Chapter 9
The Facts of Tropes

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Abstract Kevin Mulligan's defense of a variant of trope theory is critically examined. It is argued that his account employing tropes, as opposed to facts, in the role of grounding the truths of monadic and relational predications is problematic and not a viable alternative to an account employing facts. A key point involves Mulligan's appeal to the concept expressed by the phrase "because of" in his rejection of facts as grounds of truth and his reliance on the Aristotelian notion of a nature. Further problems with trope doctrines are explored in connection with relations and causality as well as related arguments and views by other figures who have addressed the problems of predication and the status of facts.

Keywords Complex · Simple · Because · Truth-maker · Ground

9.1 Tropes or Facts?

Kevin Mulligan has played a prominent role in the expounding of a tropist view as part of the revival of metaphysics in the latter part of the twentieth century. Like other modern proponents of medieval tropes, he has sought to reject the need to recognize facts as basic entities of an adequate ontological inventory and of an adequate account of truth and the grounds of truth. In line with his rejection of facts—which were the entities, along with universals, that were crucial to the realistic revival that Moore and Russell brought into British philosophy more than a century ago—Mulligan has also argued against relations in a familiar medieval manner. The two attacks go readily together, as one need only recall that Russell based his cases for both universals and atomic facts on relations, as did Moore at places. This chapter examines the lines of criticism Mulligan has developed in a number of recent papers.

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The attack on facts argues that facts are not *ontologically fundamental*—and thus not *basic to* an ontological account of *what there is*. He considers what is required in setting out adequate ontological grounds for true propositions and argues that facts are not fundamental as truth-makers. While putting forth his views in several papers, his main line of argument is contained in a long passage in "Facts, Formal Objects and Ontology" of 2006.

> …I propose to argue that no fact is ontologically fundamental. Answers must therefore be given to the following three questions. What does it mean to say that something is ontologically fundamental? What are the most plausible candidates for the role of what is ontologically fundamental, if facts cannot play this role? How are the ontologically fundamental and the ontologically non-fundamental related to one another?
> We already possess the beginnings of an answer to the first question. Consider again
> (1) Sam is sad
> (2) The proposition that Sam is sad is true
> (3) The state of affairs that Sam is sad obtains
> (8) If Sam is sad and the proposition that Sam is sad is true, then the proposition that Sam is sad is true because Sam is sad
> (9) If Sam is sad and the state of affairs that Sam is sad obtains, then the state of affairs that Sam is sad obtains because Sam is sad
> (17) If the proposition that Sam is sad is true and the state of affairs that Sam is sad obtains, then the proposition that Sam is sad is true because the state of affairs that Sam is sad obtains
> The "because"s in (8) and (9) tell us that (1) is more fundamental than (2) and more fundamental than (3). The "because" in (8), (9) and (17) is the essential "because", not any causal "because". [The essential "because" is essential to a correct formulation of truth-maker maximalism. But it is not enough. The truth-maker principle itself holds *because of* the nature of truth and of propositions. This "because" is the "because" of essence. ….]
> As far as I can see, there is no true instance of
> (45) (1) because$_{\text{essential}}$ p.
> If that is right, then not only is (1) more fundamental than (2) or (3), it is fundamental. But what does it mean to say that something is *ontologically* more fundamental than something else and that something is ontologically fundamental *tout court?*
> The answer to our second question will help to provide an answer to this question. The second question was: What are the most plausible candidates for the role of what is ontologically fundamental if facts cannot play this role? Sam is ontologically more fundamental than any proposition and ontologically more fundamental than any fact.[1]

The reasoning is somewhat obscure as it relies on various themes he has elaborated elsewhere. But it is clear that the argument sets out three themes: *first,* whatever is meant by "ontologically more fundamental," an object O is taken to be *ontologically more fundamental* than purported facts about it, such as that O is *F*; *second,* that (1) above expresses a more fundamental claim than (3) does; *third,* that the essential sense of "because" is required for specifying viable ontological grounds of truths, such as that expressed by "O is *F*." While there are other aspects of his

[1] Mulligan (2006): I will not deal with his consideration of what he takes as the argument for facts from knowledge and the minor role that plays in his view. I will simply note that that deals with the possibility of having to specify what is involved in one's "coming to know something" in terms of the existence of a purported fact. As Mulligan does not see that facts are necessary for giving "satisfaction conditions" in such matters, they are not taken to play fundamental roles in the analysis of such contexts.

view, these three are crucial and ultimately rely on a notion that has persisted for centuries in spite of being both problematic and obscure. The notion of a *nature* or *essence* and its expression by the use of the phrase "because of" are at the core of his argument. This will lead to the claim that particular objects, like Sam and O, are composed of constituent particular tropes and that it is "because of" the object being so construed and the particular tropes that form it—essentially combine with each other to form it—that it can be truly said to be characterized by a predicate. Moreover, such properties, as particular tropes themselves, must also have natures, though they are not composites, in virtue of which they are accidents, are of the kind that they are and combine with the tropes they do. Given a tropist account and his Aristotelian essentialism, Mulligan does not really formulate an argument against facts being fundamental to a viable ontology. Rather, that they are not fundamental is presupposed in the assumptions of his tropist view that dictate the choice of terminology. As others see it, on such a view facts are simply compressed into the natures of tropes and into the standard objects such tropes form, such as Sad Sam. With facts so blended into things, they can be declared nonessential to an adequate account of truth grounds for atomic truths.

We can see what is involved by putting things in terms of monadic atomic facts. To say that such a fact obtains is simply to say that it exists. To say that it does not obtain is to assert that it does not exist. There is only a point to speaking of a state of affairs that "obtains" if one accepts, as I think Mulligan does, that one who speaks of states of affairs speaks of them as neutral with respect to existing or not—and hence acknowledges non-existents of some sort or in some way. Yet, the appropriate employment of a Russellian style definite description does away with such philosophically problematic additions.[2] Assuming, for the time, that the appropriate manner of specifying the fact that O is F is in terms of such a description, we can then take the fact to be described and specified by:

(R) the p such that O is its term, F is its attribute, and Φx is its logical form.[3]

Here "*p*" is a variable ranging over atomic facts. Abbreviating (R) by "(ι Ω)," we can express the existence of the fact by: (E) *(ι Ω) exists,* or, in Russell's notation:

$$(\mathrm{E}^*)\mathbf{E}!(\iota\Omega).$$

One can then specify a truth predicate for our prototype monadic atomic sentences along the following lines:

$$(\mathrm{T}) \quad \text{"O is F"} \textit{is True} \textbf{ iff } \mathbf{E}\ !(\iota\Omega).$$

There is no more need to introduce a primitive notion of "because" wrapped in essentialist terminology than to introduce atomic sentences as names of states of affairs that may or may not exist. (T) will do as a means of expressing an unproblematic but

[2] I have argued this in detail elsewhere and will briefly note why it is so below.

[3] To speak of it being specified by the description is to take the description to be the viable way to represent such facts.

viable *truth ground* for a monadic atomic statement. (T) is quite unlike a Tarskian T-sentence, but we can add a further clause to express the semantic link between such a truth predicate and the atomic statement. For while the quotation marks are understood to form an expression denoting another linguistic item, we do not get the familiar T-sentence from (T) as it is. Thus, if one desires to obtain such a result, we can do so by replacing (T) by:

$$(\mathrm{T}^*)\ \text{“O is F” is True } \mathbf{iff}\ \mathbf{E}\ !(\iota\Omega)\ \mathbf{iff}\ \text{O is F.}$$

(T*), as a semantic rule or postulate, expresses the *twofold* linkage of *what is said to be true* to both the *ontological ground* of its truth, an existent fact, and *the statement that it is true*. It provides the *additional* link providing the conventional T-sentence that involves both *representing* and *using* the atomic sentence.

