppose the shuttle to be broken in making. Will he make another, looking to the broken one? Or will he look to the form according to which he made the other?\textsuperscript{15} (389a-b) \textit{Cratylus}.


\textsuperscript{14} For example: Plato, \textit{The Republic}, Book X, 596-597c. In this passage Plato writes of how the carpenter does not make the form of the bed but rather makes an artifact that is an imitation of that form, and which is, in comparison to the form, a "somewhat dark affair." (597b); Plato, \textit{Republic}, trans. G.M.A. Grube, revised by C.D.C. Reeve, Indianapolis, Hackett Publishing Co., 1992.

But there are only two forms of such furniture, one of the bed and one of the table. And don't we customarily say that their makers look towards the appropriate form in making the beds or tables we use, and similarly in the other cases?16 (596b) Republic.

It is also the notion of a form as paradigm that justifies the philosopher's rule within the Republic. Like the true ship captain in the simile of the ship, it is the philosopher who has the knowledge to steer the city in the right direction.17 How does he come by this knowledge? Through his knowledge of the forms. Using the forms as navigational aids, the philosopher steers the city towards the realization of justice by bringing the city into a relation of greater resemblance to justice itself.

This lack of clarity regarding the notion of participation is troubling on two fronts. First, it makes difficult the evaluation of Plato's final theory. Lacking a distinct and coherent notion of participation, it is hard to know what to make of Plato's theory of forms. Second, it points to an additional confusion. The confusion lies, I think, in Plato's own mind as to whether he accepts a constituent ontology; an ontology, that is, in which the objects of the sensible world are metaphysically complex entities composed out of more basic or simple metaphysical constituents. Clearly, if the forms are in the objects of the sensible world in a manner analogous to that in which the bricks are in the house or the flour is in the cake, then Plato must accept some form of constituent ontology. This would be an indication that he thinks of the forms as being among the metaphysical ingredients out of which the objects of the sensible world are composed.


17 Ibid., 488a-489a.
If, however, the forms are simply the paradigms the objects of the sensible world resemble, then Plato need not accept the notion of there being metaphysical ingredients to the objects of the sensible world. As he vacillates on the question of how to best understand the notion of participation, he simultaneously vacillates between a commitment to constituent ontologies and a position the occupation of which leaves him free to reject such ontologies.

This vacillation, however, leaves untouched the assumption of singularism. This is a point that merits our attention. Because singularism relies on providing an analysis of property possession, it is easy to conflate singularism with the urge towards constituent ontologies. The assumption of singularism, though, is compatible with both the acceptance and the rejection of constituent ontologies. What is essential to the assumption of singularism is that property possession be analyzed in terms of an object's relation to some other second object and that predicates function as names for this second sort of object. This, though, need not involve the first object having the second as a constituent. Hence, singularism is compatible not only with trope nominalism and metaphysical realism (constituent ontologies), but also with resemblance nominalism and class nominalism (non-constituent ontologies). Indeed, when this is recognized one begins to understand the longevity of the singularist assumption. Compatible with a wide range of theories, singularism has the ability to lurk unnoticed in the background. Hence, it often goes unaddressed.

Why, though, should the notion that property possession is analyzable be an essential feature of singularism? There are two reasons — one trivial, the other non-trivial. Trivially, the notion of property possession as analyzable is an essential feature of singularism because of the very adequacy conditions placed on a singularist solution. Such a solution is adequate if and only
if there is a single entity the acceptance of which is capable of solving all three sub-problems that constitute the problem of universals. As one of those problems is the problem of property possession, an analysis of property possession in terms of some favored entity is a requirement for the existence of a singularist solution. The non-trivial reason is this: consider to what singularism commits one. It commits one to the claim that there exists a single entity the acceptance of which allows one to solve all three of the sub problems that constitute the problem of universals. Two of these problems are semantical problems. The remaining problem is ontological. So too is the solution — it involves an ontological posit. Now while arguments from language to ontology are often unproblematic, the singularist cannot argue for his or her ontology on the basis of language. The reason is that within the order of explanation the singularist offers, any ontological posit must be made prior to the articulation of a semantic solution. It is the prior belief in an object's being capable of solving the ontological problem of predication that informs his or her solutions to the two semantic problem. It is the belief that there exists an analysis of property possession that motivates the adoption of singularism. In what follows, I will argue against the orthodoxy that there exists any such analysis. In doing so, I will be attacking the foundations of singularism.

§ 2. Property Possession and Metaphysical Analysis.

In the previous section, I identified as the central feature of singularism the assumption that there exists an analysis of property possession. By “analysis” I mean here a non-regressive reductive analysis. Property possession is to be reduced to some more fundamental ontological phenomenon. And there can be little doubt that this assumption is present in the work of many theorists writing on the problem of universals. It is present in the work of David Armstrong who turns it into an argument against rival theorists. It is also present in the works of Gustav Bergman, Bertrand Russell, and Keith Campbell. Consider, for instance, the following passages; each
manifests an implicit acceptance of the worth of metaphysical analysis and the doctrine that such analysis consists in the reduction of phenomena to simpler or ontologically more fundamental constituents or relations:

David Armstrong:

If a and F are simples, then we can call a's being F an atomic state of affairs... We shall speak of a and F as constituents of the state of affairs. 18

Gustav Bergmann:

An ordinary thing having a certain property must have an ontological ground which, as one says, accounts for it. In other words there must be "in" the thing, or synonymously, there must be among its constituents at least one entity such that if it were not among the things constituents, the later would not have the property..., A thing's having a property must have an ontological ground. 19

Bertrand Russell:

There is clearly some valid meaning in saying the fact expressed by "Socrates is mortal" is complex. The things in the world have various properties and stand in various relations to each other. That they have these properties and relations are facts, and the things and their qualities or relations are quite clearly in some sense or other components of the facts that have those qualities and relations. The analysis of apparently complex things, such we started with, can be reduced by various means to the analysis of facts which are apparently about those things. 20

Keith Campbell:

Metaphysics is an ambitious subject; it aspires, among other things, to give an account of the fundamental constituents of any reality and exposition of how these constituents mesh to give us the reality in question. 21

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Let us call, then, the view that there exists a reductive analysis of property possession the orthodox view. According to this view, questions such as “What is X?” or “Why is x of such and such a nature?” are to be answered in terms of simpler or more fundamental constituents or relations. Why is a F? The class nominalist says it is because a belongs to the class of Fs. The metaphysical realist claims it because a exemplifies the universal F-ness. The trope nominalist answers that a’s being F is a matter of a’s instantiating an F-trope. Such analyses capture the imagination. They hold out the promise of a more complete or fundamental understanding of the world. Higher level phenomena reduce to lower level phenomena. The world in all its complexity is nonetheless an orderly place. Nature, much like language, adheres to a basic principle of compositionality.

This orthodoxy has not, however, gone unchallenged. Wittgenstein challenges it in The Blue and Brown Books. He writes, talking of the metaphysician’s tendency towards analysis, that “this tendency is the real source of metaphysics and leads philosophers into complete darkness. I want to say here that it can never be our job to reduce anything to anything, or to explain anything.” More recently in “New Work for A Theory of Universals” David Lewis has argued that the request for a non-regressive reductive analysis of property possession cannot be met. In

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22 At this juncture I wish to leave open the question of whether exemplification or instantiation must be thought of as a relation. Latter we shall have the opportunity to consider David Armstrong’s arguments that it need not be a relation. Hence, what I here identify as the orthodox view is itself neutral on the question of whether the reductive analysis must be relational or non-relation, all the orthodoxy demands is that there be some analysis of property possession that is non-regressively reductive.


this section I will argue that Lewis' view of the request for a non-regressive reductive analysis of property possession is the correct one. No theory can meet such a request. Or, more judiciously, no theory can meet such a request in a non ad-hoc manner. The recognition of this fact should not, however, be mistaken as evidence for the claim that as regards the issue of property possession nominalism, metaphysical realism, and trope nominalism, are all on a par. Rather, I argue that once the request for a non-regressive reductive analysis is dropped, a nominalist account of property possession, according to which property possession is sui generis, is to be strongly favored over those offered by either the trope nominalist or the metaphysical realist. This being so, I go on in the next section to argue that a nominalist theory of predication is also to be favored. This though should not be interpreted as an acceptance of singularism on my part. The nominalism I accept is a limited nominalism that addresses only the semantic question of predication. Property possession is treated as resistant to analysis. Hence, there exists no favored entity in terms of which an analysis of property possession may be given. Moreover, as we shall later see, nominalism lacks the theoretical resources to resolve the problem of abstract reference.25

There are problems with the orthodox view. The suitability of the orthodoxy to any particular theory (nominalist, trope nominalist, or metaphysical realist) depends upon the availability within that theory of the resources necessary for a successful reduction of property possession. Adequate reductive analyses, however, are notoriously difficult to come by.26 What

25 See: Chp. 3, pp. 131-141.

26 See, for instance, Jerry Fodor's "Special Science, or the Disunity of Science as a Working Hypothesis," in Readings in Philosophy of Psychology, ed. by Ned Block, Cambridge, Harvard University Press, 1980, p. 120-133.
is the adequacy condition for a reductive analysis of property possession? It is this: In order for a proposed reduction to succeed it must be the case that on the right hand side of the analysis (in the *analysans*) there appear no unanalysed notion of a property or type. Armstrong articulates this adequacy condition in the following manner:

If then in the course of an attempted analysis it should happen that covert appeal is made to the notion of a property, kind, or type, the analysis has failed to achieve its purpose.27

And it is this adequacy condition that serves in *Nominalism and Realism* as the basis for Armstrong's primary argument in favor of his own non-relational form of metaphysical realism. Using this adequacy condition, Armstrong argues, by means of a succession of regress arguments, that no relational analysis of property possession can meet the above adequacy condition.28 Hence, he argues, no theory that contains a relational analysis of property possession can solve the problem of universals. I accept this conclusion. Where I take issue with Armstrong is in his assertion that there exists a non-relational analysis of property possession that meets the adequacy conditions for a successful reduction. Consequently, the remainder of this section is divided into two parts. In the first, I consider and endorse Armstrong’s arguments against relational analyses of property possession. In the second, I consider and reject his assertion that there can exist a non-relational analysis of property possession that proves adequate. Together these two parts

27 David Armstrong. *Nominalism and Realism: Universals and Scientific Realism*. Cambridge, Cambridge University Press, 1978, p. 19. This passage, as it occurs in the book, has the word “nominalist” embedded between the words “attempted” and “analysis”. I have dropped this word from my quotation of this passage for the simple reason that this is the clearest statement on Armstrong’s part of what the adequacy conditions for a successful reduction of property possession should be — that being the case its occurrence within the context of a discussion of nominalism should not, I think, prevent us from using it as a general articulation of the criterion for a successful reduction.

28 A relational analysis of property possession will be understood here as any analysis of the following form, where R is a relation; a is F if, and only if a Rs b. Hence, a necessary feature of each relational analysis will be the appearance of a relation within the *analysans* of the analysis.
yield a conclusion that there can be no analysis of property possession. The phenomenon of property possession is resistant to reductive analysis — that objects have properties must be taken as a brute fact about objects.

§ 2.1 Against Orthodoxy I — Armstrong and the Relation Regress.

Though Armstrong criticizes rival theories on a variety of grounds, often times tailored to the particular theory being considered, his main argument against rival theories is that the solutions they offer all run afoul of what he calls the relation regress. They all, he claims, fail to excise from the right hand side of their analyses the notion of a property or type. Three examples should suffice to illustrate the force of this argument.

First, consider Armstrong's discussion of class nominalism. According to this discussion, class nominalism is the view that "a's having the property F, should be analyzed as a's being a member of a certain class, the class of F's." In short, it is characterized as the view that seeks a reduction of the phenomenon of property possession to the phenomenon of class membership. According to such a view, property claims are to be analyzed in the following way:

For all x, x has the property φ, if and only if x belongs to the class of φ's.

As Armstrong notes, such an analysis falls far short of the adequacy conditions for a successful reduction. Why? Because in the analysis there appears within the analysans an unanalyzed notion of a property, namely the notion of the dyadic relation of class membership. And what happens if on subsequent attempts at analysis we then turn our attention to an analysis of this relation? An infinite regress ensues. Imagine how such an analysis would have to proceed.

29 Ibid., p 28
According to the schema Armstrong attributes to the class nominalist, it would have to proceed as follows:

For all objects $x$ and classes $y$, $x$ is a member of the class $y$, if and only if $x$ and $y$ are the members of the class of ordered pairs standing in the relation of class membership.

Clearly, there is a problem. If the relation of being a member that appears within the $\textit{analy sans}$ just is the relation that appears on the left hand side of the analysis within the $\textit{analy sandum}$, then no analysis has been given at all. Any such analysis would be trivially circular, for it would make use within the analysis of the very term being analyzed. If, however, as is more plausibly the case, the relation of being a member that appears within the $\textit{analy sans}$ is a different relation, a higher order relation, than that which appears within the $\textit{analy sandum}$, then we have succeeded in giving a non-circular analysis only at the expense of introducing yet another unanalyzed property, namely the higher order relation of class membership itself. And if we should then undertake an analysis of this property, the problem repeats itself. Moreover, it repeats itself infinitely. Hence, in the course of the analysis no point of completion is ever reached. Hence, the analysis fails.

Second, consider Armstrong's discussion of trope nominalism. According to this discussion, trope nominalism is the theory that accepts particularized properties or tropes as a solution to the problem of universals. Properties are not to be understood either in the terms that the metaphysical realist suggests nor the terms the nominalist suggests. For the trope nominalist, properties exist; they are among the constituents of the world. Unlike the metaphysical realist, however, the trope nominalist eschews an identification of properties with universals. Properties are not multiply exemplifiable; rather, each property is itself a particular able to be possessed by
one and only one object.\(^{30}\) How, then, do we account for commonality of property or type? The suggestion is that we do so through classes of resembling tropes.\(^{31}\) Accordingly, the schema the trope nominalist accepts for the analysis of property possession will be as follows:

For all \(x, x \text{ is } F \text{ if and only if } x \text{ possesses an } F\)-trope.

Again, there are problems. The problem is a variant of the infinite regress argument Russell employs against resemblance nominalism in *The Problems of Philosophy*.\(^{32}\) It is this: Within the *analysans* of our analysis there appears the notion of a type, namely the notion of being an \(F\)-trope. According to the theory we are now considering, \(F\)-tropes are those tropes that resemble one another in being cases of \(F\). Hence, as our notion of being an \(F\)-trope involves an appeal to the relation of resemblance and our analysis involves an appeal to \(F\)-tropes, there appears within our analysis a covert appeal to a property, namely the property of resemblance. Suppose now that we turn our attention to an examination of this relation. What can we say of it? What we must say is that wherever two tropes resemble one another, there is then a third trope that is their resemblance. Hence, our analysis will look something like this:

For all tropes \(x\) and \(y\), \(x\) resembles \(y\) if and only if there exists a resemblance trope that obtains between \(x\) and \(y\).

Remember, the trope nominalist is committed to the claim that every property can be understood in terms of the possession of a trope. Hence, as resemblance is a relation and as relations are properties, resemblance will itself have to be understood in terms of tropes. But then the same

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\(^{30}\) Provided of course that we are confining for the moment our attention simply to monadic properties or tropes.


problem reappears. Once again covert appeal is made within the *analysans* to the relation of resemblance, this time in the guise of explaining resemblance. We have two choices: Either it is the same relation of resemblance that appears on the left hand side of our analysis within the *analysandum*, in which case no real analysis has been given. Or it is a higher order relation of resemblance, in which case the problem repeats itself infinitely. In either case the analysis fails.

Initially, it may seem that the regresses of which Armstrong makes so much are simply variants of the regress Russell identifies in *The Problems of Philosophy*. In a way they are, but we should not think that Armstrong is simply reiterating Russell’s conclusions. Such a view would be mistaken. To see this we must attend to Russell’s discussion. In *The Problems of Philosophy*, Russell argues that nominalism must fail because the nominalist must at some point admit at least one universal into her ontology in order to complete her analysis of property possession. Talking specifically of the resemblance nominalist (i.e., the nominalist who accounts for property possession in terms of a particular’s resemblance to some paradigm case) he writes,

> If we wish to avoid the universals whiteness and triangularity, we shall choose some particular patch of white or some particular triangle and say that anything is white or triangle if it has the right sort of resemblance to our chosen particular. But then the resemblance required will have to be a universal. Since there are many white things, the resemblance must hold between many pairs of particular white things; and this is the characteristic of a universal. It will be useless to say that there is a different resemblance to each pair, for then we will have to say these resemblances resemble each other, and thus at last we shall be forced to admit resemblance as a universal. 33

But then, as our third example will make clear, even if Armstrong uses the same regresses as does Russell, his purpose differs. Russell’s purpose is to show the inadequacy of nominalism. Hence, he allows that the regress might be stopped through an appeal to universals. He then goes on and writes of this appeal that once it is made, nominalism should be abandoned all together, for

"having been forced to admit this universal [i.e., the relation of resemblance], we find that it is no longer worth while to invent difficult and implausible theories to avoid the admission of universals such as whiteness and triangularity." Armstrong, however has a different purpose. His purpose is to show the inadequacy of all relational analyses of property possession. Hence, not only is the nominalist accused of failing to meet the adequacy condition for a successful reduction, but so too is the trope nominalist and the garden variety metaphysical realist, where by "garden variety" I simply mean the metaphysical realist who accepts a relational account of exemplification.

To illustrate, consider the last of our three examples. It concerns relational versions of metaphysical realism. According to such versions of metaphysical realism, property possession is to be explained through the relation of exemplification and the acceptance of universals into one's ontology. Such realists accept the following schema for their analysis of property possession:

For all $x$, $x$ is $F$, if and only if $x$ exemplifies the universal $F$-ness.

And as in the case of nominalism and trope nominalism, there are problems with the metaphysical realist's proposed analysis. Once again, the source of the problem is located in the use of a relation within the analysans. The problem is this: exemplification is, itself, a property. Hence, as the metaphysical realist is committed to the reductive analysis of all properties and types, in order for his analysis to be complete he must provide an analysis of exemplification. How, though, will such an analysis proceed? It will proceed in terms of the given schema:

For all $x$ and $y$, $x$ exemplifies $y$, if and only if the ordered pair $<x,y>$ exemplifies exemplification.

34 Ibid., p. 117
And the problem with this kind of analysis should now be familiar. We have two options for the interpretation of it. First, if the use of exemplification that occurs within the *analysans* just is that which occurs within the *analysandum*, then no analysis has been given. If, however, the relation of exemplification that occurs within the *analysans* is a higher order relation than that which occurs in the *analysandum*, then we have analyzed the notion on the right only at the expense of introducing yet another unanalysed property or type, namely the higher order relation of exemplification that is employed within the *analysans*. And if we should then undertake an explication of this relation, the problem repeats itself. Metaphysical realism, too, feels the bite of Armstrong’s regress arguments.

We have now reached a point where some reflection is called for. What, if anything, do Armstrong’s regress arguments show? How might one interested in resisting the force of these arguments respond?

If they succeed, then Armstrong’s arguments generalize into a refutation of relational analyses of property possession. Any analysis that makes use of the following schema form (where R stands for a relation) is susceptible to a regress argument of the kind Armstrong discusses:

\[ A \text{ is } F \text{ if and only if } a \text{ } R \text{ } b. \]

The reason such analyses fall prey to regress arguments should now be clear. Since such analyses analyze property possession by means of a relation, they are unable to excise from the *analysans* all unanalyzed properties, for the relation R by which the analysis is conducted will itself be an unanalyzed property. And if in the course of the analysis the theorist attempts, consistent with the above schema, to analyze the relation R itself, she succeeds only in either a) articulating a trivially
circular analysis, or b) introducing yet another higher-order relation that itself stand in need of 
analysis. The moral of this story is, Armstrong claims, "the relation regress holds against all 
relational analyses of what it is for an object to have a property or relation."35

Before we accept this conclusion as our own, however, we would do well to explore it 
further. Perhaps this conclusion has been reached too quickly. Perhaps there is some response 
the relational theorist can give to save his or her favored theory. The most plausible response to 
these arguments is this: One cannot deny that relational accounts of property possession are 
regressive. This must be accepted. What one can, however, do is deny of those regresses that they 
are vicious, i.e., one can deny that they constitute any real obstacle to the proposed analysis. The 
foundation for this response lies in the recognition that it is not the case that every regress is 
vicious. In order for a regress to be vicious it must be the case that for every n steps to be 
successfully completed there exists a step n+1 that also must be successfully completed. One well 
known regress that does not conform to this model is the regress on truth. To illustrate, consider 
the sentence "Aristotle was a student of Plato." Call this sentence P. P is true. Moreover, if P is 
true, then it is true that P is true, and it is true that it is true that P is true, and so on ad infinitum. 
Clearly, though, the truth of P is not dependent upon the truth of the truth of P or any other 
member of this infinite series. Rather, the truth of each member of this series is dependent upon 
the truth of the member that immediately precedes it. This regress, though infinite, is not vicious. 
It presents no barrier to the acceptance of the truth of P. If it can be shown that the relation regress 
resembles in this way the truth regress and not the model of a vicious regress, then the various 
theories Armstrong criticizes may be saved. Unfortunately, there is a salient difference between 

35 David Armstrong. Nominalism and Realism: Universals and Scientific Realism. Cambridge, 
the truth regress and the relational regresses Armstrong considers. The difference is this: Where in the truth regress the adequacy of each successive step depends upon the step completed immediately before it, in the relation regresses Armstrong considers the adequacy of each step depends upon the adequacy of all of the steps that follow it. This difference, though, just is the difference between a non-vicious regress and a vicious one. In a vicious regress every step must be completed before any may be thought adequate — but this is an impossibility. I conclude these considerations, then, in agreement with Armstrong. No relational analysis of property possession can meet the adequacy conditions for a successful reduction of the phenomenon of property possession.

§ 2.2 Against Orthodoxy II — On the Possibility of Non-relational Analyses.

Within Nominalism and Realism, the regress arguments are not employed as evidence for the bankruptcy of the orthodox view. Instead they are utilized as ammunition in Armstrong's argument for his own positive analysis of property possession. The general structure of this argument is as follows:§

§ Armstrong himself never explicitly formulates the following argument. Yet such an argument is implicit in the very organization of Nominalism and Realism. Consider: On pg. 11, the book proper starts by demanding of each theory that it give an analysis of the Moorean facts that objects have properties and can resemble one another in respect to their properties. Then the next four chapters are concerned with arguments against Nominalism. In each of these chapters the regress argument appears as a decisive objection to the nominalist theory under consideration. Chapter 7, concerns ante rem realism. It too (pp.69-70) falls prey to the regress argument. In chapter 8, it is the trope nominalist’s turn. On p.85, trope nominalism is claimed unable to avoid a relation regress. Finally, in chapter 11 a non-relational realism is accepted. Such a realism, because it is non-relational will avoid the relation regress. It still, however, must provide an analysis of the Moorean fact mentioned on p.11. That Armstrong accepts this version of realism is an indication that he thinks it is able to provide such an analysis. Hence, even if the argument I am now sketching is never explicitly formulated within the pages of Nominalism and Realism, it is present in those pages — distributed through the various sections I have just mentioned.
1) Any adequate solution to the problem of universals requires a reductive analysis of property possession. (Armstrong's acceptance of this premise constitutes his acceptance of the orthodoxy and underwrites his acceptance of singularism).

2) Neither nominalism, trope nominalism, nor relational versions of metaphysical realism are able to provide adequate reductive analyses of property possession. Each of these views runs afoul of the relation regress.

3) A non-relational theory of universals is able to provide such an analysis.

4) The theories named in 2 & 3 above are exhaustive of the known analyses of property possession.

5) Hence, as a non-relational metaphysical realism alone proves adequate, we ought to accept this view.

It is the third premise of this argument that will be the focus of my concern. I wish to reject the orthodox view. Before I do so, however, I must consider Armstrong's arguments that a non-relational theory of universals is able to meet the adequacy conditions for a successful reduction of the phenomenon of property possession. It is in this discussion that Lewis' arguments that there can exist no such analysis will find purchase. In “New Work for a Theory of Universals” Lewis explicitly takes himself to be replying to Armstrong. He argues not only that Armstrong fails to provide an adequate reductive analysis of property possession, but that such an analysis is impossible.

The key to understanding Armstrong's own positive account lies in understanding his distinction between “thick” particulars or “states of affairs” and “thin” particulars. Universals are for Armstrong existents. Any complete inventory of the world must include universals. Universals, though, are understood in terms of a thorough-going in re realism. “For each N-adic universal U,” Armstrong writes, “there exist at least N particulars such that they U.”

principle Armstrong names *The Principle of Instantiation*. There can be no uninstantiated universals. Universals are dependent for their existence on the objects that exemplify them. So too, Armstrong writes, do particulars exist. But we have two very different conceptions of particulars. The first is of a particular qua qualified object. Call this the “thick” conception of a particular. It is the notion of “a thing taken along with all of its properties.” Elsewhere, Armstrong calls this conception of the particular a “state of affairs,” where by a “state of affairs” he means “a particular having a property, or two or more particulars being related.” The second conception of a particular is that of a particular stripped of its properties. Call this the “thin” conception of a particular. It is the bare haecceity of a thing itself. Its “thisness” so to speak. The thin conception of a particular is formed from the thick conception of a particular through a process of abstraction. “It is a thing taken in abstraction from all of its properties.” And as with universals, there is no independent existence for “thin” particulars. “For each particular, X, there exists at least one universal, U, such that X is U.” Call this principle *The Weak Principle of the Rejection of Bare Particles*. Together *The Weak Principle of the Rejection of Bare Particles* and

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38 Ibid., p.114.
39 Ibid., p.139.
40 Ibid., p.109.
41 Ibid., p.114.
42 Ibid., p.113.

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The Principle of Instantiation yield a conclusion that “universals are nothing without particulars” and “particulars are nothing without universals.” The fundamental objects of the world are for Armstrong “thick” particulars or particulars bearing properties.

Despite his assertion that thick particulars are the fundamental objects of the world, Armstrong does accept a constituent ontology. Though universals and particulars both depend on thick particulars for their existence (in the manners articulated by The Principle of Instantiation and The Weak Principle of the Rejection of Bare Particulars), so too do thick particulars depend upon universals and thin particulars. Thick particulars are constituted by universals and thin particulars. They are thin particulars having properties or exemplifying universals. **Question:** Given the acceptance of such an ontology, how are we to conceive of the connection between thin particulars and universals within the thick particulars that both depend upon them and on which they depend?

It is one of the failings of Armstrong’s position that he has no clear answer to the above question. Like Plato, when confronted with the question of how to understand the notion of participation, Armstrong when confronted with this question vacillates between two distinct positions. First, there are passages in which he suggests that the distinction between particularity and universality is merely a formal distinction of the kind Duns Scotus recognizes in the *Oxford...*
Commentaries. Armstrong does not embrace a constituent ontology after all. Talking in this vein, Armstrong writes, "obviously we can and must distinguish between the particularity of the particular on the one hand, and its properties (and relations), on the other. But it is a distinction without relation." It is a distinction lacking ontological significance, for both are but abstractions from states of affairs or thick particulars. But this answer is not satisfactory. If universals and thin particulars are merely the formal aspects of all existence, formed through a process of abstraction, then it is difficult to regard Armstrong as either being a genuine realist or as having analyzed in any ontologically robust sense the phenomenon of property possession. Sure, we can conceive of property possession in terms of the combination of particularity and universality, but if these notions are merely formal ones, then an analysis of property possession in terms of these notions will have no ontological bite. Why? Because as Duns Scotus writes, they enjoy no basis in specific reality. Hence, if we interpret Armstrong's realism in terms of this first reading, then we are forced into the position of thinking him a sort of disingenuous conceptualist who simply ignores the very question he has demanded throughout that every other theory answer, i.e., the question of how to provide a non-regressive reductive analysis of property possession. Clearly this reading is to be avoided if it is at all possible.