The above pattern does not appeal to a mysterious essence or nature of truth—either of things or of facts. Yet it does what we expect any proposed analysis to do in that it fits our ordinary understanding and employment of concepts like truth. Nothing is gained by adding a claim about the essential nature of truth and introducing a primitive notion of *because* or *because of*. To do that would be like what some do when they proclaim a revival of *causal necessity*. As *essential necessity* purportedly explains why Sad Sam accounts for it being true that he is sad, so the *causal necessity* between F-ness and G-ness supposedly explains why “Every case of F is a case of G” is *a law* and not an accidental generality. It does so *because* it is taken to be the postulated relation between F and G (or between something being F and it being G) that explains why the generality is a law. We will consider this matter further later. The clearer, simpler, and more transparent move in the case of *truth* is simply to recognize that one *assumes* the relevant conditions for a truth predicate as a semantic rule—as in (T*). As Galileo and subsequently Hume noted long ago, appeals to necessary connections or unknown powers add nothing of substance to explanations of lawfulness. Yet, Mulligan’s essentialist notion of truth and account of tropes provide the basis for his attack on facts in that they are the grounds for his claim that an object O is more fundamental than the fact that O is F. One who accepts essential natures along with objects and tropes laden with them does not require facts, but neither such essences nor such tropes are acceptable.

Tropes aside, there is one sense in which an object may be said to be more fundamental than any atomic fact about it. It trivially follows from “**E!** (ι Ω),” using our description, that O exists and is a term of the fact. But this has to be irrelevant to whether or not facts are required and whether or not they are basic entities, in some important sense of “basic.” Aside from the *items of usage* involving the term “because” that Mulligan cites, his conviction that O is more fundamental than the fact that O is F can only be based on the simple point we have just noted.

In summary, his attack on facts is essentially threefold, as it comes down to (a) the innocent sense of the *dependency* of O’s being F on O, b) his acceptance of tropes and essences, and (c) the traditional dependency of properties and relations on their being instantiated by particulars—the so-called principle of instantiation.

Yet when diverse parts of his view are put together, while O will be classified as an "independent particular," it is also taken as a complex of tropes containing tropes that are *essentially connected* to each other or joined together. This essential, internal connection or dependency supposedly allows for the omission of a compresence relation or nexus that joins them into an object. Moreover, insofar as it is such a complex, an object like O would not be the same complex as a similar one without that particular F trope.[4] Hence, it is as much dependent on its being-F as its being-F is dependent on it—legislation about the mechanics of *dependency* and various kinds of *dependency* notwithstanding.

It is fruitful to compare his approach employing the *because* of essence with one using (T*).[5] Classifying *because* as a "formal" concept, he builds his discussion on a fundamental kind of dependency relation—the *inherence of* tropes in a subject. Such a relation of inherence spawns other relations—such as the connection between what truth is ascribed to and the ground of it being true. This makes use of the Tarskian format with an Aristotelian twist:

(M) "O is F" is True *because* O is F,

where *because* replaces the biconditional.[6] (M) reveals another problem in his linking *what is true* to its *ground of truth*. Any serious account of truth grounds, as opposed to truth conditions, goes beyond Convention-T and the familiar manner of introducing truth predicates into a schema via the biconditional. The problem is then to avoid appealing to nonexistent entities—or in Mulligan's phrasing—nonobtaining states of affairs. We do not avoid such entities if we simply introduce a *basic relation* on the order of a Carnapian denotation relation for proper names and primitive predicates:

(R1) "O" refers to (denotes) the object O
(R2) "F" refers to (denotes) the property F
(R3) "O is F" refers to (denotes) the fact that O is F.

[4] This theme will be expanded on in connection with the employment below of Russell's theory of definite descriptions. It is also complicated by dealing with objects and temporal alteration—Sam being sad at one time and happy at another. Thus, the problem of the self and "identity" over time arises. It is easier to focus on the basic issue if one considers momentary phenomenal objects, like color patches or sounds, rather than physical things.

[5] Mulligan bases the *essential because* on the "because of essence." What that amounts to is that appeals to the essential are based on the purported essence of something, which is embodied in its "nature."

> Now, the essential "because" requires the "because" of essence. For example,
>
> If the proposition that p is true because$_{\text{essential}}$ the state of affairs that p obtains, then (the proposition that p is true because$_{\text{essential}}$ the state of affairs that p obtains) because$_{\text{essence}}$ of the essence of truth and of propositions. (Mulligan 2009a, p. 9)

[6] Tarski had cited Aristotle on truth and taken his Convention-T to capture, in a sense, the Aristotelian theme that to say what is true is to say that what is is or what is not is not.

If we do so, we cannot take atomic sentences to represent corresponding existent facts—name them, as it were—as one can take proper names and primitive predicates to represent only existent objects and properties (relations), respectively. Forgetting about the dictates of ordinary usage, we easily follow Russell and take proper names to be correlated with objects and predicates with properties.[7] But, as atomic sentences can be false, a well-known problem arises. Thus, (R3) will not do as a semantic rule, assuming that *refers to* is taken as a genuine relation that requires viable terms. It forces the introduction of non-obtaining states of affairs or something similar. This is one thing behind the move to (T*) involving the use of Russellian style definite descriptions of purported facts.[8]

The point here is that the appeal to (M) does employ such a basic denotation relation, and Mulligan has to pay the price of recognizing the realm—or *mode of being*—of what is not.[9] In (T*), recall, we employ the familiar biconditional of logic and not a relation, as in (R3) or (M). As I see it, he actually employs (M) in the discussion covertly by taking Sam to be ontologically fundamental. Thus, Sam's state of sadness, contained in Sam, supposedly resolves everything. It is interesting to note how Peter Simons succinctly employs such a tropist account to resolve the problem of negative facts:

> For example, if Sean loves Máire then there is an emotional state or attitude of Sean towards Máire that makes this true. If she does not love him, it is because there is no such attitude of Máire towards Sean that would if it existed make it true that she loves him. Both the positive and the negative true relational predications are external, but only one has a truthmaker. (Simons 2010, p. 204)

It is because there is *not* anything of a certain kind, a trope of a certain kind, that we have the explanation of Máire's not loving Sean or Sam not being happy.

While some might take him to hold, as one commentator does, that facts "supervene" on objects, given his taking O to suffice as the truth-maker for "O is F," I do not think that the glib notion of *supervening* captures what is involved in his essentialism. This brings into focus another key aspect of Mulligan's line of argument. For him, in cases that we are considering, there has to be a trope, *the F-ness of O* in the present case, that makes O the truth ground, or maker, for the truth of the proposition. It is by such means that facts are purportedly avoided. But this brings us back to the long argued dispute about tropes being taken to ground their own sortal similarity to other tropes of the *same kind*—their providing the unity universals provide. That matter is beyond our scope here.

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[7] S. Mumford has sought to avoid negative sentences by metalinguistic manipulations and the use of "is False" in dealing with the problems posed by truth grounds and problematic negative facts. The metalinguistic manipulations were built around the claim that *p* being False is being such that there is no truth-maker for *p*.

[8] This is the point mentioned earlier regarding the key role of Russellian descriptions in avoiding the introduction of entities that are non-existents, yet required by such an account.

[9] For a discussion of J. Searle's somewhat strange reliance on Meinongian type entities, without apparently realizing just what he is doing, see Hochberg (1994).

I have mentioned that Mulligan's discussion sometimes appears to be based on a combination of stipulations and appeals to features of ordinary language. Thus, while

(s) Sam is sad because Sam is sad

is not in keeping with *the essence of truth,* it seems that

(s*) Sam is sad *because of* Sam

is so. Of course, in writing(s) we do not do violence to grammar, but we do pay the price of not being clear that we talk about what is true, with the first phrase-token, and what grounds truth, with the second occurring token. This is an aspect of the obscurity in ordinary usage that allows for the development of misleading lines of argument. Thinking along the lines of (T*) rather than in terms of an *essence of truth,* the problematic(s) would be replaced by

Sam is sad **iff** Sam is sad

or

"Sam is sad" is true **iff** Sam is sad.[10]

The first, while trivially true, is hardly relevant to discussing grounds of truth and is utterly useless as a Carnapian style semantic rule. The second, taken as a proverbial T-sentence, is likewise irrelevant to specifying grounds of truth.[11] However, if the right side of the biconditional is understood as representing a state of affairs, and hence something that is relevant to the matter of truth grounds, we have a relevant but problematic truth ground.

In (s*), we no longer simply have the repetition of the tokens of "Sam is sad," so we easily separate truth bearer from truth ground. Of course, one has to understand that Sam is taken with his inherent trope of sadness, and the ordinary sentential expression seems to stand for Sam being in a certain state, or, for many a tropist, "in" that object. It would perhaps be more straightforward to employ

(s**) Sam is sad because of Sam's sadness[12]

in place of (s*). But (s**) seems as ridiculous as (s).

Mulligan claims that *the* (his) truth-maker principle holds *because of* the nature of truth and of propositions employing the "because" *of essence*. This merely claims that there is a (formal)[13] concept of truth and that *its essence* reveals that the essentialist *because* must be employed in a viable account of the ontological grounds of

[10] Such examples from usage do not help as keys to philosophical issues. Consider "Life is sad because of life." A bit odd, more so than "Life is sad because that is life" or "Life is sad because it is sad."

[11] Recall Mulligan's (45) above and simply replace his $\text{because}_{\text{essential}}$ by the neutral biconditional together with its use in what is taken as a semantic or interpretation rule.

[12] Or, perhaps, because of *the way* Sam is or *of a trope* in him.

[13] As Mulligan uses "formal"—"Propositions, states of affairs, facts, concepts, classes and properties clearly all belong together. They are creatures of a kind. Call them *formal objects*." (2006, 2)

truth. It is all a bit circular and brings us back to constituent tropes and essences, as well as a good place to move on.

9.2 On Matters of Form

What is meant by taking forms like Φx to be logical forms, rather than properties? First, consider again the atomic fact that O is F. It is no more problematic to speak of the form, Φx, than it is to speak of the fact. One readily understands that O is F and B is G are of the same form. One can then hold that the form does not, in being the form of the fact, *form* a further fact—a fact that an atomic fact is of that form. That it is so is one thing meant by speaking of such a form as a logical form—as being a matter of the logic or analysis of facts and not a matter of fact. Second, one observes that it is a matter of logic, and not fact, in that a system of standard logic, dealing with predications, presupposes the subject–predicate distinction that is embodied in the triad: term, property, and fact. Consider the logical pattern—Φx v ¬ Φx. This being a pattern for logical truths presupposes the differences between terms, predicates, atomic sentence patterns, connectives, and so forth. To have a system with such expressive patterns requires formation rules and the logical distinctions they embody. Thus, the distinctions between subject, predicate, and sentence are, in one sense, more fundamental than the logical truths that make use of them. The formation rules, as well as the transformation rules, express logical necessities.

Assume, for example, that there is a basic relation of diversity holding between particulars. It is not clear that its being a dyadic relation relating particulars logically requires that it not be sensibly attributable to properties and relations. That can be reflected in a schema that ignores property types. Hence, where π may be a particular or a property and Φ is an attribute we could employ a single form Φπ, rather than a series of forms. That allows us to consider a simple point. Consider the logical form as a relation along with the pairs <F, a>, <F, G>. <a, b>, <a, a>, and <F, F> taken as subject–attribute pairs. To then speak of the two pairs of particulars as combining into a fact of the form Φπ is as senseless as taking F to exemplify a.

Plato was concerned not only with existence existing and difference being different from sameness, but with differences of *participation*. There was the participation of particulars, such as Theaetetus or instances like the *F-ness* in Theaetetus, and forms, the *F-itself,* and the participation of forms in forms. A similar question arises here, if one considers higher-order predications and questions regarding facts. Even in a schema that only reflects there being two types—one for particulars, the other for attributes—one can still not take exemplification as either a nonsymmetric or asymmetric relation. It is the restriction of the variable Φ to range over attributes that expresses the *asymmetry* involved—the asymmetry *between* particulars and attributes—*not* the asymmetry *of a relation*. This connects with a suggestion in Plato that participation of forms in forms is a kind of blending of forms to compose others. This may suggest an analogy with instances of particularized attributes that are held to compose objects—bundles of instances. Yet there is a clear difference

as the participation of particulars in forms—the exemplification of properties by particulars—generally involves contingent facts, while the exemplification of attributes by other attributes is, if not in all cases, apparently in most that come to mind, a matter of necessity. *Red is a color,* assuming color as a basic property of properties, is an example. The difference between atomic facts, as contingent entities and the seeming necessity of atomic sentence patterns with higher-order properties is an indication of the diversity of the senses of "exemplification" that are involved. The problems posed by such necessities are familiar. In the present essay, it suffices to note that such problems indicate a basic diversity between *exemplification* as a form of contingent first-order atomic facts and higher-order forms for properties of properties. Here, it has simply been argued that first-order exemplification cannot be regarded as a relation among relations, since one cannot meaningfully characterize it in terms of the standard logical properties of relations—reflexivity, asymmetry, transitivity, etc.

Wittgenstein took *color* as a logical property or form—common to the color properties. But he could not support the claim—and that may well have contributed to his attempt to expand the sense of "logical" to include the explicit and implicit rules of "use." Knowing the logic of color came down to knowledge of the correct use of color terms of the language. Admittedly, there is some similarity between the asymmetry of predication and the absurdity of taking C# to be a color lighter than red but darker than yellow. Yet, there is a striking difference. The ordinary formation rules embody the one. To get the other as a matter of logic we must incorporate the diversity between sound predicates and color predicates into the grammatical rules of a schema. Thus, we begin a game without, as the saying has become, an "exit strategy"—as even moral claims became grounded on grasping the correct usage of the vocabulary of evaluation.

The problems posed by apparent nonlogical necessities have long been there. It is interesting to recall that Russell had once held that such nonlogical necessities were simply well-ingrained empirical truths. He had a more extreme predecessor in Hume, who had questioned the necessity of the logical principles themselves. Basing his concern on the need to apply them in the process of reasoning and the lack of a sharp line between the *certain* and the *probable,* Hume argued:

> There is no Algebraist nor Mathematician so expert in his science, as to place entire confidence in any truth immediately upon his discovery of it, or regard it as any thing, but a mere probability. Every time he runs over his proofs, his confidence encreases; but still more by the approbation of his friends; and is rais'd to its utmost perfection by the universal assent and applauses of the, learned world. Now 'tis evident, that this gradual encrease of assurance is nothing but the addition of new probabilities, and is deriv'd from the constant union of causes and effects, according to past experience and observation.
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> In accompts of any length or importance, Merchants seldom trust to the infallible certainty of numbers for their security; but by the artificial structure of the accompts, produce a probability beyond what is deriv'd from the skill and experience of the accomptant. For that is plainly of itself some degree of probability; tho' uncertain and variable, according to the degrees of his experience and length of the accompt. Now as none will maintain, that our assurance in a long numeration exceeds probability, I may safely affirm, that there scarce is any proposition concerning numbers, of which we can have a fuller security. For 'tis easily possible, by gradually diminishing the numbers, to reduce the longest series of addition to