The second way in which Armstrong talks about the connection between universals and thin particulars seem to accord them a greater ontological significance. In contradistinction to the passages cited above there also exist passages in which he explicitly adopts the language of constituent ontologies. When talking of what he calls the “victory of particularity”, for instance, he writes that “particularity plus universality yields particularity.” The victory of particularity, then, is that universals when combined with thin particulars yield thick particulars. Universals and thin particulars are the ontological, and not merely formal, constituents of states of affairs. It is this reading of Armstrong’s work that I believe must be the favored reading. The reason is simple. Armstrong expressly identifies himself as being a metaphysical realist. It is only this second reading of his work that supports this assertion. Moreover, it is only this second reading that allows us to attribute to Armstrong retention of the original goal of providing a reductive analysis of property possession. According to this reading, the instantiation of universals by thin particulars will be alleged to explain property possession and the existence of thick particulars.

What though should we say of this notion of instantiation? Aside from telling us that it is a non-relational notion, Armstrong tells us very little. “What is required”, he writes, “is some more intimate union between the particularity and universality of particulars than mere relation.” And it is precisely for his reticence on this matter that his critics take him to task. David Lewis, for instance, accuses him of leaving unanswered the very question he requires other theories to address. Discussing Armstrong’s views, Lewis writes,

Neither do predications of “instantiates” fall under Armstrong’s general analysis of predication. His is a non-relational Realism: he declines with good reason to postulate a dyadic relation of instantiation. So let all who have felt the bite of Armstrong’s relation regress rise up and cry “tu quoque!” And let us mark well

that Armstrong is prepared to give one predicate 'what has been said to be the privilege of the Harlot: power without responsibility.' The predicate is informative, it makes a vital contribution to telling us what is the case, the world is different if it is different, yet ontologically it is not supposed to commit us. Nice work: if you can get it.'

And this is the manner in which James Van Cleve responds:

What is involved, he says, is a "more intimate union than relation. But there is no union so intimate that it ceases to be a relation, except perhaps for identity, and Armstrong does not think the union of universal and particular is a case of identity. So there is really no room for the sort of position he wants to hold; as soon as universals are admitted in addition to particulars, predication inevitably becomes a relation."

Hence, there are two serious criticisms to Armstrong's work. According to the first, he dodges the very requirement he enforces for every other theory. According to the second, his view is incoherent. At this point in the articulation of his theory Armstrong is caught within a dilemma of his own making. If he accepts that universality and particularity are genuine and distinct constituents of thick particulars, then they must be related to one another in some way. The notion of instantiation as used to combine genuine constituents can only be a relational notion. And if this is so, then Armstrong will face the very same regress arguments as do the other analyses he considers. Conversely, if universality and particularity are not related, then they cannot be genuine constituents of states of affairs — they will merely be the formal constituents of such things. But then no ontological analysis has been given at all. Why? Because the notion of a particular having a property will, under this interpretation, be antecedent to, and ontologically more basic than the notion of either a universal or thin particular. What conclusion, then, ought


we reach? At a minimum we can conclude that Armstrong has failed to provide an adequate non-relational analysis of property possession. But we can do better than that. The refutation of Armstrong’s non-relational analysis generalizes into a refutation of all non-relational analyses of property possession. To offer an analysis of property possession is to offer a diagnosis of the conditions under which an object possesses a property. If that diagnosis is to be more than simply a restatement of the symptoms, then entities or relations other than those referred to within the analysandum will have to be referred to within the analysans. Statements such as “a is F if and only if a is F”, while true, are not analyses. More is required. What more is required is that we say what constitutes a’s being F. But this cannot be done without introducing into the analysans a complexity greater than that found within the analysandum. More entities will be named within the analysans than are named within the analysandum. This much should already be clear from our examination of the various analyses we have considered. What, though, should we say of these entities? One thing we can say of them is this: Either they are related to one another or they are not. As we are concerned with non-relational analyses, assume that they are not related to one another. Under this assumption the analysans of our analysis simply contains a listing of disparate objects. It is a type of shopping list in which no attempt is made to spell out the relevancy of any item on the list to any other item on the list. But if this is right, and I think it must be, then in what sense can the non-relational theorist be said to have offered an analysis at all? No attempt is made to explain how the objects within the analysans connect with one another in order to form an explanation of the phenomenon within the analysandum. Nor, indeed, could such an attempt be made without retreating from a non-relational analysis to a relational one. The notion of their being a connection between objects is, itself, a relational notion. The non-relational theorist finds himself in the position of the baker who thinks simply having the ingredients for a cake is enough to have the cake, that no recipe or additional work is needed.
Non-relational analyses of property possession leave us with a shopping list of ingredients but no recipe for putting them together. But, of course, just as no listing of objects is a recipe neither is it an analysis. We require recipes as well as ingredients. But at the moment a recipe does appear we have at that point moved from a non-relational analysis to a relational one. The conclusion we should reach then is this: \textit{No non-relational analysis of property possession can meet the adequacy conditions for a successful reduction of the phenomenon of property possession.}

§ 2.3 Property Possession as Sui Generis.

Together the conclusions from §2.1 and §2.2 yield a conclusion that there can be no successful reduction of the phenomenon of property possession. This is a conclusion that echoes that which Lewis reaches. Lewis writes,

\begin{quote}
Doing away with all unanalysed predication is an unattainable aim, and so an unreasonable aim. No theory can be faulted for failing to achieve it. For how could there be a theory that names entities, or quantifies over them, in the course of its sentences, and yet altogether avoids primitive predication. Artificial tricks aside, the thing cannot be done.\textsuperscript{51}
\end{quote}

What, then, should be our attitude toward the theories we have discussed? Lewis' suggestion is that, at least as regards the problems of property possession and resemblance, we should adopt a type of thorough-going egalitarianism, an egalitarianism according to which we allow each theory the use of primitive properties within its analysis. He writes,

\begin{quote}
Let the Nominalist say 'These donkeys resemble each other, so likewise do those stars, and there analysis ends.' Let the Platonist say 'this statue participates in the Form of beauty, likewise that lecture participates in the Form of truth, and there analysis ends.' Let Armstrong say "this electron instantiates unit charge, likewise that proton instantiates tripartitionness, and there analysis ends."\textsuperscript{52}
\end{quote}


\textsuperscript{52} Ibid., p.354.
Similarly, we could say "let the trope nominalist say 'this stone instantiates a trope whiteness, likewise that building instantiates a trope triangularity, and there analysis ends.'" Once the request for a reductive analysis of property possession is dropped, nominalism, metaphysical realism, and trope-nominalism all seem prepared to offer explanations of facts of sameness. Prepared, that is, provided one is willing to accept the notion of instantiation, participation, class membership, or resemblance at face value. This is much the same conclusion as that which Armstrong reaches in his later book *Universals*. In this work, talking of the regress argument, Armstrong writes, "what is an objection to all theories equally does nothing to favor some over others." On the matters of property possession and resemblance, then, nominalism, metaphysical realism, and trope nominalism are said to be on a par. The question of which of these theories to choose is to be settled on other grounds. Perhaps, through a consideration of abstract reference; perhaps, through a consideration of causation or theoretical economy.

In the remaining portion of this section, I wish to challenge this assumption of egalitarianism. Nominalism, metaphysical realism, and trope nominalism are not all on a par with one another — either as regards the analysis of property possession or the analysis of resemblance. Once the demand for a non-regressive analysis of property possession is dropped as illegitimate, there are grounds to favor what Armstrong calls "ostrich nominalism" over other varieties of nominalism as well as metaphysical realism and trope nominalism. Ironically, my argument for this claim mimics in structure Russell’s argument against resemblance nominalism.

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Consider ostrich nominalism. This is the nominalist view that property possession is *sui generis*, that the phenomenon of property possession stands in no need of explanation. "There are no universals, but the proposition that a is F is perfectly all right as it is."\(^4\) Objects have properties and relations and there is nothing further, on the metaphysical front, to be said of this fact. So too objects resemble one another. Again there is little that can be said of this fact. Two objects \(a\) and \(b\) resemble one another in respect to being F, just in case \(a\) is F and \(b\) is F. Brute facts about property possession ground facts about resemblance. Such a theory explicitly rejects a strategy of ontological posits. There is no need, at least as far as the problem of property possession is concerned, for universals, classes, set, tropes, or paradigms. Ostrich Nominalism rejects such entities as useless for the task at hand. In so doing the ostrich nominalist explicitly rejects the assumption of singularism. There is no favored entity by means of which property possession may be explained. The request for a reductive analysis of property possession is ill conceived and has hindered our progress towards a solution to the problem of universals.

Consider now what is involved in Lewis' and Armstrong's assumption of egalitarianism. One assumption is that there are no grounds within a consideration of property possession for favoring any one theory over the others. Once the request for a reductive analysis of property possession is dropped, and one allows each theory the use of primitive predicates or properties, nominalism, metaphysical realism, and trope nominalism are all equally prepared to offer accounts of property possession. Excluding ostrich nominalism, what will such accounts look like? The general format for such accounts will be as follows:

\[
A \text{ is } F \text{ if and only if } a \text{ Rs } \Psi.
\]

The phenomenon of property possession (and ultimately resemblance) is accounted for in terms a primitive property \( R \) and an ontological posit \( \psi \). Depending upon the choice of property and ontological posit either a nominalist theory, a metaphysical realist theory, or a trope nominalist theory will be generated. If for instance \( R \) is the property of 'being a member of' and \( \psi \) is the posit of a class, then the theory generated will be a class nominalism. If, however, \( R \) is the property of exemplification and \( \psi \) the posit of a universal, then the theory will be a metaphysical realist one. Similarly, if \( R \) is the relation of instantiation and \( \psi \) the posit of a type of trope, then the theory will be a version of trope nominalism.

The contrast, then, between an ostrich nominalism and the other theories we have discussed is this: ostrich nominalism accounts for property possession simply through the use of primitive properties; it makes no ontological posit. The other theories we have considered accept the need not only for at least one primitive property, they also make use of at least one ontological posit. Metaphysical realism posits universals, trope nominalism posits tropes and classes of tropes, and the various nominalist theories other than ostrich nominalism posit such diverse entities as paradigms, linguistic types, classes, and sets. Does this difference make a difference? Does it give us a reason to prefer ostrich nominalism over its rivals? I think it does. My argument for this claim is loosely based on the argument we considered earlier by Russell against the resemblance nominalist. Recall that after arguing that the nominalist must admit at least one universal (the relation of resemblance) into his ontology, Russell writes, “and having been forced to admit this universal we no longer find it worthwhile to invent difficult and implausible theories to avoid the admission of such universals as whiteness or triangularity.”

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argument ultimately fails. Russell anticipated that one could halt a relation regress through the admission of universals. In adopting this belief, he was in error. Nonetheless, the point of his argument is germane and may be easily adapted to the present discussion. It is the following: If one finds in the course of offering an account of some phenomenon a, the need to adopt some position, call it x, that by itself is capable of accounting for a, then considerations of economy dictate that one prefer x to any conjunction of x with some other theory. In the case we are considering, it emerges that each theory must, of necessity, accept some one case of property possession as primitive — either instantiation, membership, exemplification, or resemblance. Moreover, whatever primitive is ultimately accepted that primitive will be a necessary feature of every account of property possession offered by that theory. But once one primitive property is accepted (and moreover, one that must appear within every account of property possession offered by the theory) there is no reason to “invent difficult and implausible theories” to avoid other primitive properties. Hence, I conclude that once the request for a reductive analysis of property possession is dropped and a need for primitive properties recognized, the account of property possession we ought adopt is that advocated by the ostrich nominalist. A is F because A is F. No more need be said.

§3. On Objects and the Causal Powers of Objects.

Prima facie, the arguments in section 2 might well be thought too weak to merit the rejection of either metaphysical realism, trope nominalism, or those varieties of nominalism other than ostrich nominalism. What we secure through the above arguments is that there can be no non-regressive reductive analysis of property possession and that there is some reason to favor ostrich nominalism over a metaphysical realism that accepts a primitive relation of exemplification, a trope nominalism that accepts a primitive relation of instantiation, and other
versions of nominalism that accept primitive relations in order to explain the phenomenon of property possession. This presumption in favor of ostrich nominalism, however, is grounded in fairly weak Occamist considerations of numerical simplicity. Ostrich nominalism makes use of fewer kinds of primitives than does each of the other competitor theories. Hence, ostrich nominalism may be said to enjoy an advantage of numerical simplicity over its competitors. But while numerical simplicity is a reason to favor ostrich nominalism over other theories, it is not a definitive reason. A recalcitrant theorist might still accept any one of ostrich nominalism's competitors while remaining in good metaphysical faith. More is needed. It would be helpful if we could show not only that ostrich nominalism enjoys an advantage of numerical simplicity over its competitors but that it also offers an advantage of explanatory simplicity over those same competitors. In this section, I argue that ostrich nominalism enjoys this advantage. Trope nominalism and metaphysical realism, I argue, lead to improbable views on the metaphysical nature of objects. Varieties of nominalism other than ostrich nominalism lead to equally improbable views on the origins of an object's causal powers. Ostrich nominalism avoids these problems. That ostrich nominalism avoids these difficulties without spawning any new ones is yet another reason to prefer ostrich nominalism to these other theories.

§ 3.1 Metaphysical Realism, Trope nominalism and the nature of Objects.

Consider, again, metaphysical realism and trope nominalism. Each of these theories explains property possession in terms of the constituency of objects. Why is a F? Because a contains as a part of itself either a trope or a universal. Hence, trope nominalism and metaphysical

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56 Note that this is by no means a foregone conclusion. The numerically simpler theory is not always the theory that enjoys the advantage of explanatory simplicity. To illustrate, consider number theory. A theory according to which the natural numbers are reducible to sets is numerically simpler than one which claims numbers to be platonic entities; yet calculation is not made simpler by the numerical simplicity of set theory.
realism both accept what I have earlier called "constituent ontologies" — ontologies, that is, according to which the objects given to us in sense experience are not only scientifically complex but are, in addition, metaphysically complex. The chair in front of me is scientifically complex in the sense that it is composed of smaller more basic physical elements, namely atoms. According to the metaphysical realist and the trope nominalist the chair is also metaphysically complex. Not only is the chair reducible to atoms; it is also, given another theoretical framework, reducible to either tropes or universals, or tropes or universals and some other metaphysical element or elements. This being so, it is insufficient as a defense of these theories to simply accept certain primitives and claim these theories capable of answering the ontological problem of property possession. If we are to have confidence in these theories and the answers they give, then the metaphysical realist and trope nominalist must each show that he or she is capable of providing a coherent account of the compositional nature of objects. But this is the very thing many have claimed they either cannot do or, at least, cannot do easily.

In general, there are two ways in which trope nominalists and metaphysical realists have sought to provide an account of objects. First, some have argued that an object is best thought of as a composite of a bare substratum and the qualities, either tropes or universals, that inhere in that substratum. Call this the pin-cushion conception of an object. According to this view, objects

57 See: Chap. 2, p.47.

58 This view seems present either implicitly or explicitly in the following works by the following theorists: John Locke, An Essay Concerning Human Understanding, Oxford, Clarendon Press, 1975, Bk. II, Chap.XXIII, Section 2, pp.295-296; Edwin Allaire, "Bare Particulars" and "Another Look at Bare Particulars" both in Universals and Particulars: Readings in Ontology, ed. by Michael J. Loux, London, University of Notre Dame Press, 1976, pp.261-290 & 296-303 respectively.

59 Bruce Aune, Metaphysics: The Elements, Minneapolis, University of Minnesota Press, 1985, p.46.
are, conceptually, something like pin cushions. The bare substratum of an object may be likened to a pin-cushion sans pins; the qualities of the object may be likened to the pins themselves; and the ordinary propertied particular that is the object of analysis may be likened to the pin-cushion with pins. Second, some have argued against the necessity of accepting substrata in which qualities inhere. Qualities alone, it is claimed, are sufficient for the generation of objects. Such theorists are often labeled bundle theorists. Depending upon whether the bundle theorist is a trope nominalist or a metaphysical realist, the bundle theorist will claim objects are simply bundles of either tropes or universals. On this view, objects are generated wholly out of the qualities they possess. The problem both trope nominalism and metaphysical realism face is that neither of these views is entirely satisfactory.

§3.1.1 Bare Substrata

First, consider the pin-cushion conception of an object. According to this conception of objects, each object is a composite of a bare substratum and the qualities that inhere in that substratum. This is the view John Locke articulates in *An Essay Concerning Human Understanding*. Locke writes:

The idea then we have, to which we give the general name substance, being nothing but the supposed, but unknown support of those qualities, we find existing, which we imagine cannot subsist, *sine re substante*, without something to support them, we call that support *substantia*; which according to the true import of the word, is in plain English, standing under, or upholding.\(^61\)

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A bare substratum, then, is simply that which supports the qualities of an object. In addition to having been defended by Locke, this view has, in more recent times, been defended or assumed by such philosophers as Gustav Bergmann and Edwin Allaire.62 There are two motivations for the adoption of such a theory; one that is shared by both trope nominalists and metaphysical realists alike, the other is peculiar to the metaphysical realist alone. First, one might be motivated towards such a view through a suspicion that in order to explain the compositional nature of objects one needs more than simply properties or qualities. One also needs a substance in which those qualities inhere, which, when taken together with tropes or universals, provide the combinatorial elements necessary for object construction. Aristotle's theory of hylomorphism might be thought an example of a pin-cushion theory motivated in this way. Qualities alone are insufficient to explain the material nature of material objects. What more is needed is some undefined matter receptive of qualification by either tropes or universals. Such matter is the substratum of which Locke talks. But such matter must be unqualified, for having accepted a two category ontology, according to which objects are generated through combinations of elements from each category, a qualified substratum could not be basic.63 Such a substratum would admit of further analysis.64 Second, it is often claimed that the notion of a bare substratum is helpful to the metaphysical realist in the following way: universals are by definition repeatable. More than one object can

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64 Nor can the pin-cushion theorist plausibly take a qualified substratum as primitive. Such a maneuver would simply beg the question of why one doesn't simply take the qualified object itself as primitive. After all, if one is allowed to concede there are qualified substances that admit of no further analysis, then why postpone this maneuver until the introduction of the mysterious notion of a substratum? Under such a construal, substrata should gain one nothing but incredulous stares.
exemplify the same universal. Universals, then, seem unable, by themselves, to generate discrete identity conditions for objects. Given any listing of universal properties, it is possible two or more objects might exemplify all and only the same universals. How, then, do we account for the non-identity of two objects that share all and only the same universals? By means of their substrata. Substrata, though qualitatively the same, are said to differ numerically. It is this numerical difference in which the identity of objects is grounded. This is the solution to the problem of individuation that Gustav Bergman advocates. Talking of bare substrata, he writes:

Bare particulars neither are nor have natures. Any two of them, therefore, are not intrinsically, but only numerically different. That is their bareness. It is impossible for a bare particular to be "in" more than one ordinary thing. That is their particularity.65

That a concern for individuation is a motivation for the metaphysical realist to accept bare substrata but is not a motivation for the trope nominalist points to an essential difference between trope nominalism and metaphysical realism. In general, the trope nominalist does not have the problems with individuation that the metaphysical realist encounters. The reason, of course, lies in the trope nominalists acceptance of particularized properties. Since each trope is, at the least, numerically different from every other trope and as no trope appears in more than one object, the trope nominalist is able to individuate objects simply on the basis of their tropes — no further mechanism of individuation is required.

Once in place, a pin-cushion conception of objects might well be thought to have some benefit. First, as Campbell notes, "the two category ontology of substance and property can be

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used to give an account of how subject-predicate sentences work.\textsuperscript{66} The dualist ontology of substratum and quality fit well the dualism inherent in our linguistic division of non-logical terms into subjects and predicates, and our desire to secure the meaning of non-logical terms through a referential semantics. On such a view, subject terms refer to substrata, predicates to universals or tropes, and a simple sentence is true just in case the substratum exemplifies or instantiates the universals or tropes the sentence says it does. That is, “a is F” is true if and only if there is a substratum a referred to by “a”, a universal or trope F referred to by “F”, and the substratum a exemplifies or instantiates F. So too, the pin-cushion view of objects might be thought to be of a benefit to those seeking an explanation of identity through change. Objects change over time. Such change is constituted by a change in the properties an object possesses. If all there is to an object is its properties, then it is difficult to see how an object that has undergone change can be considered the same object as existed before that change. By locating the particularity or “thisness” of an object within its substratum the pin-cushion theorist is able to avoid these difficulties. Identity through change can be tracked through the substratum of the object undergoing change — a at time t\textsubscript{1} is the same object as b at time t\textsubscript{2} if and only if a and b share the same substratum.

Whatever benefits result from the acceptance of a pin-cushion theory of objects, however, those benefits are only as secure as is the original posit of bare substrata. A theory of bare substrata must be evaluated not on the ancillary benefits it might bring within other philosophic discussions, but rather on the grounds of general intelligibility and plausibility. And it is on these

grounds that theories of bare substrata have been said to fare quite poorly. There are at least three serious criticisms to any theory that uses bare substrata within its analysis of objects:

1) First, empiricists have long criticized the notion of bare particulars or substrata on the grounds that such substrata threaten to make ordinary objects mysterious. Presumably bare substrata are just that, bare. Such substrata lack any characteristics whatsoever. As Bergman notes, such substrata differ from one another merely numerically. They cannot differ qualitatively for they possess no qualities. But if this is so, then it seems as if the admission of bare substrata into an ontology violates the empiricist stricture against unknowable ontological posits. Lacking all characteristics, we could never be in a position to identify the substratum of any object. Moreover, as universals and tropes are, themselves, already mysterious entities, the combination of bare substrata with such entities reduces the ordinary objects of the world to completely mysterious entities. We end with a view in which the better known is explained or accounted for by the less well known or, even, the unknowable. Hardly a satisfying view.

2) Worse still than the empiricist criticism of bare substrata is the suspicion that the very notion of bare substrata is incoherent. Such is the criticism Campbell levels against this notion. He writes,

If bare particulars [substrata] are truly bare, they will lack capacities as well as properties. If they lack all capacities, they will lack the capacity to have properties. But that is exactly what they need in order to fulfill their role.67

The criticism, then, is this: The notion of a capacity is intimately connected to the notion of a property. The capacities of an object either are properties of that object or are derived from the properties of that object. Hence, as bare substrata lack all properties, so too will they lack all

67 Ibid., p. 7.
capacities. But then bare substrata cannot fulfill the role for which they were suggested. For lacking all properties, they will lack the capacity to support properties. And lacking this capacity, they cannot, then, play a vital role in the constitution of any object.

Nor can the pin-cushion theorist at this point plausibly take qualified substrata capable of supporting qualities as a primitive. The reason is this: The pin-cushion theorist is committed to explaining the possession of each property a particular has in terms of a substratum that supports that property. To take any qualified substratum as primitive is to abandon this commitment. But once this commitment is abandoned and we allow that some objects might primitively possess their properties, then there seems no principled reason for denying that all objects might primitively possess their properties. To admit qualified substrata into an ontology is to effectively undermine the grounds for a belief in substrata to begin with. For once it is admitted that some objects (namely substrata) may primitively possess their properties, it is far more economical to simply allow that all objects may do so, for in allowing this we rid ourselves of the need for substrata all together.

3) Finally, the unqualified nature of bare substrata calls into question the pin-cushion theorist's ability to secure for himself even the ancillary benefits, mentioned above, that are often associated with the acceptance of pin-cushion theories. Recall what these benefits are said to be: First, it is claimed that bare substrata aid a theorist in individuating objects. Second, it is claimed that bare substrata aid a theorist in accounting for substantial change and identity through change. Two objects differ just in case their substrata differ. An object a at time t₁ is the same object as object b at time t₂ if and only if a and b share the same substratum. The essential strategy is this: problems revolving around identity and change can either be solved or made easier by redirecting the focus
of our attention away from the properties particulars possess towards the substrata of those very same particulars. But this is an effective strategy only under the assumption that we able to individuate bare substrata. But how could we? If bare substrata are really bare, then they must be indistinguishable one from another. There is no qualitative basis for distinguishing them. Perhaps it is here that their numerical difference is felt to play a role. But in the absence of qualitative difference, numerical difference makes no sense. Campbell puts this point as follows:

If bare particulars are really bare, they will lack even relative position, which is the clearest of our ways of envisaging a multiplicity of exactly resembling objects.68

The very bareness of bare substrata, then, seems to undercut the ability of such substrata to ground identity. And if this is so, then the ancillary benefits mentioned above are merely illusory. Lacking clear identity conditions themselves, bare substrata are of no help in solving problems revolving around the identity of objects.

§ 3.1.2 Bundle Theories of Objects.

For the trope nominalist or metaphysical realist who rejects substrata as leading to unnecessary and potentially damming difficulties, the alternative is a bundle theory. According to the bundle theorist, ordinary particulars just are bundles of either universals or tropes. Such particulars, it is claimed, are reducible to their qualities. The classic metaphysical realist articulation of this theory belongs to Bertrand Russell. In Human Knowledge Its Scope and Limits Russell argues particulars are reducible to complete complex compreassences of properties; he writes,

We can form groups of qualities having the following two properties: (a) all members of the group are compressent; (b) given anything that is not a member of the group, there is at least one member of the group with which it is not

68 Ibid., p.7.
comprężent. Any one such complete group of comprent qualities constitutes a single complex whole, defined when its constituents are given, but itself a unit, not a class. That is to say, it is something that exists not merely because its constituents exist but because, in virtue of being comprent, they constitute a single structure.\textsuperscript{69}

This will be our general articulation of a bundle theory. Whether we are talking of a bundle of tropes or a bundle of universals, in order for a bundle to form a particular it must be a complex whole constituted out of a complete complex comprence of qualities. The completeness requirement comes in with the articulation of Russell's property (b)—to be complete there must exist no property (universal or trope) outside of the complex capable of being simultaneously comprent with every member inside the complex. The need for such a requirement emerges when we consider the form a bundle theory would take in its absence. We would then have to suppose that a particular just is a complex comprence of properties (rather than a complete complex comprence of properties). But then, for each particular made up of more than three properties that particular would contain within itself three or more distinct particulars. To illustrate, suppose $a$ is a particular comprised of three comprent properties $P$, $Q$, and $R$. Then by our definition of a particular, $P$ is comprent with $Q$, $Q$ is comprent with $R$, and $R$ is comprent with $P$. But then, if any complex comprence of properties is a particular, the comprences of $P$ and $Q$, $Q$ and $R$, and $R$ and $P$ each make up a distinct particular. These comprences, however, are contained within our original particular $a$. Thus, where we once thought there was but one particular, we now find four. Moreover, provided we are talking of a material particular, the four particulars we find may all occupy the very same space simultaneously—a truly baffling result. Russell's completeness requirement blocks this unintuitive result.

Even given the completeness requirement, however, there are problems lurking in the background. Some of these problems are peculiar to the metaphysical realist's version of a bundle theory; others are problems for both the metaphysical realist and the trope nominalist equally. I start with a listing of those problems common to both sorts of theories.

1) First, for both the trope nominalist and the metaphysical realist, there is a problem with the mechanics of how particulars are generated from complex compressences of properties. Prima facie, the bundle theory entails a regress on the relation of compressence such that a complete complex compressence of properties could never be generated. To illustrate, consider the highly artificial example of a particular, call it \(a\), having just two monadic properties. Call these properties \(P\) and \(Q\). According to the mechanics by which the bundle theorist generates particulars, \(P\) and \(Q\) must be compressent with one another. Compressence too, however, is a property. It is a relation. Consequently \(P\) and \(Q\) being compressent is not enough to generate a complete complex compressence. There is another property, namely the dyadic relation of compressence, that must itself be compressent with \(P\) and \(Q\). Hence, the bundle that constitutes \(a\) must include this dyadic relation. What now do we say of these three properties that contribute to the generation of \(a\)? What we must say is this: \(P\), \(Q\), and the dyadic relation of compressence are all compressent with one another. But this introduces yet another relation of compressence, namely a triadic relation of compressence, that will also have to be compressent with the qualities of \(a\). Hence, \(a\) will have to have at least four properties \(P\), \(Q\), the dyadic relation of compressence, and, now, the triadic relation of compressence. It is clear how this generates a regress. At every stage in the construction of \(a\) at which there exist \(n\) qualities compressent with one another, there will have to exist yet another property, an \(n\)-adic relation, that is their compressence. But then at each stage
of a's construction there exists yet another property, namely the $n$-adic relation of compresence itself that is compresent with all the other qualities of a but which has not yet been accounted for. Hence, we never reach a stage at which we can say of the complex compresence identified as a that is complete. Not only is this regress, if unhalted, infinite, it is also vicious — it entails that if the bundle theory is correct, that there then exist no objects.