> the most simple question, which can be form'd, to an addition of two single numbers; and upon this supposition we shall find it impracticable to shew the precise limits of knowledge and of probability, or discover that particular number, at which the one ends and the other begins. But knowledge and probability are of such contrary and disagreeing natures, that they cannot well run insensibly into each other, and that because they will not divide, but must be either entirely present, or entirely absent. Besides, if any single addition were certain, every one wou'd be so, and consequently the whole or total sum; unless the whole can be different from all its parts. I had almost said, that this was certain; but I reflect that it must reduce itself, as well as every other reasoning, and from knowledge degenerate into probability.
>
> Since therefore all knowledge resolves itself into probability, and becomes at last of the same nature with that evidence, which we employ in common life, we must now examine this latter species of reasoning, and see on what foundation it stands. (Hume 1888, Part IV, Sect. I, pp. 180–181)

Hume here appears to stretch the purported fallibility involved in the applications of basic logical principles in proofs to the simplest principles themselves. The constant correlations and habits developed from successfully applying them—reinforcement, as one says—is the apparent foundational basis for both the basic principles and their complex patterns of application in proofs. It is as if he proceeds, in the above passages, to suggest that the basic principles themselves are not more firmly embedded than what is derived from them and from the process of derivation itself. This is taken to follow since there is no point of clear separation between what is certain and what is not. Logical principles do not differ from the case of the addition of numbers he cites, as both operate in the context of a continuum that cannot clearly demarcate probability from certainty, and thus logical *certainty* itself *becomes* a matter of *probability*.

The examples of Russell and Hume are recalled to emphasize a simple point. Whether one is as confident of the necessity of what is totally red not also being totally blue as one is of simple laws of logic and elementary arithmetical truths and operations is not the point. The point concerns the account one gives of the kinds of truths that they are. There are compelling reasons for separating the logical from the nonlogical and arguments for linking elementary arithmetic to logic. The problems posed by the cases of colors, sounds, and so forth are well known. But simple claims about natures or essences are of no more help here than in the matter of truth. They just amount to another way of saying that certain truths are necessary even though they are not matters of logic. That is one reason, one must suppose, that they are still problems—as is the corresponding case of causal necessity. Hume, however, runs the question of necessity together with a feeling of certainty and takes the former in terms of the latter, as he had in the celebrated analysis of causality and the idea of necessary connection. Galileo had separated them by speaking of *understanding* or apprehending *necessity* as the *basis for certainty*. He did so in limiting *objective necessity* to *mathematics* (including *geometry*) and rejecting the traditional appeal to the necessity imposed by purported Aristotelian essences or natures.

Consider the so-called *First Principle* of a long tradition. However one phrases it, it is basically the principle of noncontradiction that Aristotle tried to prove but ended up repeating. It is also the basic idea behind a valid argument being so and a propositional tautology being a necessity—taking a denial, in either case, to result in a contradiction. It seems that we construe truth, falsity, and negation in such a

manner that we have the familiar truth tables. But thinking one clarifies anything by then speaking of all that being a matter of essences is to delude oneself, as Aristotle did when he thought he proved the principle of noncontradiction. The best we can do is to recognize that we understand what we do in terms of familiar logic, and the patterns of the latter provide a framework for seeing why various arguments we take to be valid are so—as well as clarifying puzzling cases. There is no penetrating to something more fundamental by seeking essences. The problem has always been to then try and justify the nonlogical necessities, held to be so on the basis of what Hume considered a sentiment of necessity or certainty, by construing them as logical in some sense or in some other way. Hence, the Kantian *synthetic* a priori, the earlier appeal to traditional essences not based on the ways of mind, the Wittgensteinian extended sense of logic, etc. Mulligan, in seeking to avoid the road to idealism that Kant paved, returns to the necessities of the Aristotelian tradition that Galileo rejected to help set the modern stage. Galileo pushed such necessities out of physics, but not out of metaphysics, and essentialist trope theories still employ them to reject the thoroughly a posteriori facts of the logical atomists. Thus, the F-ness of O could only be O's, and O would not be O without it. Moreover, I would assume that Sam's particular sadness of the moment would not be that sadness, if it was due to Maria's rejection of him rather than Bertrand's refutation of his argument.

Mulligan has not made a case against facts but argued from an account employing essences, tropes, and richly natured particulars to set out an alternative account of truth grounds that purportedly does not appeal to facts. While the type of ontology Mulligan avoids by his embracing of natures recognizes universals, particulars, and facts, we should recall that the facts involved are logically independent of each other and such that their terms, attributes, and relations are not necessarily bound to each other. In short, the facts are the atomic facts of Russell and Wittgenstein. It is thus not surprising that the old questions that plagued the Aristotelian tradition and gave rise to the rejection of causal natures in the Galilean approach to the laws of physics, and in the subsequent empiricist tradition in philosophy, are resurrected on Mulligan's view. His argument dispensing with facts as "fundamental" for specifying the truth grounds of atomic propositions rests on tropes and objects with essences rich enough to play the role of facts, with the added spice of a quantum of necessity. Yet there is a problematic feature of Mulligan's particular way of construing the object O as a complex of tropes t, t*, t***,… in the manner that he does:

> On the view I favour, an independent particular is composed of tropes that are specifically (or token-) dependent on one another…. An independent particular, like all particulars, is in time. But its inner internal relations are outside time. This is the grain of truth in the claim that a thing has a history but no temporal parts…. (Mulligan 2009b, p. 32)

Such a claim indicates that *each trope,* being a dependent entity, is essentially dependent on the object, while also being *essentially dependent on one another*. What that means to Mulligan, who follows Moore's analysis of "internal relation," is that it follows from t's existing that it is in a *formal relation of dependency* to O. To be dependent in such a way is for t to be such that its existing implies that it is in that relation to O, and hence that O exists. That implies, in turn, given how O is construed, that it follows that it is joined with the other tropes that it is in fact joined with—

those that combine to form O. Thus, the constituent tropes are essentially connected with each other, given the existence of O. But as he presents his view, there is a complication, for he speaks of ordinary temporally changing objects—in the manner one speaks of classical substances that change accidents or *have a history*.

> I shall assume that Maria's sadness depends on her in the sense that it could not have occurred without her, that Maria is independent of her sadness although not of all tropes. (Mulligan 2009b, p. 9)
> Mary's happiness depends on Mary, but she is independent of it, and the same goes for Erna and her happiness. It is because Mary and Erna are independent of their happinesses that the proposition is contingent and the relation between Mary and Erna is an external relation. (Mulligan 1998, Sect. 4)

It seems that he can hold to the contingency between Mary and her happiness simply because, as in views of the self like Sartre's, an ordinary object that is taken as a continuant is itself a complex of complexes of tropes that constitute its *stages* or developmental process.[14] The point can be simply illustrated if we consider a simple case of a red circle changing *its* color and the temporal sequence involved.

Assume we have the combination A, of a red and a circular trope "at a location" (or containing a location trope or however one construes such matters). Consider the subsequent combination, B, of blue and another instance of circularity at the location (or containing a location trope of the place sortal). One can take there to be a changing object that is construed as an object $\mathbf{O^c}$—an object that is a composite of A and B—call them its temporal stages (not parts, given Mulligan's mereological concerns about *part* and *whole*). So long as one does not hold that temporal relations between the red trope of A and the blue trope of B, for example, are matters of internal necessity (as Simons apparently does hold in his discussion of such temporal precedence, cf. Simons 2010, p. 208) one can take the change to be contingent. While I do not think Mulligan can consistently, or at least viably (i.e., non-arbitrarily) do so, that is a matter I can only indicate without adequately addressing.

I simply note that given the existence of O it must follow, for Mulligan, that t exists, if not $\mathbf{O^c}$. We can see that if we take the open and appropriate way of specifying such complex objects—really hidden facts of compresence—by means of a definite description and not a simple indexical sign or name. For such names are not used as mere indexicals designating basic objects. Employing descriptions, we immediately note a feature of the essentialist view, for using a description reveals that the claim that O exists logically implies that O has each of the properties on which the description is built.[15] In that simple and obvious sense (obvious since 1905), the existence of the object can be said to necessitate having its constituents. All the contingency, so to speak, is packed into the one existential claim—that O exists. Everything of any interest is already included, or can occur, *in* that existential statement,

[14] Some advocates of trope theories appeal to "nuclear" tropes in such contexts. This is an arbitrary complication of the appeal to natures and raises the problems posed by stipulating the members of such a nucleus along the lines faced by Meinongian defenders of nuclear properties.

[15] We bypass the eternal and obvious problem the essentialist faces: What properties go into the description? Those that serve to uniquely indicate it do not do as essential solely on that ground. So we are led into the mystery of what is essential as determined by one's metaphysical intuition.

and that statement is, at least apparently, a contingent truth. It is in a similar setting that an Absolute idealist takes a crucial step and uses the "internal" connection of relations, via relational properties (lover of Sam, far from Geneva, prior to being blue) to pack everything into each thing (or, at least, make them interdependent) and arrive at a doctrine of monads or at an Absolute Monad. However, it might appear that there is still some further contingent content to the essentialist view, since from t exists, we do not obviously infer that O exists. But that is mere appearance. For the view really involves denoting the trope designated by "t" as the unique Φ-kind trope that is *dependent on* or *inherent in* O.[16]

We can then see how one can be misled about contingency in terms of the earlier example involving A, B, and $\mathbf{O^c}$. Just take A as a stage of Sam (now $\mathbf{O^c}$) with a particular sadness trope, t, and B as a later stage without a sadness trope but with a happiness trope, h. Tropes being what they are and Mulligan's complexes being what they are, t requires the existence of A and vice versa, as h requires B and vice versa. *Sam's stages,* construed as complexes or objects, are not contingently sad or happy, given that Sam is construed as $\mathbf{O^c}$—as a complex formed from A and B. What one can hold is that, Sam aside, given that A exists B can exist or not. (One can also hold the same sort of thing about A with respect to another—earlier—stage if there is one.) Shifting between A and $\mathbf{O^c}$, by talking about Sam, we create a misleading discussion of contingency. I say "misleading" because one has to further do what Sartre does on his variant of the same pattern: introduce a series of complexes of complexes. Thus, Sartre arrives at his ever-changing ego that *is* a different self from moment to moment—the stranger *he* sees reflected in the mirror.

I am not here raising the familiar objection about the employment of a sortal term but merely noting the oddity that the objects distinguish the tropes that belong to them and supposedly both form and diversify them. The objects that are composed of them are ontologically dependent, in a clear sense, on their tropes. The oddity of a view like Mulligan's appears in the fact that his tropes are, in a very familiar sense, *ontologically more fundamental* than the objects they belong to—for *to belong to* is to inform and thus form. The dependency of the tropes amounts to their being taken as the entities connected to form a specific object—an object that is thus dependent on them. Of course, one may speak of "two-sided" dependency to purportedly deal with this. But, ultimately, an unheralded strength of the appeal to universals is their "independence" of specific particulars. That is, whether one holds to a principle of instantiation or recognizes the possibility of there being un-instantiated universals, universals are not, in any sense, essentially dependent on specific particulars. Mulligan's tropes, in being dependent particulars, are *essentially* connected to specific ordinary objects, which are also dependent on the tropes.

[16] Mulligan notes that tropes are indicated by descriptions: "One motivation for such a view is the undeniable fact that the definite descriptions 'Maria's sadness' and 'the colour of the book' are derived from sentences." (Mulligan 2009b, p. 8) He thinks of this as providing a mistaken motive for introducing facts.

9.3 Of Facts and Forms

If one construes exemplification in terms of logical forms—Φx, $\Phi^2 xy$,…, $\Phi^{\mu} x$,… ,μ—then there is a way in which Bradley's problem easily dissolves. Facts are indicated, on such a pattern, by definite descriptions specifying—the terms, attribute, and logical form of the fact. One thus employs the logical relations *term of*, *attribute of,* and *form of*. It will shortly be clear why these are reasonably held to be logical relations in yet another way.

Recall the description of the fact that O is F in abbreviated form—$(\iota\ \Omega)$.

One may take the Bradley problem to be the claim that a purported endless regress begins with a fact such as $(\iota\ \Omega)$, since a new fact, the fact that Φx informs *p,* is presupposed, and must be analyzed in turn. But given that the fact described exists—that E! $(\iota\ \Omega)$—it follows that the described fact is informed by Φx. No further fact is required given our taking the proper manner of reference to facts to be via definite descriptions of them, and not by taking atomic sentences to be names of purported states of affairs. The regress simply does not get started. The same is true in the case of purported facts that O is a term of the fact and that F is its attribute. This provides the basis for holding the relations to be "logical"—that such facts do not give rise to further facts built on the taking of monadic exemplification as a *relation*—whether of essence or any other sort.

The point is that in the present case one can give reasons, why the employment of logical forms in predicate place does not constitute a begging of the question as in other alternatives. Frege and Russell, for example, in effect issue a stipulation regarding the combining of diverse logical kinds, whether in the form of a need for completion or of the sufficiency of the things to join themselves. On the present alternative we obtain, via a simple result involving Russell's theory of descriptions, the result that the three statements—those regarding the described fact having F as its attribute, O as its term, and Φx as its specific form—necessarily, in the familiar sense of *logically necessary,* follow from the statement that the fact exists. They follow simply because they are all logically equivalent to that existential statement. Thus, we deal with a logical necessity that is a result of an analysis of the structure of facts along specific lines and the indication of the elements of the analysis in the description of what is thereby analyzed. It is not simply a matter of a stipulation, in the all too familiar manner, to resolve a problem.

Simons, in defending his version of a trope style account that is generically along the lines of Mulligan's view, has asserted that such an appeal to logical forms is mere hand waving. He may well be right, but I think not, and have provided one reason for not agreeing with him. There is another, perhaps more compelling, reason and the discussion of it will also serve to make a point about a familiar medieval view of relations.

The basic claim I want to make is deceptively obvious. Exemplification is asymmetrical, but not in an ordinary sense. For it is asymmetrical in a more fundamental way than standard relations, *like father of,* are said to be asymmetrical, where asymmetry is construed in terms of a relation obtaining in only one direction. A

more fundamental sense is illustrated by holding that particulars can only be *terms* of facts. That is, they *can exemplify* but *cannot be exemplified,* while only properties (relations) occur as *attributes* in facts and can both be exemplified and can exemplify.[17] Or, if one does not take there to be higher-order properties then, simply, particulars are the only terms and properties (including relations) are the only *predicables*. This partly echoes Aristotle's:

> There is, lastly, a class of things which are neither present in a subject nor predicable of a subject, such as the individual man or the individual horse. But, to speak more generally, that which is individual and has the character of a unit is never predicable of a subject. (Aristotle 1974, Categories 2: 1 b, p. 8)

In either case, whether there are higher-order properties or not, we have a logical distinction in the sense that particulars are not predicable while properties are *predicables*. That familiar theme provides the sense in which there is a more fundamental asymmetry between particulars and properties, that is not simply a matter of exemplification being an asymmetrical (or nonsymmetrical) relation in the familiar sense.[18] Exemplification is not asymmetrical in the standard sense. It is not since, if we take it to be so, we must allow for the statement that a property exemplifies a particular to be sensible. It must be taken to be so in order to hold that: for any particular x and any property Φ, if x exemplifies Φ, then not—(Φ exemplifies x). This allows "Φ exemplifies x" to expresses a logical possibility in the sense that atomic sentences express such possibilities. They cannot be formally contradictory. Yet, it is clear that no such possibility is expressed.