Can this regress be halted? Perhaps. One can halt the regress by allowing that the relation of compresence that binds the $n$ properties together is itself an $n+1$-adic relation that includes itself as the additional relata. In this way one can avoid the need for introducing yet another compresence relation. Such a move, however, comes at a high cost. It involves countenancing a relation other than identity that is itself among the relata of that which it relates. And in the absence of independent evidence for thinking such relations might exist, one might well regard this solution as ad hoc.

2) Second for both the trope nominalist and the metaphysical realist, bundle theories make difficult any explanation of identity through change. Change involves a change in the properties of a particular. Bundle theories, however, identify particulars solely in terms of the properties they are said to possess. The identity conditions for objects are given in terms of an exhaustive listing of their properties. But, then, as change involves a change in property, the bundle theorist must say "that whatever emerges from a change is invariably a new collection of properties," and thus must be a new object altogether.


71 Ibid., p.116.
3) Third, a second regress threatens both the trope nominalist's and the metaphysical realist's versions of the bundle theory. This second regress is a regress on bundles themselves. It starts with a recognition that tropes and universals are themselves items that possess properties. Each trope or universal, for instance, is a trope or universal of a certain sort. Additionally each will have the property of being a property. But then, since we are committed to analyzing any propertied individual in terms of a bundle of qualities, tropes and universals will themselves have to be regarded as bundles of tropes or universals. But it does not end there, for we may analyze those tropes and universals as themselves being bundles of tropes and universals — they are “bundles of further bundles, which are themselves bundles, and so on without end.” And even if this regress is not vicious, it is troubling. The suggestion that objects are combinatorial constructions out of more basic constituents suggests, at least prima facie, that at some level analysis must culminate in the discovery of ultimate or core constituents that are not themselves combinatorially complex. When pressed, however, the bundle theorist must concede that this is not so. There are no ultimate constituents; at any given level of analysis there exist further bundles of bundles to analyze. At a minimum analysis need never end; perhaps, worse still, it can never end. Such a consequence is hardly a welcome one.

4) Finally, the last criticism I want to consider is unique to the metaphysical realist's articulation of a bundle theory. It is this: The metaphysical realist who accepts a bundle theory commits herself to the truth of the principle of the identity of indiscernibles. The problem, of course, is that it is not at all clear that this is a true principle. To see that the metaphysical realist's acceptance of a bundle theory commits her to the truth of the principle of the identity of indiscernibles consider the

following argument. First, assume that a and b are particulars having the same properties. Second
assume that a metaphysical realist articulation of the bundle theory is correct. Then, from our
second assumption, particulars just are the complex compossences of the universals they
exemplify. But then since a and b exemplify all and only the same universals, they are the same
complete complex compossence. Hence, by the transitivity of identity, a and b are the same
particular. Consequently, it is true that (P) (x) (y) [(Px ↔ Py) → x = y]. That is, it is true that for all
properties P and particulars x and y, if x has P if and only if y has P, then x and y are identical. But
this just is the principle of the identity of indiscernibles. Hence, if the metaphysical realist’s
bundle theory is correct, then so too is the principle of the identity of indiscernibles correct.

Conversely, if the principle of the identity of indiscernibles is false, then so too must the
metaphysical realist’s bundle theory be false. Now the bundle theory if true must be a necessary
truth.73 The question we must ask, then, is this: Does the principle of the identity of indiscernibles
hold in each possible world? It seems not. Consider, for instance, Max Black’s example of a
radially symmetrical universe. In a paper aptly titled “The Identity of Indiscernibles” Black argues
that the possibility of a radially symmetrical universe consisting simply of two iron spheres falsifies
the principle of the identity of indiscernibles. He writes,

Isn’t it logically possible that the universe should have contained nothing but two
exactly similar spheres? We might suppose that each was made of a chemically
pure iron, had a diameter of one mile across, that they had the same temperature,
colour, and so on, and that nothing else existed. Then every quality and relational
characteristic of the one would also be a property of the other. Now if what I am

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73 This is so because the bundle theory is a thesis about the essential constitution of things. See: David
describing is logically possible, then it is not impossible for two things to have all their properties in common.24

And if it is not impossible for two things to have all their properties in common, then the principle of the identity of indiscernibles cannot be a necessary truth. And if it is not a necessary truth, then the metaphysical realist's bundle theory cannot be true at all. Once again, we have some reason to reject a bundle theory of properties.

§ 3.1.3 A Question of Simplicity.

Though the evidence may suggest it, I do not here want to draw the conclusion either that pin-cushion theories or bundle theories are incoherent. Too little has been done to warrant such bold conclusions. Specifically, I have not canvassed or considered all of the various responses a theorist might make to the criticisms I have leveled against these two sorts of theories. Perhaps, these theories are still redeemable. Rather, my aim is to secure yet another advantage for ostrich nominalism over trope theories and metaphysical realist theories. This has now been done. Trope theories and metaphysical realist theories must provide some combinatorial model of object construction. Having accepted constituent ontologies, each theory is required to say how those constituents come together to form ordinary particulars. As we have now seen, though, this requirement is not easily met and there exist doubts as to whether these theories can meet this requirement at all. A chief benefit of the ostrich nominalism I advocate is this: Given ostrich nominalism, these problems concerning the metaphysical construction of objects do not even arise. Ostrich nominalism shuns the sort of metaphysical analysis that yields constituent ontologies. Hence, ostrich nominalism is never called upon to explain the metaphysical constitution of objects. Objects are metaphysical wholes that do not admit of the sort of analysis

envisioned by the trope nominalist or metaphysical realist. Now one must be careful here. I am not claiming that every object is an unanalyzable whole. Certainly most objects are scientifically complex. What I reject is that in addition to being scientifically complex they are also metaphysically complex. I reject the sort of metaphysical analysis we earlier saw Wittgenstein claimed led to complete darkness. What conclusion then should we reach? This one: Not only is ostrich nominalism numerically simpler than trope nominalism or metaphysical realism, it also enjoys an advantage of explanatory simplicity over those same theories. Ostrich nominalism accounts for the phenomenon of property possession with fewer kinds of primitives than does the trope nominalist or metaphysical realist. Moreover, as will be argued in Chapter 4, it does so without encountering the difficulties these other theories encounter or engendering different yet equally severe difficulties. This in turn allows us to say, now with greater security, that Lewis' assumption of an egalitarianism between ostrich nominalism, metaphysical realism, and trope nominalism ought to be rejected. There are good reasons to favor an ostrich nominalism over these other theories.

§ 3.2 Nominalism and the causal powers of objects.

Similarly, there are good reasons for favoring ostrich nominalism over other varieties of nominalism. These reasons emerge not from a consideration of the constituency of objects, but, rather, from considerations concerning the origins of their causal powers. Intuitively, the origins of the causal powers of an object lie within the properties possessed by that object and the object itself. Why does a baseball have the capacity to break a window when hit off the bat with a certain

amount of speed? Because baseballs are fairly dense and windows fairly fragile. The fragility of the window and the density of the ball contribute to the explanation of why the ball broke the window. Yet this seems to be an explanation varieties of nominalism other than ostrich nominalism are unable to accommodate. Consider the other varieties of nominalism at which we have looked. All are what David Armstrong calls relational theories. They each explain property possession in terms of an object’s relation to another object — either a class, a paradigm, or a predicate.

**Class Nominalism:** a is F if and only if a belongs to the class of F’s.

**Resemblance nominalism:** a is F if and only if a suitable resembles a paradigm instance of F.

**Predicate nominalism:** a is F if and only if a falls under the predicate F.

Though each of the above is a relational theory, none of these theories involves one in constituent ontologies. The class to which a belongs in virtue of which a is F is not itself a constituent of a, neither are the paradigms a resembles, nor the predicates a falls under. But if a’s being F is accounted for by means of some external relation to a second object, and that object is not itself a constituent of a, then it would seem that we have located the origin of a’s causal powers outside of a itself. Consider: The predicate nominalist agrees that a is capable of breaking a window because of its density. Its density though is simply a matter of a’s falling under a certain predicate. But now imagine that predicate did not exist, would it then be the case that a would be unable to break a window? Clearly not. But that seems to be a claim to which the predicate nominalist is committed, for having identified a’s being dense with a’s relation to an external object, the moment that latter object ceases to exist a ceases to be dense. But then, the origin of a’s causal powers lie not within a itself, but rather within its relations to certain external objects. This is clearly an unwelcome result.
The above considerations also point to an additional defect in relational versions of nominalism. The defect is this: Relational versions of nominalism seem to place the cart before the horse. Let me explain. These varieties of nominalism claim objects possess properties as a result of those objects standing in some external relation to some sort of second object; e.g., because they fall under a predicate, or belong as members to a certain class, or resemble some paradigm. But such an answer to the problem of property possession makes impossible any explanation of why an object falls under a certain predicate, belongs to a certain class, or resembles some paradigm. Normally, in order to explain such phenomena one would appeal to the properties an object possesses; e.g. \( a \) belongs to the class of Fs because \( a \) is F. But this possibility is precluded by the nature of the nominalist's answer. Hence, we are left without any justification for why objects fall under predicates, belong to classes, or resemble paradigms. And this indeed is a baffling situation in which to find oneself.

Unlike before, with my criticism of trope nominalism and metaphysical realism, I do regard these criticism as being decisive. It is unacceptable that relational versions of nominalism can neither locate the causal powers of an object within the object itself, nor explain why it is that an object enters into those relations that define its properties. Reason calls on us to reject these accounts. But if this is so, then we once again have reason to challenge Lewis' assumption of egalitarianism. Ostrich nominalism does not encounter the problems other nominalist theories encounter. Since it eschews a relational analysis of property possession, choosing instead to regard property possession as \textit{sui generis}, ostrich nominalism avoids the sorts of relational analyses that generate the above problems. Objects fall under predicates, belong to classes, resemble paradigms, and act as causes because of their properties. Ostrich nominalism supports
these basic intuitions about objects. Bringing together the various considerations of this section, I conclude that there are good reasons for favoring ostrich nominalism over all of the other theories we have considered.

§ 3.3 A Summing Up.

Summing up the last two sections (§2 & §3), I have argued against the orthodoxy that in order to solve the problem of universals one must, in addition to solving the linguistic problems of predication and abstract reference, provide a non-regressive analysis of property possession. There is no such analysis to be had. Property possession is not reducible to any other more basic phenomenon. Both relational and non-relational attempts at such reduction fail. We ought reject the orthodoxy that demands such an analysis. I have also argued against Lewis’ assumption of egalitarianism. Once the request for a non-regressive reductive analysis of property possession is dropped as unattainable and primitives are allowed into the mix, it is not the case that all the theories we have considered are on a par. Specifically, in this setting, there are strong reasons for favoring ostrich nominalism over trope nominalism, metaphysical realism, and all other varieties of nominalism. Ostrich nominalism enjoys an advantage not only of numerical simplicity, but also of explanatory simplicity. It answers the ontological problem of property possession while avoiding the difficulties encountered by the other theories. Particulars have properties. This is a brute fact about particulars. And two particulars a and b resemble one another in respect to a property F if and only if a is F and b is F. Such a response does not mean that property possession cannot be explained. Of course we can explain why my car is white. Such explanations, however, come from science — not metaphysics. My car is white because it has a microstructure that reflects light at a certain frequency. Its whiteness has nothing to do with the instantiation of
universals, tropes, or resemblances to a paradigm. Such a conclusion heralds the triumph of science over pseudo-science. Such a conclusion is dictated by common sense. This is the conclusion we should accept.

In accepting this conclusion, we simultaneously reject the orthodoxy that there exists a singularist solution to the problem of universals, for in taking property possession to be *sui generis* we reject the notion that property possession admits of analysis in terms of some favored sort of entity. Hence, there will exist no entity in terms of which an adequate solution to all three of the sub-problems to the problem of universals may be formulated. It may still be the case that considerations elsewhere force us to admit universals, tropes, classes, or paradigms into our ontology; it is not, however, the case that the analysis of property possession forces such entities on us. And if this is so, then singularism fails.

In the wake of these conclusions, however, the more reasonable request for accounts of the linguistic phenomena of predication and abstract reference remain. In the final substantive section of this chapter, I argue that having accepted a view according to which property possession is *sui generis*, universals and tropes play no role in the analysis of the linguistic phenomenon of predication. The phenomenon of predication, I argue, is best understood in terms of Quine’s syncategorematic treatment of it. A sentence such as “a is F” is true if and only if a satisfies the predicate F. We reject, then, a referential understanding of predicates. In the next chapter, I then go on to consider the linguistic phenomenon of abstract reference. Here, I will argue that though nominalism lacks the resources necessary for offering an account of this phenomenon, this phenomenon still provides no reason for the re-introduction of universals or tropes into our ontology. Instead, I argue in chapter IV that the phenomenon of abstract reference
is best analyzed in terms of the notion of a kind. Abstract singular terms, I argue, have as their referents kinds, where the notion of a kind is to be distinguished from the notion of either a trope or universal. Metaphysical realism and trope nominalism, then, are rejected not only for their failure to provide a singularist solution, but also for their failure to provide individual answers to any of the three problems that constitute the problem of universals.


An immediate consequence of our refusal to countenance any account of property possession other than the ostrich nominalist's as adequate is that we must reject the answers the metaphysical realist and trope nominalist give to the linguistic problem of predication. There are two forces motivating this rejection: First, as noted previously, it seems unlikely that a study of language alone is able to bear the weight of such ontological posits. Such a study would likely be sufficient if it were determined the making of such posits was the sole method for understanding the phenomenon of predication, but as we shall see it is not. And as it is not, and, moreover, as the other methods involve ontologically more economical theories, the phenomenon of predication provides no reason to accept either tropes or universals. Second, and equally if not more important, if the conclusions drawn in the last section are correct, then metaphysical realism and trope nominalism are ill suited to provide accounts of predication. Consider what the request to offer an account of predication invites one to do. For the philosopher who takes the problem of universals seriously and who rejects, even in some small area of discourse, irrealist accounts of linguistic truth, it invites one to explore the metaphysical grounds for the attribution of a predicate to a subject. Call this the Grounding Problem. We take it as a given that we are able to make meaningful descriptive utterances about our environment. Language is about the world. The

76 Chp. 2, p.49
grounding problem is the problem of explaining how it is that the truth of linguistic utterances may be grounded in non-linguistic fact. Thus construed, the problem of predication is the problem of articulating a correspondence theory of truth for the predicate claims contained in some area of discourse. But if this is right, and I am right in claiming universals and tropes play no role in explaining property possession, then universals and tropes play no role in explaining the linguistic phenomenon of predication. After all, if the request for an account of predication is a request for the ontological grounds that render such statements true, then every such analysis of predication must culminate in an account of property possession. But, then, as universals and tropes have been rejected as unsuitable for explaining property possession, they will similarly be of no use in explaining the linguistic phenomenon of predication. We must look elsewhere for an account of predication other than to already discredited entities and theories. What is required is a theory of predication that proves consistent with our prior determination that property possession is sui generis. In the literature at least two such theories may be found: Ruth Marcus’ divided reference theory of predication, and Quine’s syncatégorematic or no reference theory of predication. Both of these theories merit our attention.

§ 4.1 Ruth Barcan Marcus and a Divided Reference Theory of Predication.

One possibility for meeting the requirements articulated above lies in the adoption of the theory of predication Ruth Marcus suggests in “Nominalism and the Substitutional Quantifier.” In this work, Marcus suggests that the nominalist interested in avoiding ontological posits may regard predicates as having a divided reference and “reconstruct the predication relation as one that holds between individuals.” As I understand it, Marcus’ suggestion amounts to the following: There is

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a genuine difference between subject terms and predicate terms. Both have referential force, but where subject terms denote singular entities, or at least entities considered as such, predicates have a divided reference — they denote a multiplicity of objects. Importantly, however, subject terms and predicate terms do not name different sorts of objects. They name the very same sorts of objects — the difference is that subject terms name objects singularly while predicates name them multiply. In illustrating this view Marcus writes the following:

"Let 'S' name some individual and 'P' be a monadic predicate, then 'S is P' is interpreted as saying that S is identical with one of the referents of P. 'P' does not name a set here. The relation of predication is that of identity with one of the referents of the predicate. There is no new object for the predicate to name."

So, considering the simplest sort of subject-predicate sentence, a sentence of the form “a is F,” this ought not be interpreted as expressing a relation between two distinct objects but rather should be interpreted as the expression of a special sort of identity. What makes “a is F” true, if it is true, is, on this suggestion, the fact that the denotatum of “a” is also among the denotata of “F.” What “a is F” literally expresses is that the referent of “a” is identical to one of the referents of “F.”

*Prima facie,* this suggestion seems similar to the account of predication that the class nominalist gives. The class nominalist says that a predication claim is true just in case the subject of the claim belongs to the class which the predicate names. But, as we have seen, this suggestion runs into trouble. For as the analysis of predication must ultimately dovetail with an analysis of property possession, such an understanding of predication reintroduces the problems that generated Armstrong’s regresses. Marcus’ suggestion, however, avoids this difficulty. She is clear on the matter that her predicates do not name sets or classes. For Marcus, predicates name individuals. They are simply capable of naming more than one individual at a given time. Hence, her account is consistent with a view of property possession according to which this phenomenon
is taken as sui generis. Such a result makes Marcus’ theory an attractive one. It is also a simple and elegant account of predication. Set theoretically, it wears its truth conditions on its sleeve.

One fixes the reference of the subject terms within the model, then fixes the potentially multiple reference of the predicate term within the model, and then simply looks to see whether the denotatum of the subject term is among the denotata of the predicate term. If it is, then, the predication claim is true. If it is not, then that claim is false.

There are, however, problems for the theory Marcus has articulated. Specifically, Marcus has trouble differentiating co-referential predicate expressions. Predicates, she claims, refer. They refer multiply to a number of particulars. But if this is so, then it can be shown that Marcus’s account of predication is incapable of distinguishing between predicates with the same denotata. The proof is as follows: Assume, “is triangular” differs from “is trilateral.” Additionally, assume that a predicate’s meaning is exhausted by its referents. This is merely the adoption of the Millianism that usually accompanies referential theories. Further, assume for reductio that Marcus is right in maintaining that predicates refer multiply to individuals. Then, two predicates will have the same meaning if and only if they count the same individuals among their denotata. But it is a necessary truth that anything that is triangular is also trilateral, and vice versa. Thus, “is trilateral” and “is triangular” count all and only the same individuals among their denotata. Hence, “is trilateral” and “is triangular” must have the same meaning. But clearly they do not — “is trilateral” refers to the number of sides a figure possesses; “is triangular” refers to the number of angles a figure possesses. Consequently, we must reject our reductio assumption and conclude, puce Marcus, that predicates do not have a divided reference.
A second problem with Marcus' suggestion is this: Earlier we said that one objective in offering an analysis of predication was to answer the *grounding problem*, i.e., to explain how linguistic truth might be grounded in non-linguistic fact. But Marcus' suggestion provides no real explanation of how a predicate gains application to a subject. We assume that the application of predicates to subjects does not occur within a vacuum. There must be some underlying condition of the object to which a predicate applies that legitimizes that predicate's application. The problem with Marcus' theory is that she gives us no hint as to what that condition might be. All she says is that the predicate applies because it counts among its *denotata* the very same object as that to which the subject term of the predication claim refers. What emerges, then, is a view of objects as featureless unities falling under predicates not because of any feature they might possess but rather simply as a matter of brute fact. Clearly more is required. Though Marcus' account of predication proves consistent with our prior acceptance of property possession as *sui generis* we cannot endorse it in good faith. It leaves too many unanswered questions. It is for this reason that I now turn to a consideration of Quine's syncategorematic treatment of predicates.

§ 4.2 The Quinean Solution.

Where Marcus asserts that predicates are to be understood referentially as having a divided reference, Quine suggests that predicates may be treated as syncategorematic expressions — expressions, that is, that lack any referent. This view grows out of Quine's criterion of ontological commitment contained in "On What There Is," and though this view is well known it remains under appreciated. It not only provides us with an account of truth for subject-predicate sentences, it also provides us with an explanation for how predicates find their application to a subject. Before I address these subjects, however, more needs to be said of the Quinean project.
In "On What There Is" Quine suggests that the correct criterion for measuring one's ontological commitments lies not in the names one countenances in one's vocabulary, but rather in one's use of bound variables. "Names," he writes, "are, in fact, altogether immaterial to the ontological issue"\(^78\), for, as he explains, "one can repudiate their namehood at a drop of the hat."\(^79\) What matters is not the names we use, but the entities we show ourselves willing to quantify over to provide values for our bound variables. "To be assumed as an entity," he writes, "is purely and simply, to be reckoned as the value of a variable."\(^80\)

We are convicted of a particular ontological presupposition if, and only if, the alleged presupposition has to be reckoned among the entities over which our variables range in order to render our affirmations true.\(^81\)

Now the importance of this principle for the issue at hand is this: In first order logical theory predicates are not bound variables. Thus, predicates are denied by Quine any independent ontological significance.

"Some dogs are white" says that some things that are dogs are white, and in order for this to be true, the things over which the bound variable "something" ranges must include some white dogs, but need not include doghood or whiteness.\(^82\)

Predicates, then, do not refer. There is no object, abstract or concrete, that predicates pick out. Neither should predication be treated as a relation between objects. In short, predicates are to be treated syncategorematically. They have semantic significance but that significance is not derived


\(^79\) Ibid., p. 12.

\(^80\) Ibid., p. 13.

\(^81\) Ibid., p. 13.

\(^82\) Ibid., p. 13.
from a naming relation and, hence, is not to be understood in terms of reference to an object.
This, of course, accords well with our earlier conclusion that the problem of predication does not
provide a grounds for the making of any ontological posit, for if predicates are not referential
terms, then there can be nothing, universals included, that they denote.

 Nonetheless, even Quine must agree that predicates make a semantic contribution to the
sentences in which they appear. It is necessary that we explain how this is possible given the
denial of reference to such terms. In *Nominalistic Systems*, Rolf Eberle explains how this is
accomplished. This explanation is cast in terms of the notion of satisfaction “by providing a
semantical interpretation for sentences containing predicates in such a way that no extensions are
assigned to the predicates.”83 He illustrates the feasibility of such a program through the use of the
following example:

**EXAMPLE:** Let the language L comprise the one variable ‘x’; the formulas ‘x is a
mermaid’, ‘Mary is a mermaid’, and for all formulas ø the sentence ‘(∃x) ø’. All
formulas of L are assumed to be formulas of the meta-language as well. A
universe of discourse for L is any non-empty set. If D is such a universe,
satisfaction conditions are specified for all formulas of L as follows:
1. y satisfies ‘x is a mermaid’ in D if and only if y is in D and y is a
   mermaid;
2. y satisfies ‘Mary is a mermaid’ in D if and only if y is in D and Mary is a
   mermaid;
3. y satisfies ‘(∃x) ø’ in D if and only if there exists an item z in D such that z
   satisfies ø in D.
A sentence shall be true in D just in case every element of D satisfies the sentence
in D.84

And the above analysis may be extended so as to accommodate languages of a greater complexity
either in their number of variables or predicates. The essential thought is that predicates generate

84 Ibid., p. 107.
open sentences of the form 'x is a mermaid' or 'x runs' and such sentences are true if and only if there is some object α within the domain of discourse that satisfies them. As Marcus explains in commenting on Quine’s work, such claims are, “speaking elliptically, true of the objects that satisfy them.” Indeed, there is more than a passing suspicion that what Quine has offered us is a circular account of predication. After all, in order for a predicate claim to be true, the object of that claim must satisfy the open formula generated by the predicate, and the object will satisfy that formula if and only if it is the case that the predicate claim is true. To think this is a criticism of the account, however, is to misjudge the nature of the account Quine offers.

What Quine is saying is this: There are not in addition to the objects we talk about separate features or properties of objects. To say this is not, however, to reject the notion of a feature or property simpliciter. It is simply to reject the notion of a feature or property that enjoys an existence separate from the object that has it. Neither are objects the featureless unities that Marcus’s theory would have us believe. Objects are instead featured unities. Objects have properties — this is an essential and inseparable feature of objects. It must be accepted as a brute fact. One can no more have a propertyless object than one can have a property without an object. Where traditional metaphysics, operating under the assumption of singularism, has seen two or more objects in every one, a Quinean metaphysics sees only the one. It is this kernel of truth that Quine captures in his syncategorematic account of predication. When one says that a sentence such as “Mary is a mermaid” is true what one is saying is that there exists an object, namely a mermaid, named “Mary” that satisfies the open formula “x is a mermaid.” Far from leaving the truth of such sentences ill explained such a theory accomplishes all we could ask of it. It provides

an account of how sentences may be said to be true or false while at the same time explaining the ontological grounds for the application of a predicate. A subject-predicate sentence is true if and only if the subject satisfies the predicate; and a predicate is correctly attributed to a subject if and only if the subject is of the sort indicated by the predicate.

Though we have not talked much of Wittgenstein, the Quinean view of predication as syncategorematic also has the welcomed consequence of avoiding Wittgensteinian worries concerning family resemblance. Briefly, in *The Blue and Brown Books* Wittgenstein criticizes the metaphysical realist's belief "that in order to get clear on the meaning of a general term one had to find the common element in all of its applications." He does so by adverting to the phenomenon of family resemblance. He writes,

*We are inclined to think that there must be something in common to all games, say, and that this common property is the justification for applying the general term "game" to the various games; whereas games form a family the members of which have family likenesses. Some of them have the same nose, others the same eyebrows and others again the same way of walking; and these likenesses overlap. The idea of a general concept being a common property of its particular instances connects up with other primitive, too simple, ideas of the structure of language. It is comparable to the idea that properties are the ingredients of the things which have the properties; e.g. that beauty is an ingredient of all beautiful things as alcohol is of beer and wine, and that we therefore could have pure beauty, unadulterated by anything that is beautiful.*

The claim is clear, if we are willing to roll up our sleeves and look for that in virtue of which all games are called "games" what we will find is there exists no single feature or conjunction of features that justifies the application of this predicate. Rather, games form a family held together by a loose resemblance to one another. We can think of games as forming types of spectrums.

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87 Ibid., p. 17.
spectrums from, say, least violent to most violent or solitary to team oriented. And concerning the games on either end of these spectrums, say solitaire and rugby, there may be no common feature at all. Other, of course, than the fact that they are games. But the metaphysical realist demands more. He demands that there be some ontological feature over and above their being games that justifies the application of the predicate "game." But there is none. Once again we find we have reason to reject metaphysical realism.

What, though, are the effects of such considerations on a Quinean metaphysics? Rather than calling such a metaphysics into question, Wittgenstein's results support Quine's analysis of predication. We want an objective justification for the application of the predicate "games" to games. The realist denies that this justification can be the fact that games are games — he wrongly demands more. He demands some ingredient in virtue of which all games are games. We, though, repudiate this style of metaphysical thinking. Constituent ontologies, ingredient ontologies, are anathema to the Quinean and ostrich nominalist. What justifies the application of the predicate "game" to both rugby and solitaire is nothing other than the fact that each is a game — each satisfies the open formula "x is a game." Initially, it may be the case that this answer leaves us wanting more. If so, that is an indication of just how deeply ingrained singularism and the quest for ingredients has become in contemporary metaphysics. We do not deny after all that there are explanations available for why solitaire and rugby are both games, but as in the prior case concerning my car's being white these explanations do not come from metaphysics. Solitaire and rugby both being games has something to do with our socio-institutional ways of life, and the diversity of the ways in which we as members of a community seek enjoyment. It has nothing to

do however with the instantiation of universals or tropes, or any resemblance to a paradigm. Indeed, the very notion of family resemblance renders the notion of explaining property possession in terms of some paradigm near impossible.

§ 5. Conclusions.

In this chapter, I have argued that an essential feature of singularism is the notion that there exists a reductive account of property possession. Consequently, I have examined the phenomenon of property possession to see whether it admits of reductive analysis. It does not. Neither relational nor non-relational attempts at such analysis succeed. Non-relational attempts at reduction are incoherent. Relational attempts at reduction yield either infinite regresses or theories lacking in the virtue of theoretical economy. Singularism is thus rejected as being either impossible or, more moderately, improbable. It is rejected in favor of an ostrich nominalism that takes property possession as sui generis. Such a theory is both numerically simpler than its alternatives and offers an advantage of explanatory simplicity — it is more trouble-free than are its alternatives.

In the wake of these conclusion, the more reasonable request for accounts of predication and abstract reference remain. In this chapter, I have not considered what analysis of abstract reference ought be given. That is the subject of the next two chapters. I have, however, considered what sort of analysis of predication might be given. Once again my consideration of predication yields additional reasons for the rejection of metaphysical realism, trope nominalism, and relational forms of nominalism. The request for an account of predication is the request for the ontological grounds that render predications true or false. But then, every analysis of predication must culminate in an account of property possession. Hence, as the entities these
theories employ to explain property possession have been rejected as either uneconomical or unsuitable, considerations revolving around predication yield no reason for their reintroduction. What we desire is an analysis of predication that is both consistent with our assertions that property possession is \textit{sui generis} and which grounds linguistic truth in non-linguistic fact. In the last portion of this chapter, I have argued that the Quinean view of predicates as syncategorematic terms meets these requirements.
Chapter 3:
The Problem of Abstract Reference

...universals have not been wanted solely to account for predication; they have been thought necessary to play other roles as well, such as being the objects of thought and the subject matter of necessary truths or laws of nature. To give a thoroughgoing defense of Nominalism, one would have to show that universals can be dispensed with in these roles too...
— James Van Cleve, *Predication Without Universals? A Fling with Ostrich Nominalism*

In the previous chapter, I argued that the phenomena of predication and property possession do not provide a grounds for the admission of either tropes or universals into one's ontology. Both the ontological phenomenon of property possession and the linguistic phenomenon of predication may be adequately treated by an ostrich nominalism in combination with a syncategorematic treatment of predication. Ostrich nominalism I identified as the ontological theory that holds property possession to be sui generis. A syncategorematic treatment of predication entails a denial of reference to predicates. Predicates derive their semantic significance not from a naming relation, but, rather, a relation of satisfaction or 'being true of.' Such a view, I have argued, not only enjoys an advantage of numerical simplicity over its rivals. It also enjoys an advantage of explanatory simplicity over them.

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1 Chp. 2, pp.69-73.
3 Chp. 2, pp.88-89; also Chp. 4, pp.183-198.

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In making these arguments, I find myself in good company. James Van Cleve, Bruce
Aune, Michael Devitt, and W.V.O Quine have all at one time or another defended ostrich
nominalism as providing an adequate solution to the problems of property possession and
predication. At the same time, and despite the fine work of the above theorists, it is generally felt
that ostrich nominalism cannot be a part of the solution to the problem of universals. The
problem of universals, the argument goes, is a problem made up of three parts — the problem of
property possession, the problem of predication, and the problem of abstract reference. Even if
we grant that ostrich nominalism is able to adequately respond to the first of these two problem, it
is unable to ground a suitable answer to the third. Hence, it is concluded, that ostrich nominalism
must play no role in the solution to the problem of universals. There are two elements to this
argument that demand our scrutiny. First, we need to investigate the claim that ostrich
nominalism is unable to provide an answer to the problem of abstract reference. It is with this
topic that the present chapter is concerned. An investigation of the problem of abstract reference,
I argue, supports this conclusion. No version of nominalism (ostrich nominalism included) is
able to adequately respond to the problem of abstract reference. Second, we need to investigate
the claim that since ostrich nominalism fails to provide an answer to the problem of abstract
reference it plays no role in the solution to the problem of universals. Prima facie, the mere fact
that ostrich nominalism provides no answer to the problem of abstract reference does not warrant
the conclusion that ostrich nominalism plays no role in the solution to the problem of universals.

and Phenomenological Research, Vol LIV, No. 3 (1994); Bruce Aune, Metaphysics: The Elements, Chps. 3 & 4.
Minneapolis, University of Minnesota Press, 1985; Michael Devitt & Kim Sterelny, Language and Reality.

5 For example, see: David M. Armstrong "Against ostrich Nominalism: A Reply to Michael Devitt,"
In order for this conclusion to follow, the argument needs an additional premise — one that links the failure of a theory to address all three problems to its suitability as a component within any adequate solution. A plausible premise of this sort, however, would be difficult to articulate. A first stab at such a premise might be something like the following: no theory that fails to adequately address any one of the three problems that constitute the problem of universals can play any role in the correct solution to that problem. Such a premise provides the sort of connection between the premises and the conclusion necessary for making this argument valid. Such a premise, however, is extraordinarily problematic. Consider: The metaphysical realist has a theory of predication according to which predicates stand in a referential relation to universals. Sentences of the form “a is F” are to be analyzed as a exemplifies the universal F-ness. The metaphysical realist claims that this theory provides an adequate solution to the problem of predication. But, by itself, this theory is unable to provide a solution to the problem of universals. It does not speak at all to the problem of abstract reference, it concerns itself only with the reference of predicates and not the reference of proper names or singular terms. Must we then conclude this theory plays no role in the articulation of a solution to the problem of universals? Clearly not. It may turn out to be the case that metaphysical realism fails to provide an adequate solution to this problem, but if it fails it is not because the theory of predication the metaphysical realist accepts fails by itself to answer all three of the problems that constitute the problem of universals. The problem with the premise we are considering is it assumes that if a theory is unable to answer some problem, call it X, then that theory cannot be a part of a larger theory that does answer the problem X. But this is false. Theories are often times built out of parts that are themselves theories.
We should reject the above argument. Even if ostrich nominalism is incapable of answering the problem of abstract reference, it does not follow from this fact that ostrich nominalism plays no role in a satisfactory solution to the problem of universals. It remains to be seen whether or not ostrich nominalism may be supplemented in a way that makes it fully adequate. This is the subject of Chapter IV. In Chapter IV, I argue that ostrich nominalism together with an acceptance of kinds provides a solution to the problem of universals and, moreover, that this solution ought to be favored over those offered by the trope nominalist or metaphysical realist. Within the theory I sketch, ostrich nominalism provides the solution to the problems of predication and property possession while an acceptance of kinds, as distinct from universals or tropes, provides a solution to the problem of abstract reference. If I am right, then, at the end of the day, when deliberation is done, there will still exist good reasons to favor some, now supplemented, variety of ostrich nominalism over its competitors. Prior to a consideration of these arguments, however, it is first necessary to consider the problem of abstract reference. It is to this task that I now turn.

§ 1. The Phenomenon of Abstract Reference.

As was indicated in the introduction, the problem of abstract reference revolves around the question of how best to understand the use of certain terms that *prima facie* name or refer to properties — terms such as "redness", "triangularity", or "honesty." 6 Call these terms, for lack of a better name, "abstract singular terms." 7 Both the metaphysical realist and trope nominalist claim these terms are genuine singular terms. Hence, they are said to derive their meanings from a

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6 Chapter I, p.6.

7 Chapter I, p.6.
relation of naming. They stand, within the sentences in which they appear, for the objects they
designate. And each term is singular in that it is held to have but one referent. Such is the role
singular terms are said to play within semantic theory. Each genuine singular term is object
denoting.8

The existence of terms like “redness”, “triangularity” and “honesty” has in recent years
been the focus of the debate over universals. Metaphysical realists and trope nominalists have
argued that nominalism is unable to provide a satisfactory account of abstract singular terms. The
classic articulation of this argument is found in Arthur Pap’s “Nominalism, Empiricism, and
Universals.”9 Elaborations on this argument can be found in Frank Jackson’s “Statements about
Universals”, Loux’s *Substance and Attribute*, and Armstrong’s *Nominalism and Realism*. In
discussing the features of this line of argument, I will stay closest to the version of the argument
Loux articulates in *Substance and Attribute*. I do this not because his discussion differs in
important ways from that of the others but, rather, because he makes explicit the important role
the notion of a singular term plays within the argument. Even so, I will not be offering a
reconstruction of his argument so much as a way to conceptualize the structure of that argument.

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In its details, the argument Loux presents is quite simple. It can be summarized as follows: 1) Either terms such as “redness” and “triangularity” are genuine singular terms or they are not. 2) Assume, to start, that they are genuine singular terms. 3) Then, from the definition of such a term, each such term must designate one and only one object. 4) Hence, it is the requirement for any adequate theory of abstract reference that, within the theory, one be able to fix the reference of all such terms. 5) Nominalism purports to be such a theory. 6) But within nominalism one cannot fix the reference of such terms. 7) Hence, either nominalism must be false or such terms must not be genuine singular terms. 8) Such terms are genuinely singular. 9) Hence, nominalism is false. Obviously much of the weight of this argument falls on premises six and eight. If “redness” and “triangularity” are genuine singular terms and we can secure the truth of premise six, then it would seem that we are in a position to deal a serious blow to the nominalist program. Before we can evaluate this argument, however, we will first have to say more on the notion of a singular term. What we require is criteria of singularity articulating necessary and sufficient conditions for the delineation of the class of genuine singular terms.

§ 2. Singular Termhood.

Initially, it seems plausible to think that the sort of criteria we demand may be formulated from grammatical considerations alone. Criteria of singularity must differentiate singular terms from general terms — differentiate, that is, terms such as the name “Jeff Crowe” which purport to name objects singularly from common names like “the Crowes.” In *Word and Object*, Quine

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111 Of course it might be held that even a proper name like “Jeff Crowe” is capable of naming more than one object. It might, for example, be held to name all those individuals named “Jeff Crowe.” I think this response, however, is shortsighted. It seeks without any sensitivity to the contexts within which they occur to obfuscate the distinction between a name like “Jeff Crowe” on the one hand and a common name like “the Crowe” on the other. Context is important here. Though it is true that “Jeff Crowe” might name more than one individual on each occasion of the terms use there is one and only one individual to which the term refers. This is not the case for a terms such as “the Crowes.”
offers the following definition: “if a term admits the definite and indefinite article and the plural ending, then normally under our perfected adult usage it is a general term.” Conversely, if a term, e.g. ‘mama’, admits only the singular grammatical form and admits of no article, then it is singular. Yet there are problems with the criteria Quine advocates. It fails to correctly classify some terms. Consider, for example, the term from which “mama” is derived, i.e., “mother.” “Mother” admits of both indefinite and definite articles as well as a plural ending. Consider, for instance, the following sentences: “A mother is a valuable thing to have growing up”; “mothers are honored on mother’s day”; “The mother of my friend is still young.” By Quine’s criteria the term “mother” must be classified as a general term and, hence, should never be thought to function as a singular referring expression. But surely there are instances in which it does function as a singular referring expression. I was in a store recently when a child who had been separated from his mother screamed “Mother, where are you?” The store was crowded. The child was near a number of adult females some of whom were undoubtedly mothers. Yet if they and not his mother had come to him, he would not have been comforted. In such a context the child’s utterance of “mother” functions as a singular term. It is used by the child to denote a particular person, namely his mother and no other. Though this example may sound contrived, it points to a critical failing in the criteria Quine has offered. Quine accepts a distinction between singular terms and general terms. He defines a general term as any term that “admits the definite and indefinite article and the plural ending.” According to this criteria “mother” must be thought a general term and never a singular term. But as our example shows their are occasions in which


13 Ibid., p. 90.

14 Ibid., p.90.
the term "mother" functions as a singular referring expression. The problem with Quine's criteria
is this: It fails to be sensitive to the context of a term's utterance. The very notion of asking of a
term whether it admits of indefinite and definite articles or plural endings suggests that the term in
question may be plucked from the context in which it appears and be considered separately. But
surely this is a mistake. The term "mother" though it admits of both indefinite and definite articles
and a plural ending is itself, considered by itself, neither a singular term nor a general term,
though relative to some context it is capable of being either. It is general as it occurs in the
sentence "A mother is a wonderful thing to have" and it is a singular term when used by the child
to call out to his mother as when he yells "Mother where are you?" We should reject the attempt to
draw a distinction between general and singular terms based on very general grammatical
distinctions. What matters most to whether a term is general or singular is the inferential role it
plays within the contexts in which it used. Moreover, we recognize that orthographically
identical terms may differ on the matter of being singular or general depending upon the
occasions of their use.

§ 2.1 The Dummett/Hale Criteria of Singular Termhood.

Better than the criteria offered by Quine are those offered by Michael Dummett in Frege: Philosophy of Language and improved upon by Bob Hale in Abstract Objects. Both Dummett
and Hale reject purely grammatical criteria of singular termhood in favor of criteria that take into
account the inferential roles such terms play within the sentences and contexts in which they
appear. The basic idea behind both authors' discussions of singular terms is this: Certain
inferences are valid only when certain terms occupy certain positions in the premises. And

though no single inferential pattern is sufficient for a delineation of the class of singular terms, both Dummett and Hale maintain that together several such patterns do jointly yield a set of necessary and sufficient conditions for delimiting the class of such terms. Of the two discussions, it is Hale’s that I will focus on most closely. The justification for doing so lies in the fact that Hale’s discussion is the later of the two and explicitly addresses some of the difficulties found in Dummett’s earlier treatment of the topic. In discussing Hale’s criteria, I will first present the criteria as stated, explaining for each condition the rationale behind it. I will then defend Hale’s criteria from certain recent objections. Specifically, I will defend his criteria against Linda Wetzel’s objection in “Dummett’s Criteria for Singular Terms” that the Dummett/Hale criteria fails to clearly “delimit the class of singular terms.”¹⁶ Finally, in the last portion of this section, I argue in favor of a condition Dummett includes in his criteria but which Hale excludes, namely a condition of ineliminability. Genuine singular terms, I claim, are ineliminable from the sentences and propositions in which they appear. I begin, however, with an examination and discussion of Hale’s criteria; they are as follows:¹⁷

T functions as a singular term in a use A(t) iff

1) In that use of A(t), the inference from A(t) to ‘there is something such that A(it)’ is valid.

2) In that use of A(t) and some use of some sentence B(t), the inference from A(t), B(t) to ‘there is something such that A(it) and B(it)’ is valid.

3) In that use of A(t) and some use of some sentence B(t), the inference from ‘It is true of t that A(it) or B(it)’ to ‘A(t) or B(t)” is valid.

¹⁶ Linda Wetzel, “Dummett’s Criteria for Singular terms,” Mind Vol.XCIX, No.394 (1990), pp.239-254. Note that Wetzel explicitly takes herself to be replying to Hale as well as Dummett: in her introductory paragraph she writes, “I shall argue that Dummett’s Criteria, even as amended by Crispin Wright and Bob Hale, do not delimit that class of singular terms in English.” p.239.

and;

4) the conclusions reached in (1) and (2) cannot be such that a point may be reached where a grammatically well formed request for further specification can be rejected as illegitimate.

Criterion #1.

Criterion (1) show us that the inferential patterns that Dummett and Hale think important to the identification of singular terms are those involving existential generalization. This is to be expected. Genuine singular terms are assumed to be object denoting. Hence, the use of a singular term by a sincere speaker entails an ontological commitment. If I say that “Pierre is in Paris”, then it seem that I am committed to countenancing within my ontology the existence of an individual named “Pierre” who, at the time of my utterance, I believe to be in Paris. So much is hopefully clear. Sincerely uttered singular terms bring with them an ontological commitment that licenses inferences of the following sort:

1) a is F
2) ∃x (Fx)

The point of the above criterion, however, is not simply that of making our ontological commitments clear; rather, its aim is to help delimit the class of singular terms. It serves this function by excluding certain terms (e.g., “no one”, “nobody” and “nothing”) which function grammatically as singular terms function, but, nonetheless, designate no entity or object. Such considerations point to another defect with purely grammatical criterions. There exist terms that function grammatically as do singular terms, but which quite clearly serve no referential function. Take, for instance, the term “nothing.” Quine’s criterion would count such a term as being singular. It neither admits of a plural ending nor a definite or indefinite article. Yet if singular
terms are, as we assume, object denoting, "nothing" cannot be a singular term, for there is no object for it to denote. Criterion (1) captures this distinction between genuine singular terms and those terms that merely mimic the grammatical roles singular terms play within language.

Criterion (1) alone, however, is insufficient for the delineation of the class of singular terms. Among its faults is that it does not rule out "something" or "someone" from that class. From "something is red" one can validly infer "there is something such that it is red." So too, from "someone is tall" one can validly infer "there is something such that it is tall." But this is troublesome. Singular terms are not only supposed to be referential terms (something criterion 1 guarantees) but they are also supposed to be definitely referential. "Something" and "someone", though they are referential terms, are not definitely referential — they fail to pick out any specific individual. Hale's second criterion excludes indefinitely referential terms from the class of singular terms. Every genuine singular term must be such that given two uses of that term, a use A(t) and some use B(t), the inference from A(t), B(t) to "there is something such that A(it) and B(it)" is valid. This pattern of inference holds for definitely referential terms but does not hold for indefinitely referential terms. Criterion 2 excludes terms such as "something" or "someone" from the class of genuine singular terms.

Hale's relativisation of his criterion to the uses of a term also solves one of the problems with Dummett's original discussion of singular terms. The Dummettian counterpart to Hale's criterion (2) is the following: "From two sentences A(a) and B(a) it shall be possible to infer that
"there is something such that A(it) and B(it)." The problem with such a criterion is that it would exclude a good many terms that have dual uses as being singular terms. Thus, since we cannot infer "there is something such that it is both increasingly scarce and much improved today" from the sentences "the whale is much improved today" (talking of a specific whale) and "the whale is increasingly scarce" (talking of the species) we would have to say, according to the Dummettian criterion, that "the whale" is not in either of these two sentences a singular term. Worse still, this argument could be run on almost any proper name. Consider the following two sentences:

i) Paul Newman is an actor.

ii) Paul Newman is my friend.

Though each of the above sentences uses orthographically the same term, "Paul Newman", they concern different individuals. One concerns the actor and movie star who played the leading role in *Cool Hand Luke*. The other is a close friend of mine who was both my college roommate and an usher at my wedding. Given that these sentences concern two different individuals, one cannot validly infer from *i* and *ii* that "there exists something that is both an actor and a friend of mine." But then, according to the Dummettian criterion, neither of these uses of "Paul Newman" can be counted as the use of a singular term. Why? Because there are occurrences of the term "Paul Newman" that when conjoined do not license inferences of the sort Dummett requires. But this is unacceptable. Proper names are paradigmatic singular terms. If they are not counted as singular terms, then no terms will be so counted. The problem, of course, is that the Dummettian criterion fails to be appropriately sensitive to the fact that terms may differ even if they are orthographically

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identical.\textsuperscript{19} By relativising his criteria to the uses of a term and requiring only that there be some other use B(t) that together with an original use A(t) license an inference to “there is something such that A(it) and B(it)” Hale solves this problem. Both uses of “Paul Newman” count as singular terms. So too will both uses of “the whale” count.

\textit{Criterion #3.}

By themselves, criteria 1 and 2 do not successfully delimit the class of singular terms. Though we have now ruled out terms that have no reference (e.g., “nothing” or “nobody”) and those that have only an indefinite reference (e.g., “something” or “someone”), we have yet to rule out those terms like “everything” that have a definite reference to more than one object. Our criteria as developed thus far would count “everything” as being a member of the class of singular terms. So too, it would count many plural nouns and noun phrases. So, from “everything is red” and “everything is extended” one can validly infer both that “there is something such that it is red” and “there is something such that it is red and extended.” Similarly from “tables are four legged artifacts” and “tables are useful” one can validly infer that “there is something such that it is a four legged artifact” and “there is something such that it is a four legged artifact and useful.” But if any terms should be excluded from the class of singular terms, these terms are they. Singular terms, after all, are taken to denote singular objects and are taken to function in a way strictly analogous

\textsuperscript{19} It might be objected that Dummett is not insensitive to this problem. He does after all spell out his criterion with the help of variable letters and requires that the same variable be used in each sentence. Thus, one might think his use of variables entails a type of relativisation to uses. Since the use of “Paul Newman” in i) and ii) name or designate different individuals, one could argue that they could not be represented by the same variable letter within a logically perspicuous language. Unfortunately, Dummett’s illustrations of his criterion demonstrate that he does not have this sort of problem in mind. See: Michael Dummett. \textit{Frege: Philosophy of Language}. Cambridge, Harvard University Press, 1981. pp.59-61.
to the manner in which proper names function. Intuitively, neither “everything” nor “tables” functions in this manner. They name objects not singularly, but rather multiply. What is needed is an additional criterion that excludes such terms.

It is this need that Hale’s third criterion is designed to meet. From “it is true of everything that it is either red or blue” one cannot validly infer “either everything is red or everything is blue.” After all, some objects could be red and still others blue. Neither can an inference of this sort go through in those cases where the subject position is occupied by a plural noun phrase. From “it is true that desks are either wood or metal” one cannot validly infer that “either desks are wood or desks are metal.” Such inferences are however valid when the subject position is occupied either by a proper name or a term that serves a definite but singular referential function. From “it is true of John that he is either intelligent or moronic” one may validly infer that “either John is intelligent or John is moronic.” So too, from “it is true of the current president of the United States that he is either popular or unpopular” one may validly infer “either the current president of the United States is popular or the current president of the United States is unpopular.” And again, as with criterion 2 before it, Hale’s relativisation of a term to usages is crucial here, for what such a relativisation allows one to do is to distinguish proper names from plural nouns. Without relativisation of a term to its uses, proper names would function much as plural nouns function. “John” would not single out a specific individual but would, rather, distinguish a group of individuals, namely all those individuals named “John.” By relativising a term to its uses this troubling result is avoided.
Criterion M.

Finally, more so than the other three, Hale's fourth criterion stands in need of some explanation. The problem the fourth criterion is meant to address is this: After excluding non-referential terms (criterion 1), terms that have only an indefinite reference (criterion 2), and terms that though having a definite reference refer to multiple objects (criterion 3), we are still confronted with terms that meet all of our stated criteria yet which, intuitively, are not singular terms. Specifically, we need a criterion for distinguishing between first and second-level generalities. Consider the following two sentences:

a) A policeman is needed here.

b) A policeman would be welcome here.

From (a) one may validly infer "there is something such that he is needed here." From (a) and (b) one can validly infer "there is something such that he is needed and would be welcome here." And from "it is true of a policeman that he would either be welcome or needed here" one may validly infer "either a policeman would be welcome here or a policeman is needed here." The use of "a policeman" in the above two sentences meet all of our stated criteria for being a singular term. Yet, "a policeman", as used, names or designates no individual — it is being used in the above sentence to express a second level generality. The problem, broadly stated, is that many expressions of second order generality meet our criteria without definitely designating an individual entity. Hale's fourth criterion is intended to exclude such terms. According to both Dummett and Hale, a term is of the second level of generality "if a point may reached where a demand for further specification is still grammatically well constructed, but is nevertheless rejected as illegitimate." 20 Dummett illustrates this criterion as follows: Consider first the use of

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“something” to indicate first-level generality, Dummett writes.

Suppose that someone says, ‘George dropped something on his toe’; I can always ask, ‘What was it that George dropped on his toe?’, and I might be given the answer, “A hammer”. If I now ask further, “Which hammer?”, my informant does not have to be able to tell me; but my question was legitimate - it has an answer, whether known or not.21

Contrast this now with the use of “something” to indicate second-level generality. Dummett writes,

Contrast this [the above case] with “There is something which George never learned how to use”. If I ask, as usual, “What is it that George has never learned how to use?”, I may be given the answer, ‘A motor mower’. If I now press further, and ask, “Which motor mower has George never learned how to use?”, it is just possible that I might be told, ‘The one he keeps borrowing from his neighbour — he can manage others all right’ — in which case the speaker was using ‘something’ in the original sentence to express first level generality; but the probability is that my question will be rejected as displaying a misunderstanding. The speaker did not mean that there is some particular motor mower of which it is true that George never learned how to use it, but, rather, that what George has never learned how to do is: to use a motor mower. If the speaker had intended by the word ‘something’ to express first-level generality, then his answer, ‘A motor mower,’ would have been an incomplete answer to my question what George had not learned to use: but, as it was, the answer was a complete one, not admitting of further specification.22

The thought then is this: For each expression of second-level generality it is possible to construct a grammatically well-formed question requesting further specification (e.g. ‘Which motor mower?’) that, though well-formed, may be rejected as illegitimate and as betraying a misunderstanding. There is no specific motor mower with which George has difficulties; he has difficulties with them all.


22 Ibid., p. 68.
§ 2.2 Some Challenges to Dummett’s and Hale’s Criteria.

Recently, in "Dummett’s Criteria for Singular Terms", Linda Wetzel has challenged the criteria Dummett and Hale present. She focuses her challenge on criteria (2) and (4). Criterion (2), she claims, fails to exclude all that it should. Specifically, she argues, pace Hale and Dummett, that criterion (2) is unable to exclude "something" as a member of the class of singular terms. Worse still, is criterion (4). This criterion, she writes, results in an elimination of many genuine singular terms. Specifically, Wetzel charges, "it eliminates many genuine singular terms occurring in prototypical singular term contexts — identity statements." In what follows, I will consider these objections separately, arguing in each case that the problem Wetzel identifies is tractable and, hence, poses no real threat to the Dummettian project.

Consider first the charge that Hale’s and Dummett’s second criterion fails to exclude all that it should. Criterion (2), as we have seen, is designed to exclude terms like "something" and "someone" that, though having a referential force, fail to designate any object specifically. Such terms are of the first level of generality. Hence, they will not be excluded by criterion (4). Nor will they be excluded by criteria (1) or (3). From "Something is red" we can validly infer "there exists something that is red," and from "it is true of something that it is red or green" one may validly infer "either it is true that something is red or it is true that something is green." This is just to say that if terms like "something" or "someone" are to be ruled out, then we must rely on criterion (2)

23 Some explanation is needed here. Wetzel actually addresses most of her comments to Dummett’s second and fifth criteria. Dummett’s fifth criterion, however, just is Hale’s fourth, for Hale rejects (with good reason) Dummett’s Aristotelian inspired fourth criterion. Hence, since we have examined Hale’s articulation of these criteria, it is our fourth criterion that is the focus of much of Wetzel critical remarks.


25 Chp. 3, pp.116-118.
as the criterion by which they are excluded. But this is what Wetzel claims our second criterion cannot do. To illustrate, consider the sentence “something is red.” Presumably, it is just this sort of occurrence of “something” that criterion (2) is intended to exclude. What Hale tells us is that a term (t) as it appears in the use of a sentence A(t) will be excluded by this criterion except in those case where “in that use of A(t) and some use of some sentence B(t), the inference from A(t), B(t) to “there is something such that A(it) and B(it) is valid.” But if this is the condition of exclusion we must accept, then criterion (2) does not rule out this use of “something.” Let A(t) be the sentence “something is red”. Now let B(t) be the sentence “something is red and broken.” From these two sentences one may validly infer there is “something such that it is red and it is red and broken.”

Hence, by Hale’s criteria, “something” as it occurs in the above sentence A(t) (i.e, “something is red”) must be thought a singular term. Indeed, criterion (2), as stated, excludes no terms. For any term, t, occurring in a sentence A(t), there will exist a use B(t) such that from B(t) one can validly infer A(t) and from A(t), B(t) one can validly infer “There is something such that A(it) and B(it).”

Initially, it might seem as if the above problem could be solved simply by stipulating that A(t) and B(t) are to be inferentially independent of one another in the sense that neither entail the other. We might rewrite criterion (2) as follows:

2') in that use of A(t) and some use of some sentence B(t) that neither entails A(t) nor is entailed by A(t), the inference from A(t), B(t) to “there is something such that A(it) and B(it)” is valid.