No such possibility is expressed in a twofold sense. Trivially there is no well-formed sentential expression for it, as "Φ exemplifies x" is gibberish. But it is not simply a matter of the semantics and syntax of the expression. In apprehending facts, we apprehend the distinction between predicables and terms of a fact. This is more readily appreciated in the case of relations. One can consider various other possibilities in many cases—the possible conversion of the relation, the possibility of another term having been related to one of the terms, and so on. One readily comprehends, in recognizing the distinction between the terms and the relation, that there is nothing one can try to consider as one of the terms *standing in the other* to the relation. This is a matter concerning the difference between relations and terms in facts—of relations as predicable entities—and not a matter based on language. The ontological point is expressed by the formation rules of a linguistic schema; it is not based on the latter. The point is the same in the monadic case.

To express the impossibility that Φ exemplifies x, we employ the formation rules of the schema, and hence it is impossible in a stronger sense than that in which a contradiction is not possibly true. A clarified symbolism cannot express a purported possibility that Φ exemplifies x. Thus, standard formation rules either do not allow

[17] Thus, one faces the complication of various forms of exemplification at diverse types.

[18] If one ignores types then one can allow "$(\exists \varphi, \psi)(\varphi\psi \ \& \ \neg\psi\varphi)$" and express that exemplifies, for properties of properties, is nonsymmetric. However, such a schema still embodies the underlying strong sense of asymmetry between what is a predicable and what is not, as we will still not have "$(\exists \varphi, \mathrm{x})(\varphi\mathrm{x} \ \& \ \mathrm{x}\varphi)$" as a formula.

the linguistic pattern "xΦ" or, if it is allowed, it is understood to be merely another way of expressing what "Φx" expresses—an alternative notation for the latter.

The claim being made above points to the sense in which exemplification is asymmetrical in a more fundamental sense than ordinary asymmetric relations are. That stronger sense is *shown,* or expressed, by a symbolism in which one pattern is well formed while the other is not. It can reasonably be said *to be a matter of logic* in that it is embodied in the formation rules of a schema containing standard logical patterns and is logically presupposed by such a schema's logical truths being just that. Thus, in a clear sense, the standard logical truths can be said to be dependent on such rules. To speak of "Φx v ¬ Φx" as a logical truth involves the recognition of the sentential components being well-formed combinations of subject and predicate signs. In short, the tautologies of logic require syntactical forms that can be taken to represent logical forms of facts and things—of particulars, properties, relations, dyadic facts, etc.

Exemplification cannot be taken as asymmetrical in a standard sense, even if the purported asymmetry is stated in a modal axiom proclaiming a necessary truth. Proposing such an axiom will still assume the formation rule allowing the problematic clause to be well formed. Moreover, taking *exemplification* as a relation obviously involves the context of a higher-order schema, since *exemplifies* crosses types of subject signs. So, trivially, one allows exemplification as a relation of higher type. One also requires allowing the formation of "xΦ," or some analog of it, in order to state the necessity of its negation—to state what it is that does not hold in any logically possible world. So one is forced to resort to something being *metaphysically impossible* or not holding in any metaphysically possible world, or grasped by one's metaphysical intuition, or some such phrase, rather than as logically possible in a standard sense of logical or in the stronger *logical* sense—*logically expressible*. Taking the stronger sense as *logical* is based on the fact that standard logical necessity clearly presupposes such a stronger sense. Moreover, the sense in which exemplification is then held to be asymmetrical can be taken, in turn, as a reason for holding that exemplification is not a relation among relations. One does not merely point to a way in which it differs from other relations or shares properties with them, for there is a fundamental asymmetry involved that is captured by the formation rules of a scheme.

A familiar nominalization pattern exhibits the uniqueness of exemplification in another way. Suppose, in Quine's fashion, one acknowledges the recognition of properties and relations by employing a sort of subject sign for them, the substantive term "redness" in place of the predicate "red," for example. One still has to have an exemplification predicate—for one needs some predicate, or an *arrangement* of subject signs, representing (expressing) *exemplification*—in order to express the combining of the various *sorts*. This is something like what is done in systems logicians call (many) sorted logics, in which you have (*subject*) domains of different sorts. In our case, the sorts are particulars and properties. The point is that exemplification stands out, for it cannot be taken as a further sort without introducing a further predicate (or using an arrangement of subject signs to express such a connection) to have sentences. You can put standard relations in as a sort (or as

many sorts) so long as you take exemplification as *n-adic* (or have various exemplification predicate). So, if one insists in Russell's fashion that each relation takes a specific number of terms, then you will require a variety of exemplification forms—a *potentially* infinite variety in principle. If you allow for an *n-adic* logical form with variable *n,* then one will do. That aside, there is a fundamental distinction of a logical kind that nominalization patterns miss. It is not just that one recognizes two sorts or types, at least. It is that all atomic facts logically require at least one predicable *item*. Whether there are facts of higher type or not, there certainly could be in a straightforward logical sense. After all, whether logic is restricted to first-order logic or not, we know perfectly well what higher-order logics are like, in certain respects. Schema of higher type are thus possible candidates for the improved or idealized schemata, expressing an ontology or metaphysics, that some of the metaphysically self-conscious neopositivists envisioned. Such schemata emphasize the point about an expanded notion of logical necessity and possibility. A schema that allows for higher-order atomic statements thus expresses the logical possibility of higher-order facts, and thus a sense of logically possible. In bringing in further logical types, one duplicates the strong sense of asymmetry that is expressed by first-type exemplification, for lowest-type attributes can exemplify second-type attributes but cannot be exemplified by them. Thus, there is a further form or set of forms for the exemplification of attributes of second type.

Russell's claim that his view of *relating relations* solves *the* problems posed by exemplification is seen to be inadequate in that it simply gives all relations a double role so that a relation both supplies the relational content for a fact and the unifying of itself to the related terms—the other components of the fact. But it is one thing for a relation to require a certain number of terms and quite another for it to be joined with such a number of terms into a fact. It is the latter that raises the issues about exemplification not the former.

Separating the roles, by recognizing the unique function of exemplification, emphasizes its logical difference from standard relations. A Bradley style point is thus emphasized. Exemplification cannot be transformed into a term—it is required as a unique *n-adic* logical form or in terms of a multiplicity of logical forms of diverse *adicity*. (The latter was something Russell worried about in connection with his requiring acquaintance with such entities, entities he took to be basic.) An aspect of this matter can be taken to be reflected by sorted logics, which Quinean style nominalization requirements make implicit use of in transforming the onus of ontological commitments from predicables, like *red,* to nominalizations of them, like *redness*, for, by taking nominalized predicates as subject terms that function only as subject terms, Quine's pattern requires one general connecting relation (or pattern of terms). This ironically serves to emphasize the uniqueness of an exemplification relation on a view recognizing universals in nominalized form. For, it is then a relation that cannot be nominalized and coherently used only as a subject *term*. It must play both roles or be joined by a second relating *predicate*, as the shadow of Bradley emerges.

It is thus not just a matter of saying that we should understand the claim about the asymmetry of exemplification along the lines indicated above. There is an (are)

argument(s) for doing so—since the asymmetry has to be understood as reflected by or built into the formation rules, and thus as logical in the strong sense. If it is not so understood, one faces a twofold problem. First, the need we noted earlier to appeal to some unclear notion of metaphysical or modal necessity. Second, that even with such a dubious form of necessity one must still recognize the possibility of properties exemplifying particulars in a strong logical sense and that the asymmetry (non-symmetry) is not even expressed by a standard logical truth but by a modal axiom or some claim about possible worlds.