Unfortunately, while (2’) solves the immediate problem (i.e., the problem concerning the use of


27 As Hale’s criterion differs from Dummett’s second criterion only in the relativisation of a term to uses, this same objection will be able to be run against Dummett’s second criterion as well.
redundant or partially redundant sentences), it is still too weak as a general criterion meant to exclude first-order terms that refer only indefinitely. Consider:

From 'Something is red' and "if something is broken there will be hell to pay" it is possible to infer 'There is something such that it is red and if it is broken there will be hell to pay.'

Once again, even by our improved criterion, "something" as it appears in "something is red" must be regarded as a singular term.

This is not, however, a problem for which there is no solution. What is required is a sensitivity to what both counter-examples share in common. Each depends upon the use of a non-atomic sentence as a substitution instance for B(t) within criterion 2. Such shared features suggest a strategy for the resolution of this problem. We must reconstruct criterion 2 in such a way that it focuses on the use of a term within atomic sentences. A first stab at such a criterion might be something like 2", below:

2") in that use of A(t) and some use of an atomic sentence B(t) that neither entails A(t) nor is entailed by A(t), the inference from A(t), B(t) to 'there is something such that A(it) and B(it)' is valid.

Neither, however, is this articulation of criterion 2 entirely satisfactory. After all, if the substitution instance for A(t) is itself non-atomic, then the possibility of a counter-example like our second remains. Perhaps it might be felt that we could solve this problem by specifying that all substitution instances of A(t) should themselves be atomic. This would solve our immediate problem, but it would do so at the expense of changing our project. Then, we would be articulating necessary and sufficient conditions for delimiting only the class of singular terms within atomic contexts, rather than the class of singular terms itself. Better I think is this, criterion 2":

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in some *atomic* sentence $A^*(t)$ appearing as a compositional part (perhaps proper part) in that use of $A(t)$ and some use of an *atomic* sentence $B(t)$ that neither entails $A^*(t)$ not is entailed by $A^*(t)$, the inference from $A^*(t), B(t)$ to 'there is something such $A^*(t)$ and $B(t)$ is valid.

Such a criterion focuses our attention purely on atomic sentences while nonetheless allowing us to preserve the original project of delimiting the class of singular terms *simpliciter*. Moreover, such a criterion clearly excludes "something" and "someone" from the class of singular terms. Nor does it do so in an *ad hoc* manner, for the above criterion turns on the fact that for each paradigmatic singular term (i.e., for each proper name) there will exist two or more sentences for which the above criterion is met. Hence, the above criterion demarcates a genuine difference between our paradigmatic examples of singular terms and terms such as "something" and "someone." Hence, I conclude that though Wetzel's objections concerning Dummett's and Hale's second criterion are not without foundation, neither do those objections place their project in serious jeopardy.

More serious, perhaps, is Wetzel's claim that Hale's fourth criterion (Dummett's fifth) excludes too much. Wetzel bases this claim on an examination of identity contexts. She writes, talking of this criterion, that it "eliminates many genuine singular terms occurring in proto-typical singular term contexts — identity statements." To illustrate, she asks us to consider the following sentence: "The square of three is identical to the square of three." Certainly "the square of three" passes the tests imposed by the first three criteria. Indeed, it should pass all such tests. Intuitively, "the square of three" is a singular term. After all, it seems to designate a specific thing, namely the square of three. But now consider what it is that Hale's fourth criterion

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29 Ibid., p.251.
30 Ibid., p.251.
requires: it requires that for a term to be a singular term that the conclusions reached in criteria one and two cannot be such that a point is reached where a grammatically well-formed request for (further) specification can be rejected as illegitimate.\textsuperscript{31} Take now the conclusion of criterion one as it pertains to the sentence "the square of three is identical to the square of three." The conclusion we reach is that "there is something such that it is identical to the square of three." And it is here, in relation to this conclusion, that Wetzel's second argument kicks in. She writes:

Yet suppose one asks [talking now of the something that is identical to the square of three] "what is it?" and is told "the square of three." If (confusing squares with square roots, perhaps) one goes on to ask "which square of three?" then one has misunderstood the conclusion (i.e., 'There is something that is identical to the square of three). This is because one has misunderstood a phrase occurring in it, namely, 'the square of three.'\textsuperscript{32}

Hence, we seem forced into concluding that "the square of three" is not a genuine singular term, for there exist grammatically well-formed requests for further specification that can, nevertheless, be rejected as illegitimate and, in Dummett's words, "as displaying a misunderstanding."\textsuperscript{33} Nor is Wetzel's example a unique one. "Many other singular terms," she writes, "(e.g. 'the Mississippi River') get eliminated by" this criterion in a similar manner.\textsuperscript{34}

Though Wetzel's objection to criterion four seems relevant, I want to claim that it, itself, rests upon a misunderstanding. Look back at Dummett's original discussion of our fourth


\textsuperscript{32} Linda Wetzel. "Dummett's Criteria for Singular Terms". \textit{Mind} NCLX, No.394 (1990), pp.251-252.


\textsuperscript{34} Linda Wetzel. "Dummett's Criteria for Singular Terms." \textit{Mind} NCLX No.394, (1990), p.252.
criterion. Dummett illustrates this criterion through the use of the example concerning George and the motor mower.\textsuperscript{35} When we find that George has difficulty using a motor mower, we can infer “there is something which George has never learned to use.” Of this sentence we can then ask “What is it?” to which we might be told “A motor mower.” Questioning, however, need not end at this point. We can go on and ask of this latest answer “Which motor mower has George never learned to use.” If there is a specific motor mower George has never learned to use, then this question is legitimate and we might respond “his neighbor’s.” If, however, we were speaking of the motor-mower at the second level of generality, then there is no answer to this last question that will point towards a specific mower of which George has failed to gain mastery — he has failed to master them all. In such a case we might well say that such a question is based on a misunderstanding and, hence, is illegitimate. The misunderstanding evinced by such a question is this: The questioner illegitimately thinks there is some answer to this question such that that answer can together with “the something George has failed to master” yield a statement of identity of the form “the something George has failed to master = x”, where “x” names a specific object. Contrast, now, the case of George with that of Wetzel’s incompetent mathematician. The incompetent mathematician also asks a question that we might well regard as illegitimate, namely “Which square of three?” when she is told that there is something that is identical to the square of three. But this question evinces a misunderstanding of a very different sort than that which was evidenced in our discussion of George. The misunderstanding is that our mathematician refuses to countenance “the square of three”, absent of any further qualification, as being eligible to enter into an identity statement. She thinks there is some further specification that must be given first. Her mistake is the reverse of the mistake that occurs in our discussion of George. Where

Dummett's questioner mistakes "a motor mower" for a singular referring expression. Wetzel's incompetent mathematician fails to recognize that the "square of three" is a singular referring expression, thinking instead that it refers only indefinitely to some approximation of π. Indeed, the question Wetzel's mathematician asks does not lack an answer. It has several answers: "nine"; "the sum of four and five"; "the sum of six and three"; etc. Considered in this light we need not regard Wetzel's mathematician as asking an illegitimate question. The reason is this: The notion of illegitimacy as used by Hale and Dummett is a technical notion involving a demand for an identity statement that cannot be met because one or more of the terms the identity statement is intended to clarify is not eligible for such treatment, e.g. "a motor mower." But this is not the problem in the case of Wetzel's mathematician. Her question betrays a misunderstanding of mathematics, but it is not a question to which there is no answer. Hence, the mathematician's question does not undermine the status of "the square of three" as a genuine singular term; rather, it speaks only to the mathematician's competency within her chosen field. I conclude that neither of Wetzel's objections undermine the Dummettian project of delimiting the class of singular terms based on their inferential features.

§ 2.3 Singular Terms and Inelirninability.

Before we can accept Hale's criteria, there is one last issue we need to resolve. Singular terms are object denoting. Hence, the occurrence of a singular term within a true sentence constitutes evidence for the existence of an object. But it is not the case that every term that meets Hale's criteria that is used to express a thought is necessary to the articulation of that thought. We allow that terms might be eliminable via paraphrase or reduction. Consider for instance the following examples:

a) Socrates possesses Wisdom
b) *Her anger scares me.*

Each of the italicized phrases meets Hale’s criteria for being a singular term. Yet it is not a moot question to ask whether, in these contexts, we must think of these terms as being object denoting. *Prima facie,* it seems possible to capture the meanings of the above sentences while removing any ostensible reference to objects such as *wisdom* or *her anger.* We could paraphrase these sentences in the following ways:36

\[ a') \text{Socrates is wise.} \]

\[ b') \text{She scares me when she is angry.} \]

The availability of such paraphrases makes attractive the thought that we are only committed to countenancing those terms that meet Hale’s criteria and which are ineliminable from the contexts in which they appear as being genuine singular terms. We might, embracing this sentiment, adopt the following view of Hale’s criteria: Just as grammatical criteria alone were insufficient for the delineation of the class of singular terms, so too, one might maintain, are the inferential patterns to which Hale appeals. What more is needed to make those inferential patterns sufficient is a fifth criterion requiring the ineliminability of the term in question—a criterion such as the following:

5) The use of a term \((t)\) in a sentence \(A(t)\) is genuinely singular if and only if there exists no paraphrase \(B\) of \(A(t)\) such that reference to the object purportedly denoted by \((t)\) is eliminated.

I am sympathetic to this request for such a fifth criterion. It is not, however, an unproblematic demand. Though Dummett seems to implicitly endorse such a suggestion both

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36 Note, I am not endorsing the claim that there is a systematic procedure for eliminating “wisdom” and “her anger” from all of the contexts in which these terms appear. I am merely using these term within the contexts I have specified to illustrate the *prima facie* plausibility of eliminating singular terms through paraphrase.
Hale and Crispin Wright reject it. Moreover, they reject it for similar reasons. Each claims, looking at the notion of a paraphrase, that there are no grounds for favoring the resulting paraphrase of an expression over the original expression itself. Consider: A paraphrase will only be judged adequate if it supports the following biconditional: A(t) iff B where A(t) is, to borrow the terminology of the reductionist, the reduced expression and B is the reducing expression. But, Hale and Wright both argue, there is nothing present in the mere availability of such paraphrases to dictate which expression is to be given priority. Hence, there is no justification for favoring one expression over the other and, hence, no grounds for claiming of any eliminable term that it fails to be genuinely singular or object denoting. Hale writes.

The general point may be put as this: Suppose we have a pair of equivalent statements A and A', the former apparently involving a reference which is, ostensibly, absent from the latter. Then we may say, so far at least, just as well regard the equivalence as showing that A' involves implicit reference to an object explicitly referred to in A, as the apparent reference in A is merely apparent. So far as it goes, I agree. There is nothing within the notion of a paraphrase itself to lead us to favor one sentence over another. But conversations concerning the eliminability of terms do not occur within a vacuum. We are concerned with singular terms not because the notion of a singular term is inherently interesting, though it may be, but, rather, because it is put to use within the metaphysical project. And metaphysics is guided by a principle of economy. I will not seek to defend such a principle here — that would lead us too far astray. I state it merely as an empirical fact. This is how metaphysics is conducted. The metaphysical realist's claim is not that one can give a complete description of the world in terms of an ontology that accepts universals, but,

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rather, that any complete description of the world must, at a minimum, make a place at the table for such entities. And it is this claim that rival theorists dispute. Nominalists and trope nominalists both assert that a complete description of the world may be given with a more parsimonious ontology than that which the metaphysical realist accepts. Hence, even if a consideration of singular terms alone provides no reason for accepting the priority of eliminative paraphrases, the nature of the metaphysical project does. It involves an implicit acceptance of a principle of ontological economy, and this is enough for us to say that priority ought to be given, wherever possible, to the most ontologically parsimonious expression of a statement. There is a need, then, for our suggested fifth criterion.

§ 3. Singular Terms and Nominalism.

After a sea of argument, we are now in a position to revisit the concerns of section 1 of this chapter. Recall that section 1 concerned the possibility of constructing an argument against nominalism based on the occurrence of so-called "abstract singular terms" — terms such as "redness" or "triangularity." In representing the structure of such arguments, I constructed the following nine-step argument that I take to be representative of this general line of argument:

1) Either terms such as "redness" and "triangularity" are genuine singular term or they are not.

2) Assume, to start, that they are genuine singular terms.

3) Then, from the definition of a singular term, each such term must designate or denote one and only one object.

4) Hence, it is a requirement for any adequate theory of abstract reference that, within the theory, one be able to fix the reference of all such terms.

5) Nominalism purports to be such a theory.

6) But within nominalism one cannot fix the reference of such terms.
7) Hence, either nominalism must be false or such terms must not be genuine singular terms.

8) Such terms are genuinely singular.

9) Hence, Nominalism is false.

Such an argument is clearly valid. It is not, however, problem free. Two premises demand our attention. The first is premise six: the claim that nominalism is incapable of offering an adequate semantic treatment of terms such as “redness” or “triangularity” when these terms are assumed to be genuine singular terms. The second is premise eight: the claim that such terms are, in fact, genuine singular terms. It was in preparation for a discussion of these two premises that we engaged in an exposition and critical examination of Hale’s criteria of singular termhood. We cannot evaluate the nominalist’s responses to this argument outside of an informed opinion concerning the notion of a singular term. Hence, it is only now that we are in a position to give this argument the sort of consideration it deserves.

The importance of premises six and eight lie in the fact that these are the premises the nominalist will attack in offering a response to this argument. In order to save his theory, the nominalist must deny one or both of these premises. That is, he must show us either that, pace premise six, he does have the semantic resources to secure the reference of abstract singular terms within his ontology or he must convince us, pace premise eight, that these terms are not the singular terms they appear to be. In what follows, I will consider whether either of these two strategies may be carried out successfully. In considering the nominalist’s possibilities for response I will implicitly assume that my nominalist has available to him all of the resources of
any of the nominalist theories we have touched on thus far (i.e. he has available to him the resources not only of the ostrich nominalist but also those of the class nominalist, the predicate nominalist... )

Consider first the nominalist's attempt to show premise six false. The adoption of this strategy can be regarded as an implicit acceptance of the claim that premise eight is true and that terms such as "redness" and "triangularity" are genuine singular terms. As such, the nominalist accepts that there must be an entity to which each of these terms refers — that is what it is to be a genuine singular term. Genuine singular terms occurring within true sentences are object denoting and there is little doubt that "redness" and "triangularity" appear in true sentences. But to accept that "redness" and "triangularity" are singular terms and, thus, object denoting is to say nothing about the objects that they denote. The metaphysical realist of course insists that they denote abstract properties of color and shape or universals. The nominalist, however, need not accept the metaphysical realist's answer. He or she might respond that the metaphysical realist is fooled or seduced by language into positing entities for which there is no need. We can secure the reference of these terms, the nominalist maintains, simply within the world of physical objects or, at worst, the world of physical objects with the addition of classes.

Such is the strategy Quine explores in "Identity, Ostension, and Hypostasis."39 In this work, Quine outlines how, consistent with the acceptance of "redness" as a singular term, the nominalist might, nonetheless, avoid a commitment to universals. He or she can do so, Quine writes, by allowing "redness' or "red" to designate the spatio-temporally scattered individual that

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is the scattered total of all red things.\textsuperscript{40} Red becomes on this view “the largest red thing in the universe.”\textsuperscript{41} It is, if you will, the mereological sum of all rednesses. Such a strategy, however attractive it may be, cannot be consistently maintained. Quine himself acknowledges as much when he turns his attention away from color terms to shape terms. Consider, for instance, the denotatum of “triangularity”. If we follow the strategy Quine suggests for “red” or “redness” we will say that the denotatum of “triangularity” simply is the spatio-temporally scattered sum of all triangular things. But this is problematic. There is no guarantee when we do this that we will not generate the identical sum for “squareness” as well. Suppose, for instance, that all isosceles right triangles are created by the vertical halving of a square, then it is possible that the sum of all such triangles will simply be the sum of all squares.\textsuperscript{42} But this leaves us in the intolerable position of concluding that squareness is identical to triangularity. As a general strategy for dealing with the problem of abstract reference the attempt to fix the reference of terms like “redness” and “triangularity” to the mereological sums of spatio-temporal individuals fails. Such an answer cannot be consistently maintained.

Mereological sums of spatio-temporal objects, however, are not the only objects the nominalist might suggest as being the denotata of abstract singular terms. The class nominalist might well maintain that the denotata of such terms are classes and that sentences containing such terms are but veiled ways of referring to classes. Consider, for instance, the sentence “Red resembles orange more than blue.” “Red”, “orange”, and “blue” each seem to function in this

\begin{itemize}
\item \textsuperscript{40} Ibid., p.72.
\item \textsuperscript{41} Ibid., p.72.
\item \textsuperscript{42} See: W. V. Quine, “Identity, Ostension, and Hypostasis” in From a Logical Point of View. Cambridge, Harvard University Press, 1980 (revised) pp.72-73.
\end{itemize}
sentence as singular terms. What a nominalist who accepts this strategy is likely to claim about this sentence is that once it is properly understood one will see that it really concerns itself with classes of individuals and the relations that obtain between those classes. So, on reinterpretation, the following might be suggested as a perspicuous translation of the above sentence: “The class of red objects resembles the class of orange objects more than it resembles the class of blue objects.”

Again, though, there are problems. It is not clear that such a translation is truth preserving. To see this, suppose that the only red, orange, and blue objects that exist are a red and blue writing pen and an orange dance-floor. Then the class of red objects would contain but one red pen, the class of orange objects would contain but one orange dance-floor, and the class of blue objects a blue pen. But then, what we have claimed to be a perspicuous translation fails to be truth preserving, for, even though red resembles orange more than it does blue, the class of red objects does not resemble the class of orange objects more than it does the class of blue objects. Two pens resemble one another to a greater degree, whatever their color, than does a pen and a dance-floor.

Worse still is the trouble coextensional properties pose for such an account of abstract reference. Classes come with well-defined identity conditions. Two classes are identical if and only if they have the same members. But now imagine that we live in a world where all and only triangular objects are red, then if we identify the class of red objects as the referent of the term “redness” and the class of triangular objects as the referent of the term “triangularity”, then we must say that these two terms are, at least in transparent contexts, synonyms and that a certain shape is identical to a certain color.
Now for the above two problems, there is a solution. It is got at by going modal. We may solve these difficulties provided we allow classes to contain as their members not only all actual objects answering to a certain description but also all possible objects answering to that description. Once such modalization is accepted, the above two problems evaporate. First, consider again the sentence "red resembles orange more than it resembles blue." Once we allow classes to contain possible entities as well as actual ones we can then offer the following interpretation of this sentence: What it really says is, "it is necessarily the case that the class of red objects resembles the class of orange objects more than it resembles the class of blue objects." And this sentence will be true in all and only those case where the original sentence is true. To see this we need only recognize that color is a contingent property. Hence, for any member \( c \) of the class of red objects there will be a counterpart to \( c \) in both the class of blue objects and the class of orange objects that differs from \( c \) only in respect to its color. The same will be true, respectively, of any member of the class of blue objects and the class of orange objects — each will have a counterpart in the other classes that differs only in respect to its color. Hence, if there is a difference in the resemblance of any two of these classes to the third, then it must be the color of the objects within the class that accounts for that difference. Hence, red resembles orange more than it resembles blue if and only if the class of red things (taken modally across all possible worlds) resembles the class of orange objects (taken modally) more than it resembles the class of blue objects (taken modally).

43 There are many who would regard this response as itself being a violation of nominalism. Arthur Pap, for instance, in "Nominalism, Empiricism, and Universals" (The Philosophical Quarterly, 1959) writes that nominalists notoriously frown on "subjunctive and modalities as much as on names of attributes" (p.334). But I am inclined to take a less skeptical view of these matters. The focus of nominalism, as I interpret it, is to provide a more parsimonious answer to the problem of universals than that which the metaphysical realist provides. If this can be done consistent with the acceptance of modalities, then I see no reason to rule out such a maneuver on the part of the nominalist. And since universals should themselves be considered modal entities, I see no reason for thinking a nominalism that accepts some form of modality must necessarily forfeit its claim to having still provided a more parsimonious answer than that which the metaphysical realist provides.
Similarly, the modalization of our classes seems to allow us to solve the problem of co-extensional properties. We said one problem with the above account was the possibility that all and only red objects were triangular. But if this is so and all red objects are triangular, this is merely a contingent and not a necessary relationship that obtains between triangularity and redness. It is a coincidental (and somewhat strange) fact about our world. It is not a fact about all worlds. Hence, once we allow classes to be constructed from possible individuals as well as actual ones these two classes pull apart in a way that frees us from having to identify them one with another. Once classes are construed modally the problem of co-extensional properties largely dissolves and the attractiveness of identifying classes as the referents of abstract singular terms increases.

Still there lingers a residue of our original problem. There will still exist a subset of properties for which it will be true that the classes of individuals having those properties are identical. Intuitively, there are properties that, though different, are necessarily related. Triangularity and trilateralness are two such properties. It is necessarily the case that anything that is trilateral is also triangular and vice versa. Hence, if we adopt the strategy of regarding abstract singular terms as having as their referents classes of individuals, then we will be forced to say that, at least in transparent contexts, “triangularity” and “trilateralness” are synonyms which they are not. Moreover, we are forced into this position even if we construct our classes from possible individuals as well as actual ones. We must conclude that this strategy, too, fails. Moreover, having now examined the two most plausible ways in which the nominalist might agree that so-called “abstract singular terms” are genuine singular terms, we are forced to conclude that the nominalist, if he or she is to salvage his or her theory without emendation, must show that such
It is here, in the effort to show that so-called "abstract singular terms" are not genuine singular terms at all, that our examination of Hale's criteria of singular termhood becomes important. Terms such as "redness" or "triangularity" meet the first four of our criteria for being singular terms. "Redness is a color" licenses an inference to "there is something such that it is a color". Equally, from "redness is a color" and "redness resembles orangeness" we may validly infer "there is something such that it is a color and it resembles orangeness." So too, does "redness" meet our third criterion. From "it is true of redness that it is a color or it is not a color" the inference to "either redness is a color or redness is not a color" is valid. And finally, the occurrence of the term "redness" is such that in the above contexts the term operates at the first level of generality. No point is ever reached where a grammatically well-constructed request for further specification may be rejected as being illegitimate in the sense I outlined earlier. Consequently, the focus of the nominalist's rebuttal must be our fifth criterion. What the nominalist must argue is that all such terms are eliminable via perspicuous paraphrase in a fashion that makes clear that the ostensible reference to an object is merely a stylistic element of the sentence and not a necessary feature of the proposition the sentence expresses.

It is this very thing, however, that the metaphysical realist and the trope nominalist has claimed the nominalist cannot show. Consider, again, the sentence "red is a color." According to

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44 Chap. 3, pp. 126-128.
the suggestion we are now considering, "red", as it occurs in this sentence, is non-denoting. It is not a genuine singular term. Instead, its occurrence in the sentence is a stylistic shorthand for talking about red objects. Such sentences, the nominalist maintains, are but abbreviations of sentences that talk of objects having certain properties. Thus, "red is a color," under this suggestion, is regarded as equivalent to the sentence "for all x, if x is red, then x is colored." And as we have seen, sentences of this form commit us to nothing more than the existence of red objects — the predicates of the sentence are treated syncategorematically or as non-referring terms.

While such an answer may seem plausible, or perhaps even warranted, in the case of a sentence such a "red is a color" there exists a subset of seemingly descriptive statements in which the apparent reference to objects cannot be eliminated via paraphrase. Instead of "red is a color" consider the sentence "red resembles orange more than blue." According to the nominalist's suggestion, this sentence is to be interpreted as an abbreviated way of talking about red, orange and blue objects. Hence, the sentence will be claimed equivalent to the following sentence: "for any x, y, and z, if x is red and y is orange and z is blue, then x resembles y more than it resembles blue." But this is clearly inadequate. The problem, of course, is one with which we are already familiar. It is that red objects, blue objects, and orange objects may resemble one another in respects other than color. Hence, while red may resemble orange more than blue, a red object


46 Ibid., p.334.
may well resemble a blue object more than it resembles an orange one. Think again of our two pens, one red and one blue, and the orange dance-floor. As a paraphrase of our original sentence, the above will not suffice.

Nor are there plausible strategies for resolving this difficulty. One manner in which one might try is this: One could attempt to build into one's paraphrase the respect of resemblance that is said to hold between the various objects. According to this attempt, our resulting paraphrase would be as follows: "For any x, y, and z, if x is red, y is orange and z is blue, then x color resembles y more than it color resembles z." But when we unpack this paraphrase what we have to say is that the notion of color resemblance smuggles into our paraphrase a new singular term that itself will have to be excised from our analysis. Color resemblance just is resemblance in respect to color. And "color" as it appears in the phrase "resemblance in respect to color" is a singular term. Hence, we have not excised the so called "abstract singular terms" from our analysis; we have merely replaced the existing ones with a new one that itself will have to be excised if our strategy is to succeed. A more detailed explanation is perhaps called for here. What I am saying is this: If color resemblance was a two place predicate, then all would be fine with our proposed paraphrase for we could treat the predicate syncategorematically and thus excise from the original sentence all unwanted reference to suspicious objects. But, unlike resemblance simpliciter, color resemblance is not plausibly construed as being a two place-predicate. It is best construed as a three-place predicate. Resemblance in some respect is resemblance in respect to something. That something must in the case of color resemblance be color. Hence, our paraphrase, though it suppresses this information, involves an implicit reference to color that, when made explicit, involves us in the use of yet another suspicious singular term, i.e., the term "color". Hence, I conclude that this attempt at linguistic reconstruction fails. More generally, we
can say the nominalist's strategy for eliminating such singular terms is itself highly dubious. There
seems no systematic strategy for the elimination of abstract singular terms from all of the contexts
within which they appear.47 Nominalism, considered by itself, seems unable to answer the
problem of abstract reference. We must concede, I think, that nominalism, by itself, cannot
answer the problem of universals

§ 4. Some conclusions.

In this chapter, I have considered the phenomenon of abstract reference and how it
relates to the notion of a singular term. So called "abstract singular terms", I have argued, pose
considerable difficulty for any nominalist attempt to solve the problem of universals. The
nominalist has two strategies for treating such terms. He may either attempt to secure their
reference within his own minimal ontology or he may try to deny of them that they are genuine
singular terms and thus are object denoting. Neither strategy, I have argued, may be successfully
carried out. Some of these terms must be regarded as genuine singular terms that have as their
denotata objects the nominalist refuses to countenance. Nominalism by itself is thus found to be
inadequate.

Such a conclusion is often regarded as a victory for the metaphysical realist. Pap, Loux,
and Armstrong all regard the above conclusion as evidence for the existence of universals.
Universals it is claimed are well suited to filling the role of being the denotata of abstract singular
terms. With this I agree — at least, to an extent. Universals indeed seem well suited to this role. I

47 See also: Arthur Pap. "Nominalism, Empiricism, and Universals," The Philosophical Quarterly
88; and, David Armstrong. Nominalism and Realism: Universals and Scientific Realism. Cambridge, Cambridge
disagree, however, that nominalism's inadequacies constitute a *de facto* argument in favor of metaphysical realism. Even if we set aside the fact that trope nominalists seem able to deal with these problems, I still disagree. Suppose that it is the case that nominalism by itself fails. Suppose as well that universals are well suited to the theoretical role of being the denotata of abstract singular terms. This alone does not constitute an argument for universals being *uniquely* suited to this role. It may still be the case that nominalism may be ontologically supplemented in some way that both preserves its claim to being the more parsimonious theory while, nonetheless, allowing it to answer the problem of abstract reference and, hence, the problem of universals. It is this suggestion that I explore in the next chapter. In chapter IV, I argue that ostrich nominalism together with an admission of *kinds*, where kinds differ from universals or tropes, proves adequate as a solution to the problem of universals while, nonetheless, generating a theory that is more parsimonious than either trope nominalism or metaphysical realism.

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Chapter 4:  
Towards an Ontology of Kinds.

The recognition of kinds is, of course, by no means foreign to the thought of practical life. We are all aware of the fact that there are countless different kinds of things, the things being examples of the kinds.  
— Nicholas Wolterstorff, "On Universals"

In the previous chapter, it was conceded that no form of nominalism, ostrich nominalism included, has the semantic resources necessary for grounding the linguistic phenomenon of abstract reference. Terms such as "redness" and "triangularity" are genuine singular terms. Their occurrence in true sentences dictates that there must be objects that they denote. The nominalist cannot, with his or her limited resources, fix the reference of these terms within his or her ontology. By itself, nominalism is inadequate as a solution to the problem of universals.

At the same time, we must concede that both trope nominalism and metaphysical realism appear to have the resources to fix the reference of these terms. For the metaphysical realist "redness" and "triangularity" will denote universals. For the trope nominalist, they will denote

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1 Chapter 3, pp.131-137.

classes of tropes — the class of red tropes and the class of triangular tropes respectively. Prima facie, such results would seem to dictate that one accept either trope nominalism or metaphysical realism over any of the various articulations of nominalism. Appearances, however, can be deceiving. While the trope nominalist and the metaphysical realist have little, if any, difficulty dealing with those singular terms that ostensibly pick out properties, the class of so called “abstract singular terms” is not exhausted by what we might call “property terms”, i.e., “redness”, “triangularity”, etc. In addition to property terms, there also exist within the class of singular terms terms that appear to have kinds as their referents — terms such as “man” or “whale.” In the first section of this chapter, I will argue that these terms too are genuine singular terms. I will then argue that even the metaphysical realist and the trope nominalist have difficulty comfortably securing the referents of these terms. However else we fill out our ontology, we should include within that ontology kinds as distinct from both tropes and universals. Kinds are neither comfortably reducible to classes of tropes nor are they comfortably reducible to universals. But if this is so, then if we can show that all of the semantic work necessary for answering the problem of abstract reference may be carried out by kinds, then we can once again start to envision an ontology that is both adequate for responding to the problem of universals and is free of both universals and tropes. It is this possibility that I will explore towards the end of this chapter.

Ostrich nominalism when combined with an acceptance of kinds, I will argue, not only provides an adequate solution to the problem of universals but it does so at a cheaper cost than do trope

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3 Initially it might seem strange that the trope nominalist is able to provide a solution to the problem of abstract reference in terms of classes. After all, this is what we said the nominalist is unable to do. The crucial difference is, of course, the individual the trope nominalist constructs his classes out of — they are tropes, not propertied particulars. Hence as the class of triangular tropes already differs in virtue of its members from the class of trilateral tropes, there is no problem of coextensional properties within the trope nominalist's identification of classes as the referents of abstract singular terms. Hence, the trope nominalist, in virtue of his acceptance of tropes, is able to avoid the problems encountered by the class nominalist. See also: David Armstrong. **Universals**, London, Westview Press, 1989.
nominalism or metaphysical realism. Moreover, such a supplemented ostrich nominalism, I will argue, also brings with it all of the ancillary benefits (vis. illuminating modality, grounding laws of nature, etc.) that have traditionally been claimed the products of metaphysical realism.

§ 1. On Kind Terms and Singular Terms.

I wish to begin by establishing that terms purporting to refer to kinds are genuine singular terms. At this stage, I propose to leave the notion of a kind itself unexplicated. I will rely, in these early stages, on an intuitive understanding of kinds. Later, as the discussion progresses, we will have a greater opportunity to arrive at some more precise characterization of this notion. But for now, the provisional understanding of a kind as a grouping of similar individuals will suffice. Ostensibly, we may make reference to kinds within speech. Consider, for instance, the following sentences:

a) The blue whale is nearing extinction.

b) The horse is the subject of this class.

c) The shark is much maligned in literature and film.

The claim I want to defend is that each of these italicized noun phrases is, in fact, a genuine singular term. Prima facie, there is good reason to agree with such an evaluation. Each of these terms, for instance, meets the first four of our criteria for delimiting the class of singular terms.\(^4\) We may illustrate this by means of the second sentence, sentence b. From “The horse is the subject of this class” we may validly infer “there is something such that it is the subject of this class.” Hence, our first criterion is met. Equally, so is our second. From “the horse is the subject of this class” and “the horse is a mammal” we may validly infer “there is something such that it is

\(^4\) Chapter 3, pp. 113-121.
the subject of this class and it is a mammal." Hence, "the horse" meets our second criterion as well. Recall now what our third criterion is meant to exclude. It excludes the use of both plural nouns and "everything". "The horse" meets this criterion as well. From "It is true of the horse that it is either the subject of this class or it is not" one may validly infer "The horse is the subject of this class or the horse is not the subject of this class." Hence, "the horse" also meets our third criterion. Finally, as it occurs in the above sentences "the horse" operates at the first level of generality. Hence, it will also meet our fourth criterion. The conclusions reached in steps 1 and 2 are such that given the appropriate notion of illegitimacy a point cannot be reached where a grammatically well-constructed request for further specification may be rejected as illegitimate and as betraying a misunderstanding. Consider: From "the horse is the subject of this class" one may validly infer "there is something such that it is the subject of this class." Now suppose that an inquisitive student when told "there is something such that it is the subject of this class" asks "What is it?" We can, of course, respond "the horse." To which the student might ask "Which horse?" Prima facie, the case seems relevantly similar to the case of George and motor mowers. There is, after all, no particular horse that will be studied in the class. Is, then, "the horse" a second level generalization? No. Unlike George who has trouble with any motor mower, we are not going to study all horses or any horse — the object of study is the species itself. Hence, if the student sincerely utters "which horse?" thinking that there is some further specification of the subject matter to be had, then the misunderstanding evinced by the student is of a quite different sort than that manifest in the case of George and motor mowers. In the latter case (i.e., the case of

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5 Ibid., pp. 118-119.

6 For the appropriate notion of illegitimacy see Chapter 3, pp. 126-128.

George and motor mowers) the questioner’s misunderstanding arises from a mistaken belief that there is an identity statement of the form “something=x” such that x designates a specific object that answers his or her question concerning what George has failed to master. In the former case, however, (that concerning the student and the class) the cause of the student’s misunderstanding is his or her refusal to countenance our answer as an identity statement of the above sort. This accounts for the student’s omission of the definite article in the articulation of his question. Hence, this case more closely resembles that of Wetzel’s incompetent mathematician. And just as it was decided in that case that the mathematician’s misunderstanding presented no barrier to our identification of “the square of three” as a singular term, neither should the student’s misunderstanding cause us in the present case to exclude “the horse” from the class of singular terms. What matters to whether a term is of the first or second level of generality is not whether an individual can misunderstand the nature of the answer that is offered to a “which something?” question, but whether that answer can enter into identity statements of the form “something=x.” “The horse” can enter into such identity statements; hence it meets our fourth criterion. “A motor mower” cannot; hence, it fails to meet our fourth criterion.

The sole remaining criterion to be considered, then, is the criterion of ineliminability. If one is going to resist identifying kind terms as genuine singular terms, then one will have to argue that though such terms meet our first four criteria they fail to meet our fifth. That is, one will have to argue that such terms are eliminable, via paraphrase, from the contexts in which they occur. I will argue that they are not.

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Consider, again, the sentence “The horse is the subject of this class.” Such sentences, in so far as they contain terms that meet our first four criteria, ostensibly make reference to a kind or a species. An objector to this interpretation, however, might well claim that species and kinds are simply linguistic conveniences for talking about the objects that belong to them. Talk of “the horse”, it might be claimed, is simply an abbreviated way of talking about all horses or horses generally. There emerge from these comments two strategies for eliminating kind talk from our discourse: 1) We might construe kind talk as a type of disguised universal generalization, or 2) we might interpret talk of kinds as establishing a type of generalizing condition on the talk of the objects that are said to belong to those kind, i.e. “horses quasi horses are the subject of this class”.

To endorse either of these strategies is to endorse the claim that talk of kinds may be systematically eliminated, via paraphrase, from our discourse.

First, consider the strategy that holds talk of kinds to be a type of a disguised universal generalization. Such a view is suggested by Wilfrid Sellars work in “Abstract Entities.”9 In this essay, Sellars suggests that kind terms are eliminable from statements in which properties are predicated of kinds essentially. Such sentences he suggests may be recast as universal generalizations via the following equivalence:

The K is F = All Ks are F ↑

And of the dagger at the end of this equivalence, he writes that it is intended to represent that the “righthand side is a non-accidental truth about Ks.”11 Hence, essential truths about kinds may be

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10 Ibid., p.53.

11 Ibid., p.53.
reduced to necessary truths about their members. Illustrating the plausibility of this approach, Sellars writes:

Thus, "man" in "Man is rational" is a distributive singular and the statement is equivalent to "All men are (of necessity) rational."\textsuperscript{12}

As far as they go, Sellars comments seem right. Essential truths about kinds filter down to their members and thus may be represented as necessary truths about those members. We though require more. If we wish to reduce kinds to universal generalizations, then it must be the case that both non-accidental and accidental truths about kinds are able to be recast as universal generalizations. Thus, it behooves us to consider whether Sellars' analysis may be extended so as to also accommodate accidental truths about kinds. In what follows, I argue that it cannot.

First, notice that we cannot simply extend Sellars' analysis 'as is' to accidental truths about kinds. This follows almost immediately from Sellars inclusion of a modal on the right hand side of his equivalency. To illustrate, consider, again, the sentence "the horse is the subject of this course." If this sentence is true, it is an accidental truth. Perhaps the course I teach is a course in the biological sciences the lessons of which could be illustrated just as easily in terms of the rabbit as the horse. In such a case, there are possible worlds in which the course I teach concerns the rabbit and not the horse. But now consider what happens when we try to force the sentence "the horse is the subject of this course" into Sellars' equivalency schema. According to such a schema this sentence is equivalent to the sentence "All horses are (of necessity) the subject of this course." But clearly this is not a truth preserving paraphrase of our original sentence. It denies what our original sentence allows, namely that there might be worlds in which the same course is taught using rabbits rather than horses and that there might exist in this world a particular horse that

\textsuperscript{12} Ibid., p 54.
escapes my attention and thus fails to be a subject of the course I teach. If Sellars' equivalency is to be of any use to theorists seeking an elimination of kinds, then the modal on the right hand side of his equivalency schema must be dropped. For such a theorist, the operative schema will not be Sellars modalized schema but, rather, the following non-modal version of Sellars schema:

The K is F = All Ks are F

Even so, there are still problems. If we accept this schema as expressing the appropriate equivalency, then we must accept that "the horse is the subject of this course" is equivalent to "all horses are the subject of this course", which will entail the truth of the sentence "for all x, if x is a horse, then x is the subject of this course." And while this sentence is less problematic than its earlier counterpart (i.e., that sentence in which horses were the necessary subjects of the course), it is still problematic. It may be the case, after all, that there exist horses of which I, as an instructor, am entirely unaware. Undoubtedly such horses do in fact exist. How, in this case, could those horses possibly be the subject of my course? One might be tempted here to say they are the subjects in so far as we are studying what is common to every horse. Fair enough. But this, I think, is to jettison the first strategy all together and to opt for something like the second. So long as we think the above schema, absent of any qualification, is correct, then we must think every individual horse is the direct subject of my class — and this simply cannot be right. From "the grizzly bear is fierce" it is invalid to infer "all grizzly bears are fierce." From "the lion is tawny" it is
invalid to infer “all lions are tawny.” Sentences involving kind terms are not simply universal
generalizations. For the theorist seeking an elimination of kinds, our first suggestion yields a
dead end.

Let us turn to the second suggestion. According to this suggestion, we can interpret talk of
kinds as establishing a generalizing condition on the talk of objects belonging to those kinds. In
talking of “the horse” we are not talking of all horses as they exist, but, rather, we are talking of
horses qua horses. It is this use of the qua operator that I regard as establishing what I have called
“a generalizing condition.” It is used to focus attention away from the accidental qualities of each
horse’s existence towards that which they each share in common and which makes all of the
many horses horses. This proposal suggests a translation schema of the following sort:

The K is F = Ks qua Ks are F.

Thus, the sentence “the horse is the subject of this course” becomes on paraphrase “horses qua
horses are the subject of this course.” And this sentence is surely a more plausible translation of
our original than is “all horses are the subject of this course,” for it is plausible once we add the
qua operator that the subject matter of the course does include all horses — even those of which I
am unaware, because what I am doing in studying the horse is studying of each animal that is a
horse that which makes it a horse. Still there are problems. First, it is not clear that those who
reject kinds are entitled to the use of the qua operator. After all, on one interpretation what the
qua operator does is fix the reference of a term to an object or objects belonging to a certain kind.

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13 This conclusion also seems to be supported by considerations concerning laws of nature. Kinds
figure into the expression of biological laws. Thus, if the occurrence of a kind term is an indication of a disguised
universal generalization, then it should be possible to reinterpret such laws as concern kinds as universal
generalization. But this it seems is impossible. Laws, for instance, support counterfactuals in a way in which
universal generalizations do not and laws tell us what must happen not just what has or will happen. See: Fred
A horse *qua* horse is a horse considered in light of those qualities that make it a member of the kind horse. Hence, one might suggest that the existence of kinds are a necessary precondition to any use of the *qua* operator. Second, and equally if not more important, there are still sentences involving ostensible reference to kinds that cannot be adequately translated by means of the above translation schema. Consider, for instance, the sentence "the whale is close to extinction." On translation this becomes "whales *qua* whales are close to extinction." But this is hardly an adequate translation of our original sentence. First, there is a difficulty concerning the very notion of extinction. This notion applies only to species, not to individual members of a species. Even if the whale as a species is close to extinction, Bertha the whale is not. Nor is Bertha *qua* being a whale close to extinction. Any claim that she is involves one in a category mistake — in such instances one is attributing to Bertha, the particular whale, a property that can only be intelligibly attributed to the species to which she belongs. Even waiving this difficulty, the translation still does not make sense. What is it, for instance, that differentiates a whale *qua* whale being close to extinction from simply a whale's being close to extinction? Not sure. But surely there must be something to be said on this score, otherwise the *qua* operator would be extraneous to the meaning of our sentence and, hence, would itself be eliminable. In such a case, our second strategy would simply collapse into our first and this we do not want. After all, it has already been conceded that our first strategy is inadequate.14 Perhaps the *qua* operator serves the purpose of expressing that it is each whale's being a whale that matters to its said extinction — that if it were something else, say a rabbit, it would not be nearing extinction. Again, though, this seems confused. It seems to suggest that being a whale is somehow a contributing factor to the diminishing number of whales. But this need not be true. The diminishing number of whales may owe its origin to something other than whales being whales. In such a case, the whale would

14 Chp 4, p 151.
still be close to extinction, but this fact would owe nothing to whales as such. For example, the
demise of the whale could simply be the result of a string of astronomically bad luck or even one
phenomenally unfortunate occurrence. Perhaps there are vast numbers of whales in the ocean
and it is simply a matter of there being a large asteroid heading for earth that prompts us to say
“the whale is close to extinction.” In such a case, each whale’s being a whale seems beside the
point when it comes to explaining the imminent extinction of the whale. It is not each whale
being a whale that matters to this discussion, but, rather, the imminent impact of the asteroid. We
can make this clearer by supposing that the asteroid’s impact will not only yield the extinction of
the whale but also of every other species as well. In such a case a whale’s being a whale seems
entirely beside the point when it comes to the task of explaining its limited future. Together, these
objections yield the following conclusion: The use of the *qua* operator will not prevent one from
having to accept kind terms as genuine singular terms. Even with the inclusion of the *qua*
operator, talk of kinds cannot be systematically eliminated from our discourse. Kind terms are, at
least in some contexts, ineliminable. And, if this is right, then kind terms will meet all of our
criteria for being genuine singular terms. Hence, such terms must be regarded as object denoting.
This is what it is for a term to be genuinely singular.

§ 2. Kinds, Universals and Tropes.

To arrive at the above conclusion (i.e., that kind terms are genuine singular referring
expressions) is not, however, to adopt a position regarding the sorts of objects such terms denote.
One cannot move seamlessly from the occurrence of such terms, and the evaluation of such terms
as genuinely singular, to the existence of kinds as distinct elements within one’s ontology. There
might exist other objects that can serve as the denotata of such terms. Hence, just as the class
nominalist maintained that property terms referred to classes of individuals, the metaphysical realist and the trope nominalist might maintain that kind terms refer to universals or classes of tropes respectively. In this way, the metaphysical realist and the trope nominalist might hope to uphold the intuition that such terms are genuinely singular while, nonetheless, avoiding any addition to their already plentiful ontologies. In what follows, I will argue that such a strategy is problematic. The conclusion I will reach is that however else we populate our ontology we should include kinds as distinct elements within that ontology. I start with a consideration of trope nominalism. In particular, I focus on the claim that the trope nominalist may reduce kinds to classes or sets of tropes.

§ 2.1 Trope Nominalism and Reference to Kinds.

Let us suppose that the trope nominalist is concerned with the ontological parsimony of his theory and wishes to avoid a commitment to kinds as separate elements within his ontology. How best can he do this? Clearly he cannot maintain that kinds do not exist or that the terms that ostensibly refer to kinds are not referring terms at all. This is the conclusion of the first section of this chapter. Kind terms are genuine referring expressions. Hence, there must be objects those terms denote. In the sense that there are objects such terms denote, there exist kinds. But he can perhaps endorse a second-best strategy — a strategy according to which kinds exist but constitute no addition to his ontology. Borrowing a page from the class nominalist, he might claim that kinds simply are classes or sets of resembling tropes. This, in fact, is how the trope nominalist most often responds. Consider, for instance, the following comments by Keith Campbell:

Basic tropes can be multiple in respect to their relations — of compresence with locations, of mutual distance mediated through compresence with location, and of resemblance. In respect of resemblance.  

15 Chp 4, p.153.
tropes can be grouped together according to rules of various degrees of strictness: If we are in the dye business we shall discriminate into separate natural kinds groups of colour patches which for ordinary purposes are lumped together. Each shade of green is exactly what it is. In being that shade it resembles very closely other patches which even the trained eye cannot distinguish even when next to each other. Such patches form one natural kind. Our original patch also resembles, though less closely, all other greens, which form another, larger, less tightly knit natural kind.\textsuperscript{16}

Campbell endorses what I have called a second-best strategy. He does not deny the existence of kinds but seeks their reduction to ontological elements he has already accepted. Kinds are, for Campbell, sets or classes of tropes held together, more or less closely, by a relation of resemblance.\textsuperscript{17} The more closely the tropes within a class resemble each other, the more natural is the kind they constitute. The less closely the tropes within a class resemble each other the less natural is the kind they constitute. \textit{Prima facie, we have an answer for our struggling theorist — kinds are simply classes or sets of tropes. Moreover, such an answer not only tells us what kinds are but is also prepared to explain the degrees of naturalness that seem to characterize kinds.}

Forest-green is simply the kind constituted by the class of all forest-green tropes. Green is the kind constituted by the class of all green tropes. And the kind Forest-green is more natural than the kind Green because the class composed of forest-green tropes exhibits a greater degree of internal resemblance than does the class of green tropes. Every forest-green trope resembles every other forest-green trope more closely than any such trope resembles a pale-green trope.


\textsuperscript{17} This also seems to be the view that David Armstrong advocates that the trope nominalist accept. He argues that class of resembling tropes can serve as substitutes for universals. Hence, as he accepts that universals are sufficient for explaining kinds, he must also think classes of tropes sufficient for this task. See: David Armstrong. \textit{Universals: An Opinionated Introduction}. London, Westview Press, 1989, pp.121-122.
There are, however, problems for this answer. Consider what this answer entails semantically. It entails that the reference of each kind term may be made explicit via the following equivalence:

The K is F = The class of K-tropes is F.

Hence, sentences like “The Horse is the subject of this course” entail sentences like “The class of horse-tropes is the subject of this course.” But this is problematic on two fronts. First, suppose that we have a substance-attribute view of tropes, i.e., a view according to which the individual objects of the physical world are composites of an underlying substrata in which tropes inhere and tropes. In such a case, it is not at all clear that the above equivalency holds. After all, on such a view, the class of horse-tropes, while a class, is not the class of horses. Horses are composed not just of their tropes but their tropes and an underlying substratum. Hence, one might legitimately claim a difference between the kind which has individual horses as its members and the class of horse-tropes which merely has tropes as its members. The two do not seem equivalent.

Of course, we need not reject trope-nominalism in order to solve the above problem. If it is a legitimate difficulty, and I think it is, it can be solved simply by jettisoning a substance-attribute theory of tropes in favor of a bundle theory. According to a bundle theory of tropes, objects just are complete complex compresences of tropes.18 Hence, on such a view the class of horses would be identical to the class of horse bundles. Hence, both the kind horse and the class of horse tropes (which we are assuming are complex conjunctive tropes) would count individual horses among their members — this because the trope theorist would identify each complex compresence within the class of horse tropes as itself being a horse. Perhaps, it will be felt that

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this “solution” is more troubling than the ill for which it is suggested. There are considerable
questions concerning the coherence of bundle theories — not the least of which is whether a
regress on the relation of compresence may be halted.19 For the present, set those concerns
aside. There is still another problem with the trope nominalist’s identification of kinds with
classes of tropes. Moreover, this second problem is a problem for both substance attribute
theories of tropes and bundle theories of tropes alike. It concerns the trope nominalist’s
identification of kinds with classes.

We recognize that the identity criteria for classes are well established. Two classes are
identical if and only if they have all and only the same members. Hence, two classes of tropes will
be identical if and only if they have the same members. Consequently, two kinds will be identical
if and only if the classes of tropes with which they are identified are identical. Now in the majority
of cases co-extensional classes will not pose a problem for the trope nominalist. Any two classes
of tropes so long as they have members will in fact differ. For example, the class of a-tropes and
the class of b-tropes differ in that one has a-tropes as its members, the other b-tropes. Hence, no
two kinds for which there exist examples will be counted the same. But what should we say of
those kinds for which examples do not exist, say The Griffin and The Unicorn? There exist many
kinds for which in the actual world there exist no examples. It is true, for instance, that “The
Unicorn is a kind for which no examples exist.” But if this is true, then, as “The Unicorn”
functions as a singular term, there must be an object it denotes. What object could that kind be?
The trope nominalist, having identified kinds with classes of tropes, must claim it is the null class.
So too, must the trope nominalist claim the kind Griffin reducible to the null class. But then the
trope nominalist must maintain that these two kinds not only have the same members (i.e, none)

19 Chapter 2, pp.84-85

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but are, in fact, the same kind. Yet these kinds are clearly distinct. One is a kind of mythical beast that closely resembles the horse, has a horn and has an affection for virgins; the other is a mythical beast having the head and wings of an eagle and the body of lion. Imagine, even if there were no horses or rabbits, the kind horse and the kind rabbit would differ. Trope nominalism has difficulty accommodating this intuition.20

So far, we have been assuming that the trope nominalist will construct his classes of tropes simply from the stock of tropes found (tenselessly) within the actual world. The trope nominalist can begin to sketch a response to the above problem by abandoning this assumption. Once we construct our classes from all possible tropes rather than only actual ones, we have the resources to distinguish the kinds Unicorn and Griffin. Unicorns, though they do not exist in this world, do exist in some world.21 So too, will Griffins exist in some world. And in these worlds the tropes that characterize members of these two kinds will, in fact, be different. Hence, once we move to a modally informed construction, we no longer need to be concerned that the kind to which griffins belong is also the kind to which unicorns belongs. Once it is modalized, the trope nominalist's view seems to yield an adequate semantics for kind terms.

Nonetheless, I wish to claim that we would do well to reject the trope nominalist's answer. There is a felt difference between classes of tropes and kinds. Intuitively kinds have as


21 Kripke, of course, famously disputes this in *Naming and Necessity*. He argues that as unicorns have the property of being mythical essentially, there will be no world in which a unicorn actually exists. For their mythic nature rules out their existence. Saul Kripke. *Naming and Necessity*. Cambridge, Harvard University Press, 1972, p. 24.
their members appropriately propertied things. The kind horse, for instance, has as its members all actual and possible horses. The kind Green-thing has as its members all actual and possible green things, including the green smoking jacket and the leaves of the eucalyptus tree. Except in rare cases the trope nominalist, even the trope nominalist who rejects substrata, must deny that kinds are collections of propertied things. Instead, the trope nominalist claims kinds are classes or sets of properties, i.e., classes or sets of the properties propertied things possess. The exception to this rule occurs in those case where the tropes under consideration are not only conjunctive but are also substance determining — tropes such as horse tropes or rabbit tropes. In these cases the trope nominalist who accepts a bundle theory of objects may plausible maintain his kinds include not only properties but individuals as well. This because bundles of properties just are individuals. Still, in all other cases the intuitive meaning of "kind" is subtly shifted so as to exclude propertied things as members of kinds in favor of the properties those things possess. But this shift in meaning is troubling. Kinds are the sorts of things concerning which we have well established pre-philosophic intuitions. Among these intuitions must be counted the intuition that it is things that belong to kinds and not merely the properties of things. Once engaged in the philosophical enterprise we should expect our pre-philosophic intuitions to undergo a certain degree of regimenation, but the sort of regimenation the trope nominalist suggests for kinds is unacceptable. The reason is this: The trope nominalist asks us to abandon our intuitive notion of a kind in favor of a specification of kinds in terms of tropes. But the existence of kinds is surely better established than is the existence of tropes. The notion of a kind is given to us in experience. Conversely tropes are theoretical entities through and though. All other things being equal, it is preferable to accept a theory that preserves as much as possible of our intuitive notion of a kind and dispenses with tropes over a theory that distorts the notion of a kind and accepts tropes.
§ 2.2 Metaphysical realism and Reference to Kinds.

A similar conclusion may be generated for metaphysical realism. Within metaphysical realism there exists a long tradition according to which kinds just are universals. In the Republic, Book X, Plato suggests that there are universals corresponding to kinds of artifacts. In De Interpretatione, Aristotle uses as his example of things that are universal man.

Plato:

In the present case, then, let us take any multiplicity you please; for example, there are many couches and tables. Of course.

But these utensils imply, I suppose, only two ideas or forms, one of a couch and one of a table. (Republic, 596b)22

Aristotle

Now of actual things some are universal, others particular (I call universal that which is by its nature predicable of a number of things, and particular that which is not; man, for instance, is a universal, Callias a particular). (De Interpretatione, 17a.38)23

So too, it is the case in contemporary metaphysics that the notion of a kind is often identified with that of a universal. In On Universals, for instance, Nicholas Wolterstorff explicitly argues for such an identification; he writes,

Corresponding to the predicable [i.e., universal] wisdom, there is the kind, Case of Wisdom. Corresponding to the predicable being green, there is a kind, Case of being green. And in general, corresponding to every predicable, there is a kind whose examples are cases of that predicable.

Is there any good reason for supposing that the kind, case of wisdom, is a distinct entity from wisdom? Is there any good reason for supposing that the kind Case of green, is distinct from being green? And in general is there any good reason for not identifying a predicable with the kind whose examples are the cases of that predicatable?

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I myself see no good reason whatsoever for not making these identifications. 24 Another who make such an identifications is Michael J. Loux. 25 One can safely say that the metaphysical realist recognizes a need to accept kinds and has traditionally sought a reduction of such entities to universals. According to the metaphysical realist, kinds just are universals.