The point, then, is that the appeal to a strong form of logical necessity is viably held to be a factor in the logic of predication in that it is implicit in the standard logical necessity as it is a logical condition of there being the standard logical necessities of predicate logic. Far from simply declaring something to be logically necessary and resolving a matter by stipulation, as Simons has suggested, I am not pointlessly claiming to *intuit* a metaphysical necessity or vacantly proclaiming a principle of ontology. Moreover, it is worth noting that what is taken as logically possible in the standard sense is not logically impossible in the strong sense, as opposed to the way purported metaphysical impossibilities are often construed. For what is declared to be metaphysically impossible is usually taken to be logically possible, which allows for introducing familiar and historically problematic *necessities*.

The point involved is not one that is a matter of language. Logical schemata require explicit formation rules. The question is what these reflect, just as one may ask what ontological significance is expressed, presumed, or reflected by various features of a system of logic—by logical truths, negations and bivalent logics, conjunctions, atomic sentences, logical forms, and so forth. It is the need for features of a schema to accommodate the fact that atomic facts are not mere aggregates of items, or mereological wholes, but that, in addition to having terms, properties, and relations they are of a specific logical form. What may have led Russell to hold that "relating relations" sufficed to resolve the Bradley style puzzles was his view that each property and relation was of a specific *adicity*. Thus, a relation being triadic, for example, can be seen as determining the specific relational form of the fact as well as contributing to its content.

There is also an interesting historical point involved. Some medieval philosophers took it for granted that relational predication required diverse subjects.[19] So it was understood that similarity and identity were not reflexive. A thing x is not (exactly) similar to itself but simply the kind of thing it is (this whiteness, a "thing in the genus of quality"). Likewise, a thing was not identical with itself, but simply numerically one (a numerical unit). Thus, the reflexive condition for exact similarity and numerical identity are replaced by being of a kind and being a one (this unit, object, thing). This move is adopted by some modern variants of trope theory that take the tropes themselves to be the truth grounds for two distinct tropes of

[19] "…since nothing one and the same is similar or equal to itself." Duns Scotus, Ordinatio II. d. 3, part 1, ques. 1, (18), in Spade (1994, p. 61). This does not bear on the acceptance or rejection of relational accidents (as, basically, monadic relational properties) by diverse medieval figures, such as Abelard and Ockam, who rejected them, and Duns Scotus, who accepted them.

the same kind being exactly similar and being diverse.[20] Then, the objection that such a view allows two logically independent claims (that x is diverse from y and that x is exactly similar to y) to have identical truth grounds is supposedly blocked. The claims are purportedly not logically independent since, given that x is exactly similar to y, it follows that x is diverse from y, for exact similarity is irreflexive. A relevant question then arises for the earlier discussion of exemplification. Can the medieval requirements about relations not being symmetrical be held to be logical, in the stronger sense that has here been claimed for exemplification? For they are clearly not logical in a standard sense.

It seems obvious that they are not so if we consider the case of identity and diversity. I take diversity to be the basic relation for a simple reason. Diversity has an empirical ground in that one is presented with two things being two and not one in experience, but one does not, or at least I do not, experience something being identical to itself. Perhaps that is why medieval philosophers tended to take self-identity simply in terms of *being one* (or a one). Self-identity is simply a matter of denying that a thing is diverse from itself. Moreover, claims about the logical properties of diversity and identity are familiar in discussions of the logical characteristics of relations, and not in posing paradoxes. Far more important is the fact that there is clearly no such presupposition made by standard systems of logic dealing with relations, as there is in the case of a formation rule about predicative juxtaposition. In the one kind of case, we deal with a particular philosophical thesis regarding the nature of relations; in the other case, we deal with a matter of intelligibility. Moreover, the attempt to incorporate such a theme into the logic of relations faces formidable obstacles in actually preventing, rather than being presupposed by, standard logical treatments of relational predicates.

The medieval theme was resurrected in Wittgenstein's *Tractatus* by his proposing a schema in which there would be no duplication of constants representing objects, and where quantified contexts like "$(\exists x)(\exists y).\varphi x \,\&\, \psi y$" were understood in terms of what is normally expressed by "$(\exists x)(\exists y)\mathbf{:}\ x \neq y \,\mathbf{\&.}\, \varphi x \,\&\, \psi y$." Whatever the insights expressed in such a theme, the rejection of the reflexivity of identity (and, perhaps, of reflexivity in general) revives a problematic medieval thesis, rather than uncovering a logical presupposition, for not only is that thesis not presupposed by the standard logic of relations but it is also not consistent with significant themes of the latter.

That particulars are what is not exemplifiable, while properties are what can be exemplified, not only embodies the asymmetry of exemplification but also points to why exemplification is not viably taken as a relation, asymmetrical or nonsymmetrical. This then becomes an aspect of the distinction between particulars and properties (including relations). Thus, of course, it is not a relation—that would be, in part, to explain it in terms of itself. That is, simply put, another aspect of the Bradley problem. This is also why the only reasonable alternative among trope accounts is to take tropes to be components of complexes of tropes that are taken to be ordinary

[20] This type of claim has been raised in defense of trope theories by taking a Scotist-type view of reflexivity with regard to exact similarity and numerical identity.

objects. By contrast, attributes being attributable are also what can have attributes. This is what leads some to speak of exemplification as nonsymmetrical. But this continues to overlook the point that one cannot even formulate the claim that a particular is exemplified by a property, even if one allows for only two types—particulars and properties of all *sorts*. In a rigidly typed hierarchy of properties, one could not formulate the familiar Platonic formulae regarding existence existing and difference being different from sameness. But that hardly provides the ground for an argument in the sense in which the incoherence of attributing particulars does.

The necessity of the asymmetry between a predicable and a term of a fact contrasts with the purported necessity Mulligan appeals to in his discussion of the essences of Sam and his tropes, as it contrasts with the purported logicality of the claim that relations require diverse terms. Both of the latter medieval themes have more in common with twentieth century attempts to reintroduce natural necessity into causal accounts. In the early twentieth century, a number of philosophers, including C. D. Broad and E. Husserl, appealed to a primitive higher-order relation of causal connection. Over a half century later, a number of others, including D. M. Armstrong, would also appeal to such a non-Humean solution of the issues posed by causality and causal connection. On such a view, one takes "N(F, G)" to express a fact that is the ontological ground for "all Fs are Gs" being a law of nature, rather than an accidental generality. It is in view of the relation N relating the universals F and G by *nomic necessity,* that we have the necessity of nature, though the fact itself may be held to be a synthetic higher-order fact. The problems with such a view are many, but a primary one concerns the relation N itself and the appeal to such a higher-order atomic fact to ground the truth of the generality that every F is a G. For the latter does not follow from the atomic higher-order statement without an additional premise, such as "N(F, G) ⊃ (∀x) (Fx ⊃ Gx)," or postulate of some kind providing the link. Armstrong, for example, has tried a forced reading of "N(F, G)" as: x being an instance of F nomically necessitates x being an instance of G. To aid that reading, one rewrites "N(F, G)" as "N(Fx, Gx)," as Armstrong went on to do. Yet, such linguistic manipulations and questionable readings of formulae to aid the packing of a conclusion into a premise resolve nothing. The problem is about the purported atomic fact being an adequate ground of the general truth without an *ad hoc* declaration that it simply is so. Packing declarations into reading does not establish that they are no longer declarations. Armstrong has also cited M. Tooley's claim holding that the higher-order relation is postulated as a theoretical entity between the first-order properties. It is an entity that is postulated to account for the fact that whatever is F is G. He adds, perhaps ironically, "much as we might postulate a dormative virtue in opium…." It then becomes quite clear that postulating the existence of "the" relation, taken to be represented by "N(Φx, Ψx)," really amounts to no more than the claim that: there is a unique relation R that holds between Φx and Ψx and its so holding *accounts for* the generality that—(∀ y)(Φy ⊃ Ψy) is *a lawful generality*.[21] Thus, N(Φ, Ψ) trivially becomes *the relation* such that any two properties stand in it if and only if *the fact* that they stand in that relation is

[21] On aspects of these problems see Hochberg (1967 and 1981).

postulated to account for an appropriate true law-like statement being a natural law. This no more rebuts the Humean tradition rejecting *natural necessity* than Mulligan has provided viable grounds for his rejection of facts (and relations) by reverting to the essentialist natures and necessities that Galileo removed from physics.

9.4 How Facts Get Fundamental

Facts may be said to be ontologically basic or fundamental in various senses. First, they will play a role in an adequate ontological account of truth. Part of what is involved in that claim is to viably argue that trope theories and other nominalist attempts fail to account for both monadic and relational true predications. This argument has been going on in modern times since the early 1900s. It was ushered in with the beginnings of analytic philosophy both on the continent and in England. Recognizing that one also recognizes that there is neither the need nor the possibility of going into that further. Second, they are required for an adequate account of thought and its relation to what is thought about—for intentionality. Third, they are required to adequately account for our apprehension of what are obviously relational situations in our experience. We experience relations as well as terms of them, though we do not experience there being universals. That is something one must argue for. I have tried to do so here by indicating problems with the type of reductive proposals that have long failed to convince proponents of universals. This is not a matter of providing an analysis of "knowledge" and conditions of correctness, as Mulligan deals with such epistemological matters, but of merely accounting for *the facts* of common experience.

Facts are entities that have other entities—objects, qualities, and relations—as terms and as attributes *connected to* them. But facts are also taken to be of a specific logical form, as traditional substances were held to be "informed." Yet facts are not, as traditional substances were, "informed" by properties or natures—merely by logical forms. But whereas the traditional notion of informing or inhering is problematic, the notion of logical forms employed here is not, or so I have claimed. It is often noted, in various contexts, that the notion of simplicity is far from simple. With respect to facts, the question of simplicity is hard to separate from the question of being basic, and the problem of simplicity becomes obvious in a quite precise sense. Atomic facts are simple in that (1) they do not have other facts as constituent terms, (2) their analysis does not take them to be mereological compounds of their components, (3) they are terms of the logical relations—*term of* and *attribute of*—and are of specific forms, and (4) the term(s) and attribute (relation) are not connected by a further relation to form the fact. Yet, they are not simple in that they are "determined" by the set of items specified in their description—one that specifies their term(s), predicable and form.[22] The latter point requires explanation. It has been argued by some that facts must be recognized since, given a nonsymmetrical

[22] On some other matters of simplicity and facts, see Hochberg (1961).

relation R and terms a and b, we cannot, from the list of items R, a, b, determine that the list is correlated to Rab, rather than Rba. Nor can we do so by adding the logical form. Yet, if we recognize the need for including ordering entities in the analysis of relational facts, we can determine, from an appropriate list—one that includes the account of order in the fact—whether Rab or Rba is the purported fact indicated. That issue I simply note here, without taking it up. I also note that one cannot viably argue that Rab simply differs from Rba, for one must give an account of the relational order of such purported facts. Giving such an account would then indicate another sense in which facts can be taken to be complex—that there is an order involved—and there are clearly still further senses in which they may be said to be complexes.

Facts, having *terms* and *attributes,* can be said to have *components*. Thus, one can hold they are complex, as that notion has been generally used, as they are structured and the perspicuous signs for them are likewise complex—indicating their connection to terms and attributes. Yet, the logical forms of facts differ in a significant way from the logical forms of particulars, attributes, and relations—a way that is the basis for not taking facts to be viably nameable, whether by atomic sentences or some form of simple sign. The first point is one that requires no elaboration, though one can note differences, as some philosophers have put it, between speaking of *constituents* and *components*. The second point is another matter. Particulars and predicables are of different logical kinds; however, we take particulars. For a particular is an entity that *can* only be a term of a fact, and not what is a predicable. An attribute or relation, by contrast, is what can be *the predicable entity "of"* a fact. If one recognizes higher-order predicables then such an attribute or relation of one fact can also be a term of a higher-order fact. Thus, particulars and attributes are of fundamentally different *logical* kinds—reasonably taken as differing in a logical or *formal* way.

The above discussion of causal necessity as a higher-order universal is along the lines MacBride uses in dismissing, rightly, the way some trope accounts pack needed powers and truth grounds into the natures of tropes. It is also along those lines that he wrongly dismisses the appeal to facts as truth grounds, which he sees as doing the same sort of thing (MacBride 2011).

One difference has nothing to do with providing purported truth grounds but much to do with ontology—characterizing the world as it is in terms of what a viable ontology must recognize. One argues for the existence of universals in terms of apprehending an apparent sameness of attribute that two objects or two facts have, and accounting for that sameness or likeness, if one prefers. That is not the same as speaking of the truth grounds for two statements ascribing predicates two things. But, the two are easily mixed.

The revival of metaphysics in the second half of the twentieth century in English-speaking lands is connected to the rejection of the extreme nominalism and pragmatic idealism of Quine, Goodman, Sellars, Davidson, and their legions of follower, that dominated what interest in ontology there was at mid twentieth century. Recall Quine's slogan—"To be is to be the value of a variable"—and the predisposition for first order logic linked to it.

When philosophers awakened to question the dogmas of the time, a natural target was the talk of truth conditions, in the fashionable way, and the ignoring of what Russell had called the "makers of truth." Rediscovering Russell from "the silence that now virtually blankets Russell's name at Oxford" (as Gustav Bergmann once put it) was part of recovering the philosophical heritage in the English speaking nations. It included recovering Russell's writings in the early twentieth century that culminated in the logical atomism essays and returning to reconsider ideas of the "early" Wittgenstein of the *Tractatus*. Facts, as truth grounds, came back in fashion. But focusing on truth grounds overlooked another fundamental feature of the early years of analytic philosophy—the focus on what is directly apprehended. For Russell, relational universals and facts were both entities that one so apprehended.

Thus, they were part of any adequate account of what there is or has to be accounted for. Russell's classic argument for relational universals, earlier set down by Moore, does not speak of grounding true statements but of the *immediate apprehension* of color *similarity*. Other arguments for relations involve the analysis of what is involved in the immediate apprehension of a fact or event, such as one tone preceding another. Such matters point to the need to account for and accommodate the basic features of experience. Thus, one argues that facts are necessary to do that, as Russell argued that relations were. One can also argue that they are required as truth grounds for atomic statements—but that is another issue and argument.

This has an important consequence for considering MacBride's line of argument, besides the point that truth grounds are not all that matters. The appeal to a primitive relation of causal necessity is ad hoc, for the reasons noted earlier. The reason it is so is transparent from the laying out of the definite description specified in the above discussion. The situation is quite different in the case of facts. The fact that O is F, where O is a presented object and F is its color, is given in experience. It is not postulated as "the entity such that it makes true the sentence that 'O is F'," though it can be described that way, just as I can also describe O as "the object that is F and which I presently apprehend"—or some such thing. That is what it is, in some sense of "is," as it simply is *that* or O, in another sense. That is what we start with. We can then proceed to question whether it is a bundle of properties, on analysis, or composed of tropes, or whatever. *But we start with O, F, and the fact that O is F*. All are "objects" of experience. We then proceed to deal with questions about whether F is a universal or not, whether the fact is reducible to other entities or not, and so on. The case of causality—of laws and causal necessity—is quite different.

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