This identification of kinds with universals, however, is an uneasy one. First, the metaphysical realist's analysis of kinds encounters the same problem as does the trope nominalist's analysis. There is a felt difference between kinds and universals - the same felt difference that exists between kinds and tropes. Again, the intuitive notion of a kind is the notion of a collection of propertied things. The kind horse has as its members horses. The kind Green-thing has as its members green things. The identification of kinds with universals forces a theorist to abandon this intuitive understanding of kinds. In the metaphysical realist's hands kinds cease to be collections of propertied things and become the properties themselves. As with the trope nominalist's analysis of kinds, the metaphysical realist's analysis entails that one abandon any intuitive understanding of kinds. Indeed, once universals are mobilized as the referents for kind terms we can no longer even talk of kinds having members. Universals, after all, are not the sorts of things to which things belong. Universals have instances rather than members. Hence, the metaphysical realist's identification of kinds with universals also forces one to abandon the notion of a kind as a type of grouping. This is not to say that one might not go on and group things according to the universals or kinds they instance, but these grouping could not, on the analysis the metaphysical realist offers, be kinds. Instead, they would be groupings based on the


instancings of a shared kind or universal and, hence, would be distinct from the universal or kind itself. The conclusion such considerations generate is a moderated one. It is essentially the same as the one I drew concerning trope nominalism. It is this: All other things being equal, it is preferable to accept a theory that preserves as much as possible the intuitive notion of a kind and dispense with universals over a theory that countenances universals but distorts the intuitive notion of a kind.

Note that with this conclusion, together with that of section 2.1 of this chapter, further undermines the singularist assumption. Singularism demands that there be a single sort of entity the acceptance of which is by itself sufficient for answering the problem of universals. The two strongest candidates for such solutions are trope nominalism and metaphysical realism. Neither of these two theories, however, is able to offer a plausible reconstruction of kinds. Hence, neither can comfortably provide us with the sort of solution singularism demands.

§3. On the Notion of A Kind.

Thus far we have argued: 1) for a recognition of kinds as semantically necessary; 2) that kinds are not comfortably reducible to classes or sets of individuals or tropes; and 3) that kinds are not comfortably identified with universals. These conclusions suggest that however else one fills out one's ontology there is a need, within that ontology, for one to admit kinds as distinct from classes or universals. We have also seen how these conclusions constitute yet another argument against singularism. Still, the question remains "what is a kind?" It is to this question that I now wish to turn. In order to determine whether an ontology of kinds will suffice for
solving the problem of abstract reference we must first articulate an acceptable notion of kind and second say something about the logic (loosely defined) that relates kinds both to one another and to their members.

We may begin by detailing (to the extent possible) the intuitive notion of a kind. As noted before it is a part of the notion of a kind that kinds are collections of individuals and are not properties. Kinds have members and their members are propertied things. Neither, however, is it the case that every collection or assortment of individuals constitutes a kind. The following collection, for instance, fails to constitute a kind: the collection of all things that are either blue or found on a farm. The reason is this: "kinds are similarity making." For any three objects a, b, and c, if a and b are both members of the same kind and c is not, then all other things being equal a and b resemble one another more than either a resembles c or b resembles c. Hence, in our above example since there could exist things that resemble individual items within the specified collection more closely, even when the certis paribus clause is satisfied, than do other items within the collection, the collection fails to be a kind. Similarly, this collection fails to be a kind: the collection made up of Silver, Secretariat, and Black Beauty. Though each of the members of this collection is a horse, since the collection itself does not include all horses, there is no guarantee that the similarity making condition on kinds will be satisfied. It is possible that there could exist a horse outside of this collection that as closely resembles one of the three horse within the collection as do the other two horses within the collection. Of course it might be retorted that this is not so for the simple reason that the original three horse are all members of the same collection whereas the fourth is not. Hence, if the certis paribus clause is satisfied the fourth horse could not resemble any of the original three as closely as do the other two horses within the

collection. But this response evinces a misunderstanding of the notion of a kind. It cannot be membership in the same collection that constitutes the relevant relation of resemblance that obtains between members of the same kind. Rather, it is the relation of resemblance that obtains between the members of a kind independent of their membership in that kind that is relevant here. This guarantees there will be a genuine resemblance between the members within any kind. Conceived of in this way, the acceptance of this similarity making condition yields two conclusions. First, it entails there can be no disjunctive kinds. This follows from the fact that any collection based on a disjunctive criterion of membership will fail to satisfy the similarity making constraint. Second, it entails that there is no guarantee that a proper subset of a kind will itself be a kind. Though this may happen, there will be many cases in which it does not. This suggests that there is a difference between kinds and classes. Where every subset of a class is itself a class, it is not the case that every subset of a kind is itself a kind.

Of course one might reply that kinds are simply a special sort of class — a maximally consistent similarity class perhaps. Though kinds resemble classes in that both have members, the relation of a kind to its members differs from the relation of a class to its members. Intuitively, two kinds can differ even if they have all and only the same members. For instance, the kind Triangular-thing differs from the kind Trilateral-thing even though every object that is a member of the former is also a member of the latter and vice versa. Such is not the case for classes. Classes come with well defined identity conditions. Any two classes that have an identical membership are themselves identical. Classes are constituted by their members in a way in which kinds are not. In this respect kinds are similar to universals in that they are not extensionally definable — even when those extensions are taken to cross all possible worlds. Hence, what differentiates
kinds from classes constitutes a point of similarity between kinds and universals. Neither, however, are kinds universals. Kinds resemble classes and differ from universals in having members. Kinds and classes are both the sorts of objects to which things belong.

It is a kind's similarities and differences with classes that will allow us to articulate what a kind is. As I shall use the term, A kind is an intentional entity exhibiting a class like structure (in so far as kinds admit of members) that nonetheless differs from a class in the following way: though kinds have members, no kind is to be identified in terms of its membership; rather, each kind is identified in terms of the membership requirements an object must satisfy in order to be a member of that kind. Hence, the crucial difference between a kind and class is that the members of a kind must earn their right to their membership through the satisfaction of some membership requirement. Hence, it is the membership requirement that defines a kind and not its members. The most straightforward analogy by which to understand the notion of a kind is that which we can draw between a kind and a social club or organization. Consider two such organizations, say the local PTA and the local chapter of Parents against Drunk Driving. It is conceivable that these two organization might have all and only the same members. Nonetheless, they constitute two distinct entities — they are two and not one. This is so, because what matters to the identification of a social organization is not its membership but, rather, the purpose for which those members come together. The members of such organizations must earn their membership in various ways (perhaps through their participation, activity, and concern). The members of the PTA earn their membership through a concern for educational excellence. The members of Parents against Drunk Driving earn their membership through a concern for road safety. Similarly, membership in kinds is earned. It is earned by a particular through its properties. Hence, though the kind Trilateral-thing and the kind Triangular-thing may have the same members — they constitute two
different kinds. This is so, because membership in these two kinds is earned in differing ways. In
the first case, it is earned through being trilateral, by satisfying, that is, the open formula “x is
trilateral.” In the second case, it is earned through being triangular or by satisfying the open
formula “x is triangular.” For each genuine similarity making predicate, then, there exists a kind
the membership requirements for which simply is the satisfaction of that predicate within an open
formula.

Once the membership requirements for kinds are defined in terms of the satisfaction of
predicates we can begin to construct a logic for kinds. We start by defining the notion of a basic
kind:

(A) A kind $K$ is basic iff the membership requirements for $K$ may be given in
terms of a simple (meaning non-conjunctive or non-disjunctive) predicate $P$ and
the following conditions are met:

1) Every individual that satisfies $P$ is a member of $K$;
2) No individual that fails to satisfy $P$ is a member of $K$;
3) The satisfaction of $P$ is a similarity making; and
4) Given conditions 1-3 (above) $K$ is not necessarily empty.

All basic kinds are to be admitted into our ontology as primitives. Condition 1 on the formation of
a basic kinds ensures that all such kinds will be exhaustive of their members, while conditions 2
and 3 ensure that such kinds will be genuinely similarity making. For any three objects $a$, $b$, and
c, if $a$ and $b$ are both members of the same basic kind and $c$ is not, then all other things being
equal $a$ and $b$ resemble one another more than either $a$ resembles $c$ or $b$ resembles $c$. Finally,
condition 4 ensures that there will be no necessarily empty kinds. For a kind to exist, it must at
least be possible that it have members. It is essential to the notion of a kind that there is or could
be a thing of that kind.
Once basic kinds are admitted, we can then go on to articulate a logic for the construction of non-basic kinds. There are three logical relations that demand our scrutiny — negation, conjunction and disjunction. It is important to note that these logical relations are taken to operate on the membership requirements that define each kind. As with basic kinds, our discussion will be constrained by the similarity making condition. Whatever else we say of kinds, kinds are similarity making. Consider first negation. It follows from the similarity making condition that the operation of negation on a basic kind will itself yield a kind. Imagine, if K is a basic kind then it conforms to the similarity making condition and if so, then, all other things being equal, any arbitrary object outside of K will resemble every other thing outside of K more than it resembles any object within K. Hence, if K is a kind, then so too is its complement not-K. Hence, the following will be an axiom of a kind based logic:

B) If a membership requirement M defines a basic kind K, then not-M also defines a kind, namely not-K.

More will have to be said of negation later once we introduce conjunction. For now it is enough to note that we allow constructions that negate our basic kinds. Such negations are similarity-making and, hence, are unproblematic.

Turn now to disjunction. Again, remember that these logical operations have as their relata the membership requirements that define kinds. In general, the disjunction of the membership requirements for two kinds will not itself yield a kind. This can be proved by recognizing that the disjunction of the membership requirements for two kinds carves out a membership class equivalent to the union of the membership of the original two kinds. So, the following holds true of the disjunction of any two membership requirements, where (K₁, M₁) equals the membership requirements for the kind K₁ and (K₂, M₂) denotes the membership
requirements of kind $K$: 

$$C) \ (K_1, M_1) \lor (K_2, M_2) = K_1 \cup K_2.$$ 

But then, take the union of the memberships of any two kind. In general, there is no guarantee that the union of any two kinds will be a similarity-making collection. To illustrate consider the union of the members of the kind Alligator with the union of the members of the kind Red-thing. Surely it is possible, given this collection of individuals, that there could exist individuals outside of the collection that as closely, if not more closely, resemble some of members within the collection than do other members within the collection. A good candidate for such an object would be any reptile that fails to be an alligator, say any crocodile. The exception to this rule is that case in which we have the disjunction of two membership requirements for kinds that necessarily have all and only the same members, say the disjunction of the membership requirements for the kind Triangular-thing and the kind Trilateral thing. In such a case, since the membership of each kind is identical and is assumed to be similarity making, the union of their members will yield a similarity-making collection. Nonetheless, we may rule out disjunction as a principle of kind construction on the general grounds that the operation fails to guarantee the production of a similarity making collection. The only logical relations we will countenance for kind construction will be those that when applied to the membership requirements for basic kinds unfailing yield membership requirements that are at least in principle similarity-making. Disjunction fails to meet this requirement. Hence, disjunction is ruled out as a principle for kind construction.

Next, let us consider conjunction. Again, conjunction, like the other logical operations, is construed as an operation on the membership requirements for kinds. In general, the
conjunction of any two membership requirements will yield the membership requirements for a third kind. So the conjunction of the membership requirements for the kind Red-thing and the kind Square-thing yield the membership requirements for the kind Red-Square-thing. And this kind meets the similarity-making condition. For any three objects \(a, b,\) and \(c,\) if \(a\) and \(b\) are both members of the kind Red-Square-thing and \(c\) is not, then all other things being equal \(a\) and \(b\) resemble one another more than either \(a\) resembles \(c\) or \(b\) resembles \(c.\) Note that the conjunction of the membership requirements for any two kinds will yield a collection that has as its members all and only those items found in the intersection of the original kinds out of which it was constructed. We can express this as follows:

\[
D) (K_1, M_1) \land (K_2, M_2) = K_1 \cap K_2.
\]

I wish to accept conjunction as a principle for kind construction. There are, however, two problems with this proposal. The first has to do with our previous acceptance of negative kinds. We allowed, earlier, that the negation of the membership requirements for a kind constitute the membership requirements for an additional kind. But now consider what happens when, given this admission of negative kinds, we allow the conjunction of the membership requirements of any two kinds to constitute the membership requirements for a third kind. Under these circumstances we will be forced to countenance kinds like the kind Square and not-Square thing. We will be forced to countenance, that is, kinds to which no thing could ever belong. The second problem has to do with the fact that disjunction can be defined in terms of conjunction and negation. We allow in our constructions for the existence of negative kinds — kinds, that is, that are formed by negating our basic kinds. Let \(\text{not-}K\) and \(\text{not-}L\) be two such kinds. These kinds have as their membership requirements the negation of the membership requirements for \(K\) and \(L\) respectively. So the membership requirements for \(\text{not-}K\) are \(\neg (K, M)\) and the membership
requirements for not-L are \( \sim (L, M) \). But then, given our acceptance of conjunction, the conjunction of \( \sim (K, M) \) and \( \sim (L, M) \) form the membership requirements for a kind, call it kind N. The membership requirements for N are \( \sim (K, M) \& \sim (L, M) \). But then given our acceptance of negation, the negation of the membership requirements for N form the membership requirements for a kind, call it not-N. Not-N will have the following membership requirements: \( \sim (\sim (K, M) \& \sim (L, M)) \) and this just is logically equivalent to \( ((K, M) \lor (L, M)) \). Hence, our principles of construction allow the disjunction of the membership requirements of any two kinds to form the membership requirements for a third kind. And this is a result we do not want. The reason, again, is that disjunctions of this sort fail to satisfy the similarity-making condition extracted from the intuitive notion of a kind. In what follows I will consider each of these problems separately. I begin by sketching a solution to the first.

Our first difficulty may be summed up as follows: If we allow an unbridled principle of conjunction to guide us in the construction of kinds, then we will be forced into accepting an ontology in which there are kinds for which there could be no members, kinds like Square-Round-thing or Square and not-Square thing. This in turn, would us lay us open to the charge of having accepted an unnecessarily bloated ontology and, thus, of having sacrificed any claim to theoretical parsimony that we might otherwise have been able to muster. Clearly the most plausible constraint that we might place on conjunction is this:

E) The conjunction of the membership requirements for any two kinds K and L yield the membership requirements for a third kind M if and only if it is possible for there to exist an object that satisfies those membership requirements.

Such a constraint would solve our problem. Since the membership requirements formed from the conjunction of the membership requirements for the kind Square-thing and the kind not-Square-thing are not able to be satisfied in any world, there will be no kind Square and not-square
thing. Before we accept this solution, however, we need to convince ourselves that it is neither arbitrary nor does it abandon the principle articulated within the discussion of disjunction that the only logical relations we will countenance for kind construction will be those that when applied to the membership requirements for basic kinds unfailing yield membership requirements that are at least in principle similarity-making. Both of these concerns can be laid to rest at the same time. Throughout this section I have been at some pains to use, when referring to kinds, constructions such as "the kind Red-thing" rather than the more familiar construction "the kind Redness." I have done so because I have wanted to highlight what I consider to be an important part of the intuitive notion of a kind, namely that kinds are collections (albeit intentional collections) of things. It is a part of the notion of a kind that things belong or at least could belong to kinds. The acceptance of kinds such as the kind Square and Not-Square thing would force us to abandon this understanding of kinds. Hence, our rejection of these kinds is neither arbitrary nor ad hoc; rather, it is motivated by what I consider to be one of the few bedrock intuitions we have about kinds. Neither, though, does the rejection of such kinds through the acceptance of E) open us up to charges of inconsistency. We do not reject kinds such as the kind Square and not-Square-thing because they fail to be similarity making. Instead, we reject them because they are necessarily devoid of members. There is a subtle difference between these two things. We can grant that if the kind Square and not-Square-thing existed it would be similarity making and still deny that it exists on the grounds that though similarity making it necessarily lacks members. Hence, I conclude that nothing stands in the way of a good faith acceptance of E. We will allow that the conjunction of the membership requirements for any two kinds K and L yield the membership requirements for a third kind, M, except in those case where the resulting membership requirement is of necessity unable to be satisfied.
What then should we say of our second problem? At first glance, it appears to lay the groundwork for a *reductio* of the theory I have sketched. Is there a principled way of excluding disjunction while nonetheless accepting negation and conjunction? I think there is. The answer lies in a notion of logical simplicity.27 We start with the notion already familiar from introductory logic texts that the logical apparatus may be ordered in terms of simplicity "as follows: first, negation, conjunction, and disjunction; second, quantifiers; third, identity; fourth, set membership."28 Of course, this alone will not help us. After all, the logical connectives with which we are concerned are all of the first or highest order of simplicity. Nonetheless, the recognition that negation, conjunction, and disjunction are all of the same simplicity order will prove invaluable in responding to this second problem. This recognition allows us to go on and characterize a notion of simplicity for equivalent formulae that make use only of logical apparatuses of the same simplicity order. We may do so as follows:

F) For equivalent formulae making use only of logical apparatuses of the same simplicity order, the simplicity of these given formulae may be measured in terms of the number of times such apparatuses are employed - the fewer the number of employments, the more simple is the formula; the higher the number, the more complex is the formula.

Hence, since we are concerned only with logical connectives of the same simplicity ordering and then only with their appearance within logically equivalent formulae, the simplicity of any given formula relative to its equivalencies may be numerically quantified in terms of the sum-total number of appearances of all three connectives with which we are concerned. To illustrate, though \(~(\neg K \& \neg M)\) is equivalent to \((K \lor M)\) the second formula is simpler than the first — it has a simplicity measure of one, while the first has a simplicity measure of four. Now the usefulness

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28 Ibid., p.53.
of this measure of the simplicity of formulae is that it allows us to further refine our prohibition against disjunction. It is not all disjunctive or potentially disjunctive membership requirements that we wish to exclude but only those whose simplest formulation includes disjunction. Our final prohibition against disjunctive membership requirements will read as follows:

G) No kind is defined by a membership requirement whose simplest formulation includes disjunction.

This in turn frees us to accept conjunction and negation as principles for kind construction while at the same time adhering to the similarity making condition that has informed our discussion from the start.

Before we turn to the question of whether an ontology of kinds is capable of grounding an adequate answer to the problem of abstract reference, there is one further issue concerning kinds that we must address. It is this: Kinds are largely thought to exist in a hierarchically ordered structure. Before we continue, we need to say something about the hierarchical relations that may obtain between certain kinds. We may do this in terms of the relation of implication. As I will construe implication, a kind K implies a kind L if and only if it is the case that the membership requirements for K include the membership requirements for L. Hence, a kind K will imply a kind L if and only if it is the case that the membership requirements for K are conjunctive and one of the conjuncts are the membership requirements for L. When this relation obtains we will say K implies L and a result of this implication will be that it is necessarily the case that all the members of K are also members of L. In such a case, we may say that K is a sub-kind of L. An illustration will be helpful here. The kind Red-thing is a sub-kind of the kind Colored-thing. This means that the kind Red-thing has a conjunctive membership requirement that includes as a

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29 This is much the same strategy as Gary M. Hardegree adopts in "An Approach to the Logic of Natural Kinds," Pacific Philosophical Quarterly, 63, (1982), pp. 122-132.
conjunct the membership requirements that defines the kind colored thing. As a result, it will be a necessary truth that every thing belonging to the kind Red-thing also belongs to the kind Colored-thing. The notion of a sub-kind will play an important role in the kind ontologist’s answer to the problem of abstract reference.


The following details have emerged from our discussion of kinds: First, we have concluded that kind terms are genuine singular terms. As such, we said they are object denoting. Second, we have explored and rejected the trope nominalist’s assertion that kinds are reducible to classes of tropes and the metaphysical realist’s suggestion that kinds are reducible to universals. Both the metaphysical realist and the trope nominalist, it was concluded, should accept kinds as distinct elements within their ontologies. In drawing this conclusion, we noted that it is at odds with the assumption of singularism, for it suggests that neither tropes nor universals alone are sufficient for answering the entirety of the problem of universals. Such entities may provide the semantic resources for securing the reference of property-terms but they do not comfortably provide the resources necessary for securing the reference of kind-terms.

But this realization gives new life to the those of us who want to reject universals and tropes. If the trope nominalist and the metaphysical realist are allowed to supplement their theories with kinds, then so too should the ostrich nominalist be allowed to supplement his theory with such entities. What we must explore, then, is this: Is the admission of kinds into an ontology by itself sufficient for answering the problem of abstract reference? I wish to claim it is. Moreover, if it is, then I wish to claim that this fact allows us to once again assert a preference for ostrich nominalism — this time an ostrich nominalism augmented by an acceptance of kinds.
Having admitted no additional entities but those the trope nominalist and the metaphysical realist should also admit, such an ostrich nominalism remains the more parsimonious of the three theories. Hence, it is the theory we should favor. In order to make these arguments, however, we must first show that kinds may ground the phenomenon of abstract reference by serving as the denotata of abstract singular terms generally. It is this task that is the subject of this section.

Before we can answer the question of whether an acceptance of kinds, by itself, provides one with the resources necessary for answering the problem of abstract reference, we must first articulate the criterion by which proposed answers will be judged. Throughout this discussion, I will accept the criterion articulated by Michael Loux in Substance and Attribute. In this work, Loux identifies three contexts within which abstract singular terms are alleged to play a referring role. These contexts are as follows: 30

1) exemplification contexts — contexts in which to all appearances we pick out some object and say that it exemplifies or exhibits some universals.

Examples: (a) Socrates possesses wisdom.
          (b) The Scalene exemplifies triangularity
          (c) The American Flag instantiates redness.

2) Intentional Contexts — contexts in which we specify the objects of a person's mental states or acts.

Examples: (d) Alcibiades aspires to wisdom.
          (e) Quine prefers redness to whiteness.
          (f) Mathematicians think about triangularity.

30 The following definitions and examples are taken from: Michael J. Loux. Substance and Attribute, Boston, D Reidel Publishing Co., 1978, pp. 61-63.
3) **Classificatory Contexts** — contexts in which we use abstract singular terms as tools for identifying a universals that we want to go and classify in some way.

**Examples:**

(g) Wisdom is a virtue.
(h) Redness is a color.
(i) Triangularity is a shape.

If an acceptance of kinds is to prove adequate, then we must show that each of the above sentences may be reinterpreted as really being about kinds. An additional constraint on our discussion is what Loux calls the *Condition of Semantic Uniformity,* "In rough terms, this amounts to the claim that to be acceptable an analysis of sentences incorporating abstract singular terms must show any given abstract singular term to have one and the same role in [these] various contexts."[^31] The rationale for this constraint is that in natural language these terms seem to play the same role in each of these contexts. This can be seen in the ease with which these sentences can be joined. The truth of a,e, and g, for instance, entails the truth of the following sentence:

(1) A virtue Alcibiades aspires to is a property Socrates possesses.[^32]

If “wisdom” was playing a different role in each of these sentences, then (1) could not follow from the conjunction of a, e, and g. The challenge we face, then, is that of providing an analysis of sentences like (a) - (i) that does not presuppose the existence of universals, and which also “shows a given abstract singular term to have a single function in the different sentences into which it enters."[^33] The strategy that I will adopt is that of first considering each context in isolation from the others. Once this is done, I will then argue that the conjunction of these answers satisfies Loux's *Condition of Semantic Uniformity.*

[^31]: Ibid. p. 63.

[^32]: Ibid. p. 63.

[^33]: Ibid. p. 64.
§ 4.1 Kinds and Exemplification Contexts.

Exemplification contexts are those "contexts in which to all appearances we pick out some object and say that it exemplifies or exhibits some universal."34 Such contexts are closely related to the phenomenon of predication. If one accepts the metaphysical realist's claim that the phenomenon of predication is best understood in terms of the exemplification of universals, then each applied predicate will be understood as entailing an exemplification claim. "A is F," for instance, will be understood as entailing the sentence "a exemplifies F-ness." In this regard, exemplification contexts are the most ontologically biased of the three contexts we will consider. Such contexts, superficially at least, presuppose a metaphysical realist ontology.

To this extent we might be tempted to think all such claims to be false. The terms "exemplification" and "instantiation" are, after all, terms of philosophical art. They are related to universals and tropes. Hence, once we have rejected such entities, it becomes attractive to think sentences employing these terms no longer need to be taken with ontological seriousness. This is not, however, the strategy that I choose. To adopt this strategy is to ignore the other methods by which exemplification claims find expression. Though sentences such as "Socrates exemplifies wisdom" might be thought to presuppose an ontological view, sentences such as "Socrates possesses wisdom" do not. This latter sentence is able to be uttered and understood even by those who lack all philosophical sophistication. What are we to make of these sentences?

The suggestion that I wish to explore is this: All such sentences can be recast as really concerning themselves with the kinds to which particular entities belong. "Socrates possesses Wisdom" should be understood, under philosophical analysis, as really being concerned with the

34 Ibid. p.62.
kind Wise-thing and Socrates' relationship to this kind, namely the relationship of 'belonging to'. Generally, the form of exemplification claims is this: “S E W.” What I am now suggesting is that for each such sentence the verb, E, may be replaced, with the phrase “...belongs to the kind...”. In this way, exemplification claims are recast as explicitly being about the kinds to which particulars belong. Under such a strategy, sentences (a), (b), and (c) will be understood as equivalent to (a’), (b’), and (c’) respectively:

(a’) Socrates belongs to the kind Wise-thing
(b’) The Scalene belongs to the kind Triangular-thing.
(c’) The American Flag belongs to the kind Red-thing.

And more complex exemplification claims will be understood, similarly, as talking about the kinds to which one or more entities belong. In fact once we have set the interpretation of the basic sentences, more complex ones may be understood by means of the basic interpretive scheme and the formation rules. For example, conjunctive sentences such as “Plato and Socrates both possess wisdom” will be understood as saying both Plato and Socrates belong to the kind Wise-thing. The other connectives will be treated similarly.

And such re-interpretations are truth preserving. In fact, they are necessarily so.

According to the theory I have articulated each genuine similarity making property of a particular earns that particular membership in a certain kind. Being red earns a particular membership in the kind Red-thing, being blue earns a particular membership in the kind Blue-thing, and so on... But, then, if an exemplification claim is true, then so too will a claim about kind membership be true. After all, if talk of exemplification is understood as attributing a genuine similarity making
property to an individual, then in such an attribution one also necessarily attributes membership in a certain kind. Hence, the method of reconstruction I have suggested is not only truth preserving, it is necessarily truth preserving.

Now, before I continue, I want to head off any misunderstanding before it occurs. Given the above reconstructions and the importance exemplification claims play in the metaphysical realist's understanding of predication, it is tempting, perhaps, to think I am suggesting that predication claims may be understood as expressing a relation between entities and the kinds to which they belong. One is tempted, perhaps, to view me as a type of class nominalist who has substituted kinds for classes. Nothing could be farther from the truth. For this to be the case, kind membership would have to play a role in explaining predication. In the theory I have articulated, however, the ontological phenomenon of predication is more basic than the phenomenon of kind membership. Objects have properties. This is an ontologically fundamental fact about objects. So too, kinds exist. But objects do not possess their properties as a result of their membership in kinds. Rather, objects belong to the kinds they do in virtue of the properties they possess. Kind membership is explained in terms of property possession, not vice versa.

§ 4.2 Intentionality Contexts.

Loux's identification of sentences (d)-(f) as "intensional" is a bit misleading, for it brings to mind the puzzles about synonymy that dominate the literature on propositional attitude ascriptions. These puzzles rest on a de dicto reading of propositional attitudes and demonstrate that on a de dicto reading the substitution of co-referential expressions within propositional attitude contexts is not always truth preserving. To illustrate, imagine that Superman is Clark Kent. Further, imagine that Jimmy Olsen believes that Superman can fly. What the literature on
propositional attitude ascriptions has taught us is that from these two facts it does not follow that Jimmy Olsen believes that Clark Kent can fly. The reason of course being that Jimmy Olsen may be unaware of the fact that Clark Kent is Superman. But the sentences that Loux offers us are not to be read as de dicto attributions of content. Instead, they are intended as de re attributions of content. We are, Loux writes, “to identify the abstract entity that a person’s mental act or state is of, for, or about.” Hence, there is no requirement within the paraphrases that we offer that the individual(s) with whom each sentence is concerned be ready to accept the identification of the objects of their mental content that we offer. Hence, though such contexts are indeed “intensional” in that they concern the objects of an individual’s thought, they are not concerned with the problematic intensional statements so much recent literature has concerned. This in turn frees us to offer the very same sort of reconstruction for (d)-(f) that we offered for sentences (a)-(c). On reconstruction, (d)-(f) become (d’)-(f’) respectively:

(d’) Alcibiades aspires to belong to the kind Wise-thing.
(e’) Quine prefers the kind Red-thing to the kind White-thing.
(f’) Mathematicians think about the kind Triangular-thing.

An ontology of kinds, then, provides the means for understanding Alcibiades’ aspirations, Quine’s preferences, and mathematicians’ programs of study.

§ 4.3 Classificatory Contexts.

Finally, the kind theorist’s understanding of classificatory contexts will be predicated on his or her understanding of the relationships that obtain between and among various kinds. According to the Metaphysical Realist, classificatory contexts will be contexts in which abstract singular terms are used as tool for identifying universals that we want to classify in some way. The...

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examples Loux gives are sentences such as “Wisdom is a virtue,” “Redness is a color,” or “Triangularity is a shape.” But these sentences could just as easily be read as talking about the relation of implication that obtain between various kinds. 36

Within our previous discussion of kinds we characterized the notion of implication as follows: A kind K implies a kind L if and only if it is the case that the membership requirements for K include the membership requirements for L. With the notion of implication so defined, we then went on to characterize the notion of a *sub-kind*. A kind K is a sub-kind of a kind L when K implies L. We, then, fleshed out the notion of a sub-kind by noting that when a kind K is a sub-kind of a kind L, it then follows that all the members of K are necessarily members of L. And it is these companion notions of implication and sub-kind that explain the hierarchical structure of kinds. Sentences such as (g) - (h) are properly understood as talking about the relationships that obtain between kinds and their sub-kinds. Specifically, each may be interpreted as claiming of a kind that it is a sub-kind of another kind. On reinterpretation our original sentences (g) - (i) becomes (g') - (i') respectively:

(g') The kind Wise-thing is a sub-kind of the kind Virtuous-thing
(h') The kind Red-thing is a sub-kind of the kind Colored-thing.
(i') The kind Triangular-thing is a sub-kind of the kind Shaped-thing.

And again as with my reconstructions of the previous sentences, these reconstructions are truth preserving. The sentences (g'), (h') and (i') will be true in all and only those instances where (g), (h), and (i) are true. This is so because on the theory I have sketched it is required of each thing that belongs to a kind that it satisfies the membership requirements for that kind. These membership requirements are spelled out in terms of the properties a particular must possess.

Thus, if the kind Wise-thing is a sub kind of the kind Virtuous-thing, then anything that satisfies the membership requirements for the former will also satisfy the membership requirements for the latter, and this just is to say, colloquially, that wisdom is a virtue.

§ 4.4 The Condition of Semantic Uniformity.

What we have now shown is this: The kind theorist is able, through the use of kinds, to offer, on a context by context basis, adequate reconstructions of sentences (a) - (i). What remains to be seen is whether the kind theorist can meet what Loux calls the condition of semantic uniformity. Recall what this condition requires. It requires that our analysis of abstract singular reference be such that it show any given abstract singular term to have one and the same role in the various contexts we have considered (vis. exemplification contexts, intentional contexts, and classificatory contexts). The reason for this requirement is, again, that in natural language each term seems to play but a single role in each of these three contexts. How else could we understand the ease with which (a), (d) and (g); (b) (e), and (h), and (c), (f), and (i) can be combined to yield (1), (2), and (3), below, respectively?

(1) A virtue Alcibiades aspires to is a property Socrates possesses.
(2) A property mathematicians think about is a shape that the scalene exemplifies.
(3) A color Quine prefers to whiteness is a property instantiated by the American Flag.

The account I offer is able to meet this condition. Using kinds and the foregoing discussion of these various contexts, the reconstruction of (1), (2), and (3) will be as follows:

(1') The kind to which Alcibiades aspires is a sub-kind of the kind Virtuous-thing and is a kind to which Socrates belongs.

(2') The kind mathematicians think about is a sub-kind of the kind Shaped thing and is a kind to which the scalene belongs.
(3') The kind Quine prefers to the kind White-thing is a sub-kind of the kind colored-thing and is a kind to which the American Flag belongs.

The *Condition of Semantic Uniformity* is met. According to the analysis I have given, each abstract singular term plays the same role in each of the contexts we have considered. Consequently, I conclude that kinds prove semantically adequate to the task of analyzing abstract singular reference. Kinds, I conclude, may serve as the denotata of abstract singular terms.

Moreover, as we have previously shown that ostrich nominalism is, by itself, capable of answering the first two problems that play a constitutive role in the problem of universals, we are now in a position to say that an ostrich nominalism that is augmented by an acceptance of kinds should prove perfectly adequate. Such a theory provides a solution to the problem of universals.

§ 5. On the preferability of an Augmented Ostrich Nominalism

We are not yet, however, in a position to secure the preferability of such an augmented theory over trope nominalism or metaphysical realism. It is true, I think, that an augmented ostrich nominalism is a more parsimonious theory than either of its competitors, but this still has to be argued for. Moreover, the preferability of a theory cannot be based simply on considerations of numerical economy; explanatory power and the avoidance of problems both small and large must also play a role in any final estimation of a theory’s worth. In this last section, I argue, using the above criteria, that an augmented ostrich nominalism should be preferred to either of its competitors. I start with considerations of numerical economy.
§ 5.1 The Economy of Kinds.

On brute numerical grounds, an ostrich nominalism of the sort I have articulated can do no worse than Metaphysical Realism or Trope Nominalism. Moreover, it quite possibly fares better than either of its two rivals. Consider: In addition to particulars having properties the trope nominalist and the metaphysical realist must each countenance within their ontologies entities for which the ostrich nominalist has no use — the trope nominalist countenances tropes, while the metaphysical realist accepts universals. So too does the ostrich nominalist accept a type of entity over and above propertied particulars. He accepts kinds. If neither the trope nominalist nor the metaphysical realist must accept kinds, then it would appear that on brute numerical grounds the three theories are roughly on a par. But is it the case that the trope nominalist and the metaphysical realist have the resources to reject kinds? I have tried to suggest that they do not. Kinds it seems to me have the status of Moorean fact. One must make room for them somewhere in one's account of what exists — either by reducing them to other elements within one's ontology or by accepting them as entities within that ontology. In order to remain on a par with ostrich nominalism both metaphysical realism and trope nominalism must embrace a strategy according to which kinds are reducible either to universals or classes of tropes. But these proposed reductions are not comfortable ones. Even if they prove semantically adequate, they subtly change the meaning of the word "kind." Intuitively kinds are neither properties nor classes of particularized properties. Rather, kinds are the sorts of things to which propertied particulars belong. In order to reduce kinds to elements already found within their ontologies, both the trope nominalist and the metaphysical realist must deny this. Hence, however the trope nominalist and metaphysical realist resolve their difficulties concerning kinds they pay a price relative to the ostrich nominalist. If they accept kinds as distinct elements within their ontologies, then they must abandon any claim to enjoying numerical parity with the ostrich nominalist. If, on
the other hand, they reject kinds as distinct entities within their ontologies, opting instead to reduce them to tropes or universals, then they pay the price of having subtly distorted the meaning of “kind.” Though these considerations are not weighty enough to settle the matter of what theory one ought to choose, they do suggest that where numerical simplicity is concerned ostrich nominalism enjoys an advantage over its rivals.

§ 5.2 Explanatory Scope.

But again, numerical simplicity alone is not sufficient for determining what theory one ought to accept. The second criterion I have suggested for measuring the worth of a theory is a theory’s explanatory scope. Now clearly if all three theories prove, as advertised, adequate for answering the problem of universals, then this problem will not provide a measure for determining differences in scope between these three theories. We must look instead to the ancillary benefits each theory is said to provide. The chief ancillary benefits claimed for universals are that such entities provide both an account of laws of nature and an illumination of the nature of modality. Such benefits have also been claimed on behalf of tropes. I claim that kinds provide these benefits as well.

§ 5.2.1 Dretske on Laws of Nature.

Among those who argue that universals help account for laws of nature is Fred Dretske. In “Laws of Nature”, Dretske argues that if we want to retain the notion of a law of nature, then we must accept the existence of universals.\(^{37}\) Such an argument, if successful, provides good reason for favoring metaphysical realism over either trope nominalism or an augmented ostrich nominalism. Though such a benefit would be counted as ancillary to that of providing a solution

to the problem of universals, ancillary benefits need not be insignificant. If it could be shown that universals alone are capable of grounding laws of nature, this, I think, would be enough to dictate an acceptance of metaphysical realism. What I propose to do in this section is to examine Dretske's reasons for making this claim. In response, I will argue that it is not the case that universals alone are capable of grounding such laws. Kinds, too, I will argue can do this work.

What then is Dretske's argument? It turns on the notion that laws of nature are not universal generalizations or what he calls universal truths. Laws, Dretske writes, have features that universal truths lack. First, laws support counterfactuals in a way in which universal truths do not. A law tells us not only what has happened but also "what would happen if certain conditions were satisfied." Second, laws of nature explain the phenomena falling within their scope in a way in which universal truths cannot. Dretske writes,

To say that a law is a universal truth having explanatory power is like saying that a chair is a breath of fresh air used to seat people. You cannot make a silk purse out of a sow's ear, not even a very good sow's ear; and you cannot make a generalization, not even a purely universal generalization, explain its instances. The fact that every F is G fails to explain why any F is G, and it fails to explain it, not because the explanatory efforts are too feeble to attract our attention, but because the explanatory attempt is never made. The fact that all men are mortal does not explain why you and I are mortal; it says that we are mortal, but it does not even suggest why this might be so...Subsuming an instance under a universal generalization has exactly as much explanatory power as deriving Q from P & Q. None.

Natural laws, however, do explain their instances. The reason we are mortal is that we are men and the property of being a man nomologically entails the property of being mortal. Having the first property entails having the second. One might question the explanatory worth of such

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38 Ibid., p.263

39 Ibid., p.262.
explanations, but the attempt at explanation is made. Third, natural laws “are the sorts of things that can become well established prior to an exhaustive enumeration of the instances to which they apply.”40 It is from this fact that laws derive their predictive power. “Our confidence in them increases at a much more rapid rate than does the ratio of favorably examined cases to total number of cases.”41 Again, this is not so for universal truths or generalizations.

It is on the basis of these considerations that Dretske argues for an identification of natural laws with universals. Such laws, he writes, should be thought of as “singular statements of fact describing the relationship between properties and magnitudes,” i.e., as describing relationships between universals.42 And such a conclusion is supported by the recognition that laws entail what Dretske calls an “ontological ascent” — “a shift from talking about individual objects and events, or collections of them, to the quantities and qualities that the objects exemplify.”43

Instead of talking about gases that have a volume, we talk about the volume (temperature, pressure, entropy) that gases have. Laws eschew reference to the things that have length, charge, capacity, internal energy, momentum, spin and velocity in order to talk of these quantities themselves and to describe their relationship to each other.44

But we can endorse all that Dretske says without having to endorse his final conclusion, namely that relata that laws of nature relate can only be universals. Our ontological ascent need

40 Ibid., p. 256.
41 Ibid., p. 256.
42 Ibid., pp. 253 & 263.
43 Ibid., p. 263.
44 Ibid., p. 263.
not be to universals. It could also be to kinds. Consider: Why am I mortal? Because in virtue of
my being a man, I belong to the kind Man and the kind man is related to the kind Mortal in such a
way that everything that satisfies the membership requirements for the first kind also satisfies the
membership requirements for the second. So too, by construing laws as the expressions of various
relationships between kinds we are able to capture the counterfactual force of laws of natures.
Kinds exist regardless of whether their members exist. Hence, the relationship between the kinds
man and mortal exists even if no man exists. And this in turn licenses us to say "if it were the case
that a man existed, he would be mortal." The conclusion we should reach, then, is this: While
Dretske is right in thinking that there is a salient difference between natural laws and universal
generalizations, he is wrong to think that such differences can only be captured under the
assumption that laws express relationships between universals. We may also capture these
differences when laws are construed as expressing relationships between kinds. An acceptance of
kinds, even when conjoined with a rejection of universals, need not entail a rejection of natural
laws. Hence, a consideration of natural laws yields no reason to prefer metaphysical realism over
an augmented version of ostrich nominalism. On this matter, such views are on a par.

§ 5.2.2 Kinds and the Structure of Modality.

Likewise, kinds are capable of filling the same roles that universals fill within
combinatorial accounts of modality. Let me say at the outset that I am skeptical that modality is
reducible to things non-modal or that modal facts may be reduced to non-modal ones. Modality,
it seems to me, is a fundamental feature of the world. Hence, I am skeptical that combinatorial
theories of modality give reductive accounts of possibility and necessity.45 Neither, however, do I

1989, p. 139.
think that the worth of a combinatorial theory is to measured exclusively in terms of its ability to reduce modal facts to non-modal ones. Even if combinatorial theories fail to be reductive, they might, nonetheless, be of value. Such theories can shed valuable light on the structure of modality and in this way can be of help to us in regimenting our thinking about modal notions.

It is within projects of this sort that metaphysical realists have located one of the chief advantages of their theory. Universals, it is claimed, make easier combinatorial accounts of modality. Such, for instance, is the conclusion David Armstrong reaches in A Combinatorial Theory of Modality. He argues that through an acceptance of universals and a stock of infinite yet identical bare particulars, one has available all that is required in order to construct the multiplicity of possible worlds within which we interpret our modal semantics. The constructions work as follows: First, we start with a stock of universals and simple or bare particulars. Then, we introduce the notion of a possible state of affairs. For Armstrong, a possible state of affairs is introduced semantically, by means of the notion of an atomic statement. He writes,

Let a be a simple individual, and F and G two simple properties. Let a be F but not G. Now consider the statements 'a is F' and 'a is G'. The former is true, and may be called an atomic statement. But the latter may also be called an atomic statement. While failing to correspond to an atomic state of affairs, it corresponds to the form of an atomic state of affairs. Hence, on Armstrong's account, a merely possible state of affairs is represented as a false atomic predication that, though false, nonetheless adheres to the form of an atomic statement. Together with actual states of affairs, merely possible states of affairs will serve as the building blocks for

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46 Ibid., p.44.

47 Ibid., p.45.
Armstrong's fictionalist account of possible worlds. A world, for Armstrong, will simply be any subset of all possible and actual atomic statements considered as a supposed totality. Hence, from a few building blocks (universals and bare particulars) we generate the entirety of the possible worlds structure.

This is of course but a rough sketch of Armstrong's theory. There are details that remain to be articulated. How, for instance, does the notion of consistency fit in to such an account? Clearly it must fit in some where; if not, we generate not only possible worlds but also impossible ones. One of the faults of Armstrong's discussion is it is not clear how on his view one rules out impossible worlds from counting as possible. This problem is, at least in part, due to Armstrong's belief that what he is offering is a reductive account of modality. Hence, he is loathe to introduce into his discussion a primitive relation of consistency in order to inform his constructions out of fear that this very notion would reintroduce into his theory the very modalities that he wishes to reduce. This is one of the reasons why I say earlier that I doubt any combinatorial account of modality can offer a true reduction of this notion. It is because we need to allow our constructions to be informed by a principle of consistency such that contradictory qualities cannot be conjoined in the same individual at the same moment. Nothing can be both F and not-F at the same time. Consistency, though, is itself a modal notion.

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48 Ibid., p.48.

49 Ibid., p.139.

50 Ibid., pp.48-49.
But now let us consider whether such a combinatorial theory is possible given only the acceptance of kinds and particulars belonging to those kinds. I wish to claim such a theory is possible. Let us start by specifying the basic elements of our theory. Like Armstrong, we assume an infinite stock of supposed character-less individuals, \( a, b, c, \) etc. Within our theory these will not represent bare substrata as they do for Armstrong but rather they will be place holders for the propertied particulars that exist in each world. Then, instead of assuming a stock of universals, we will assume a stock of kinds (\( K, L, M, \ldots \)), each of which is defined not in terms of its members, but, rather, in terms of the membership requirements its members must satisfy. Note that this stock of kinds though potentially infinite need not contain either negative kinds or conjunctive kinds. This is so because as those kinds are formed from boolean operation on our basic kinds they will all be constructible out of our basic kinds and, hence, need not be represented as distinct entities. These two sets of entities (i.e., character-less individuals, and kinds) together with a primitive notion of consistency yield all that is necessary to represent the structure of modality. We may do so by generating the following sort of chart: First lay out horizontally at the top our stock of simple kinds. Second, lay out vertically on the left side the members of our stock of character-less individuals. We generate a chart that looks as follows:
Each such chart will represent for us a world. The character of each world is defined by the manner in which the chart is filled out. For instance, the following chart would define the world in which there exists but one individual belonging to kind $K$:

![Chart](image)

Figure 4.2: A world with only one individual belonging to kind $K$. 
And the following would define the world in which there exist only two individuals both of which belong to kind K:

| Kind K | Kind L | Kind M | Kind N | Kind O | Etc ...
|--------|--------|--------|--------|--------|------
| Indiv. a | X      |        |        |        |      
| Indiv. b | X      |        |        |        |      

![Table](121x753)

Figure 4.3: A World with two individuals belonging to kind K.

It should now be clear how this story will proceed, for each individual and kind there is a world in which that individual belongs to that kind. Further any combination of worlds is itself a world. Hence, from our basic principles it is possible to recursively define each world.

The worlds we generate in this way, however, are both possible and impossible worlds alike. No consideration has been given, thus far, to excluding impossible worlds. Hence, if kinds K and L are incompatible kinds in that an object could not belong to both, there is still a world of the following sort:

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Figure 4.4: An impossible world.

It is here that a principle of consistency is needed. A possible world will be defined within the system I suggest as follows: A chart represents a possible world if and only if there is no individual represented on the chart as belonging to two or more incompatible kinds. Hence, from our basic elements and a principle of consistency regarding incompatible kinds we are able to generate the multiplicity of possible worlds within which our modal semantics gets interpreted. Now clearly, such a combinatorial system is not reductive. I have not succeeded in reducing modality to anything else. Neither though was this the goal. It is, I think, an unattainable goal. Rather, the goal was to come to some perspicuous exhibition of the structure of modality. That has now been achieved. We may understand the structure of modality in terms of kinds, the relationships that obtain between kinds (including incompatibility) and supposed simple individuals. We have not eliminated modality but we have reduced it to a few modal primitives and a few simple entities. I conclude that the theorist who rejects universals in favor of kinds, does not sacrifice in that rejection the possibility of articulating a combinatorial theory of modality. Hence, considerations revolving around modality present us with no reason for favoring metaphysical realism over an augmented version of ostrich nominalism.
On the basis of the foregoing discussion we can say that where matters of theoretical scope are concerned ostrich nominalism appears to be on a par with metaphysical realism. So too, if the trope nominalist's claims are correct, does trope nominalism. Hence, we can tentatively conclude, barring further information, that considerations of theoretical scope provide no reasons for favoring any one of these three theories over the other two.

§5.3 The Avoidance of Problems.

It is in the avoidance of problems that Ostrich Nominalism's greatest strengths lie. All three of the theories we have looked at must account for the same basic facts, namely that there exist particulars having properties and that these particulars are able to classified according to the kinds to which they belong. Of the three theories we have considered, only ostrich nominalism does a passable job of steering clear of problems. Both trope nominalism and metaphysical realism are fraught with difficulties. It will be helpful to review the most serious of these problems here. Consider first, trope nominalism. The trope nominalist claims that properties just are tropes. As we saw in Chapter I, he seeks to reduce property possession to the instantiation of particularized properties. But this strategy is problematic. First, it runs the risk of a vicious regress. Since instantiation is itself a property, it too must be explained in terms of the instantiation of a trope. But this simply introduces yet another occurrence of instantiation that itself must be explained. Thus, the vicious regress. Second, trope nominalism foists on a theorist a problematic view of objects. Given the trope nominalist analysis of property possession, the trope nominalist must embrace either a pin-cushion view of objects or a bundle theory of objects. But as we saw in Chapter 2, neither of these two alternatives is entirely satisfactory. Finally, The trope nominalist has trouble accommodating the notion of a kind. As we saw earlier in this
chapter, he has two strategies for dealing with kinds. He can either attempt a reduction of kinds to
classes or sets of tropes, or he can admit kinds as distinct entities within his ontology. Again,
neither of these answers is entirely satisfactory. If the trope nominalist attempts a reduction of
kinds to trope, the result is that he does some violence to our intuitive notion of a kind. If,
however, he admits them as distinct entities into his ontology, then he must abandon any claim to
numerical parity with the ostrich nominalist that he might otherwise have been able to make. Of
these problems the first two are the most serious, for they threaten the very coherence of the
account he offers.

Almost identical problems infect the metaphysical realist's theory. He too runs the risk of
a vicious regress. His is a regress on the relation of exemplification he claims binds a universal to a
particular. Since exemplification is itself a multiply instanced property it too will have to be
bound to the particular that instances it — this, though, can only be done by yet another, higher
order, relation of exemplification. Thus, again, we have a regress. Moreover, since the
metaphysical realist's analysis cannot plausibly be said to be finished until the last relation of
exemplification is analyzed, this regress is also vicious. There will never be a last relation of
exemplification. Second, like the trope nominalist, the metaphysical realist too is saddled with an
implausible view of objects. Given his analysis, he too must choose between a pin-cushion theory
of objects and a bundle theory of objects. But again, neither of these two alternative is entirely
satisfactory. Finally, the metaphysical realist has trouble accommodating the notion of a kind.
Like the trope nominalist, he has two strategies for dealing with kinds. He can either identify
kinds with universals, or he can admit kinds as distinct entities within his ontology. As before,
neither of these answers is entirely satisfactory. If the metaphysical realist identifies kinds with
universals, then he does some violence to our intuitive notion of a kind. If, however, he admits
them as distinct entities into his ontology, then he must abandon any claim to numerical parity with the ostrich nominalist that he might otherwise have been able to make. And as before with the trope nominalist, of these problems the first two are the most serious. They threaten to undermine the very coherence of the account the metaphysical realist offers.

To count the avoidance of problems among ostrich nominalism's strengths is not to say that ostrich nominalism spawns no problems. Any such claim would not only be false but would also be hubristic. It does, however, strike me that the problems ostrich nominalism faces are on a different and lesser order of magnitude than those its rivals face. There are three chief problems facing the ostrich nominalist. First, given the principles for kind construction, it follows not only that there are negative kind but also that there are kinds such as the kind Platypus-Tractor. That is, our principles of kind construction yield kinds of every imaginable combination except those that are logically impossible or disjunctive. Such a promiscuity of kinds might well be thought troubling. Of course, this problem differs very little from one the metaphysical realist and the trope nominalist also face. They too must include within their ontologies combinatorial principles. In general, there will be both conjunctive universals and conjunctive tropes. A general problem for all three theories, then, is to articulate plausible combinatorial principles. The one's I have chosen are quite liberal but the very liberality of these conditions ensures that the kind theorists will have the semantic resources necessary for grounding the problem of abstract reference. Perhaps we can ensure the same with a less liberal principle of conjunction. If so, there is nothing to prevent us from accepting it over the one I have suggested. Second, It turns out on my view that given the existence of negative kinds we can determine a priori that ever particular belongs to exactly the same number of kinds. The proof is as follows: every kind has a negation. For each kind any particular belongs either to it or to its negation but not to both.
Hence, every particular will belong to half of the number of kinds that exist. Hence, every particular will belong to exactly the same number of kinds. This too might strike one as odd. Finally, there is a need within the theory I have articulated for a principled way of distinguishing those kinds that are natural from those that are not. I have little to say on this matter. I have not within this work been interested in articulating a notion of natural kinds. Rather, I was interested in articulating a notion of kinds that proved adequate for grounding a response to the problem of universals. That my kinds include kinds that are not natural is seen in my inclusion of negative kinds. The condition that kinds be similarity making does not by itself suffice to demarcate natural kinds from kinds simpliciter. Negative kinds are similarity making but they are not natural in the sense intended by those working within the natural kind literature. Hence, one future project for the ostrich nominalist of the sort I envision is this: to articulate a theory of natural kinds consistent with the theory of kinds articulated above. This said, the problems the ostrich nominalist faces are indeed different from those the trope nominalist or metaphysical realist face. The metaphysical realist and the trope nominalist face difficulties that call into question the coherence of their projects. This is not the case for the ostrich nominalist. Yes, the ostrich nominalist faces certain difficulties, but, in general, these difficulties do not threaten to undermine the ostrich nominalist's basic strategy. In problem avoidance, the ostrich nominalist would seem to be the clear winner.


In this chapter, I have considered whether an acceptance of kinds provides a theorist with the semantic resources necessary for making sense of the phenomenon of abstract reference. I have argued that it does. Consequently, I have argued that an ostrich nominalism augmented by an acceptance of kinds provides a fully adequate answer to the problem of universals. Such an
ostrich nominalism responds not only to the ontological problem of property possession and the linguistic problem of predication but to the problem of abstract reference as well. The first of these two problems are answered through the ostrich nominalist's acceptance of propertied particulars as *sui generis* and the syncategorematic account of predication that I defend in chapter II. The third problem is answered through the augmented ostrich nominalist's acceptance of kinds.

But we can say more than just that the ostrich nominalist's theory is adequate. We may also claim that it should be preferred to those that the trope nominalist or the metaphysical realist offer. First, ostrich nominalism, as thus conceived, would appear to be the numerically simpler theory. It is so before we add kinds to each theory and it remains so after this addition. But the evaluation of a theory's worth cannot be based simply on considerations of numerical simplicity. The scope of explanations a theory offers as well as the troubles a theory encounters must also be taken into account in any final evaluation. In the latter sections of this chapter, I have argued that an ostrich nominalism augmented in the way I suggest enjoys the same ancillary benefits as does metaphysical realism. Not only is such an ostrich nominalism compatible with the project of offering an account of natural laws, but it is also compatible with the project of offering combinatorial accounts of modality. The conclusion thus suggested is that metaphysical realism enjoys no advantage of explanatory scope over such an ostrich nominalism. Neither, I think, does trope nominalism. Though trope nominalism, itself, has not been explicitly considered within this context, there is no reason to suspect trope nominalism enjoys any benefit in this area. Indeed, much of the trope nominalist's project, at this point, turns on securing the very same sorts of claims we have secured for ostrich nominalism, namely that is suffers no deficit in regard to explanatory scope when compared with metaphysical realism. Hence, as regards explanatory
scope, we may say these theories are roughly on a par. But if this is so, then it seems that we
should favor an augmented ostrich nominalism over its competitors. It is, as regards explanatory
scope, on a par with its competitors. As regards numerical simplicity it enjoys an advantage over
those competitors. Moreover, it is a less troubled, and, hence, less troubling theory.
Metaphysical realism and trope nominalism both suffer the specter of infinite regresses. Trope
nominalism suffers from such a regress on the relation of instantiation. Metaphysical realism
suffers from such a regress on the relation of exemplification. Of course, one can admit such
relations as *sui generis* and thus avoid these regress, but it is not clear that such a solution is not *ad
hoc*. That ostrich nominalism avoids these problems and yet others that would undermine the
coherence of the ostrich nominalist’s project is a reason to favor ostrich nominalism over
metaphysical realism and trope nominalism.

In arguing for these conclusions, we have also seen how the current state of metaphysics
misleads and obfuscates the real issues. Metaphysical theorizing, I have argued, has been ruled by
an assumption of singularism — the assumption that there exists a single kind of entity the
acceptance of which is sufficient to answer each of the three problems that constitute the problem
of universals. An acceptance of ostrich nominalism constitutes an explicit rejection of this
assumption. Ostrich nominalism maintains that there is no such single entity. Each problem must
be addressed separately. What we look for is not a single overarching solution, but consistency
among our many solutions. Indeed, in many ways, the troubles in which the trope nominalist
and the metaphysical realist involve themselves may be traced to an implicit acceptance of the
singularist assumption. There exist easier and more elegant answers to individual problems than
those of which the trope nominalist and metaphysical realist avail themselves. That they bypass
these more elegant answers is a result of the philosophical blinders that the singularist assumption
places on them. We end this chapter, then, by expressing our preference for an augmented ostrich
nominalism — this theory when considered among its competitors is the theory we should favor
as a solution to the problem of universals.
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