

Types of Tropes : Modifier and Module

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TYPES OF TROPES: MODIFIER AND MODULE

Robert K. Garcia

ABSTRACT: The general concept of a trope – that of a non-shareable character-grounder – admits of a distinction between modifier tropes and module tropes. Roughly, a module trope is self-exemplifying whereas a modifier trope is not. This distinction has wide-ranging implications. Modifier tropes are uniquely eligible to be powers and fundamental determinables, whereas module tropes are uniquely eligible to play a direct role in perception and causation. Moreover, each type of trope theory faces unique challenges concerning character-grounding. Modifier trope theory faces challenges concerning the inscrutability of predication and the incompatibility with bundle theory, whereas module trope theory faces challenges concerning character overdetermination and a collapse into austere nominalism. These differences indicate that the modifier/module distinction divides the advantages of general trope theory and thus presents the trope theorist with a pivotal choice.

1 Introduction

According to trope theory, properties exist but are non-shareable, or “tropes”. Unlike universals, tropes are non-sharable in that it is impossible for a trope to characterize

distinct objects at the same time.¹ For example, if c_1 is the cubicity trope of cube a at time t , then no object wholly distinct from a is characterized by c_1 at t . If a distinct cube b also exists at t , then there is a cubicity trope, c_2 , such that c_1 and c_2 are exactly similar but numerically distinct. In characterizing an object, a trope plays the role of a character-grounder. In our example, a is cubical in virtue of having c_1 and b is cubical in virtue of having c_2 .

We thus have the general concept of a trope, that of a non-shareable character-grounder. As we will see, this general concept is ambiguous in a way that allows a distinction between two more specific concepts: modifier tropes and module tropes. After distinguishing these types of tropes (section 2) I will go on to show how they are unequally suited for metaphysical work. Modifier tropes have advantages concerning powers (section 3) and fundamental determinables (section 4), whereas module tropes have advantages concerning perception and causation (section 5). In addition, each resulting trope theory faces unique implications and challenges concerning character-grounding. Modifier trope theory faces challenges concerning the inscrutability of predication and the incompatibility with bundle theory (section 7), whereas module trope theory faces challenges concerning character overdetermination and a collapse into austere nominalism (section 8).

2 Modifier tropes versus module tropes

We can arrive at the distinction by considering a specific trope and using the law of excluded middle to ask a question about

¹ This *synchronic* non-shareability is distinct from *diachronic* non-shareability, which is denied by some trope theorists. For example, on Douglas Ehring's view (1997), tropes are "transferable" in that a trope can characterize distinct objects at different times.

the character of the trope itself. Consider a range of putative tropes that one might find in either abundant or sparse trope ontologies. Applying the law of excluded middle, we can ask: Is a negative charge trope itself negatively charged? Is a mass trope itself massive? Is a salinity trope itself saline? Is a sphericity trope itself spherical? Is a fragility trope itself fragile? Is a hotness trope itself hot? Is a hardness trope itself hard? Is a redness trope itself reddish? Is a courage trope itself courageous? Is a value trope itself valuable? And so on. In each case, the two ways of answering the question map onto two different conceptions of a trope: the affirmative answer yields what I call a *module* trope, the negative a *modifier* trope.

It is desirable to move from specific questions about putative tropes to a general question that delivers the module/modifier distinction. Because tropes are *character grounders*, one way to frame the general question is in terms of *whether tropes have the character they ground* (Garcia 2015b; Maurin 2023); here we might say that a module trope has the character it grounds whereas a modifier trope does not. Alternatively, we could frame the general question in terms of *whether tropes are self-exemplifying*; here we might say that a module trope is self-exemplifying whereas a modifier trope is not (Garcia 2016). I take these ways of framing the question to be equivalent. However, both are potentially misleading and require caveats.

On the one hand, the relational language (“have” and “exemplify”) might lead you to conclude that where there is a module trope there are two entities: the trope (which *has* or *exemplifies* the character) and the relevant character (which is *had* or *exemplified* by the trope). But that would be a mistake. A module trope is simple and not composed of one trope characterizing another trope.

On the other hand, the language of self-exemplification should not be taken to imply that a module trope is characterized

logically posterior to (and as a result of) it *functioning* as a character-grounder. That would be a mistake for two reasons. First, it would assume that character grounding is possibly reflexive, which is at least controversial if not false (see Schaffer 2009 and Rodriguez-Pereyra 2015). Second, tropes are supposed to be fundamental entities and character-grounders of everything else. Thus, the character and nature of a trope is determined logically prior to its functioning as a character grounder. For example, a sphericity module trope is spherical logically prior to its functioning as a character grounder; it is not the case that a sphericity module trope is spherical in virtue of grounding its own character or as a logical result of exemplifying itself. Thus, to ask whether the sphericity trope is self-exemplifying (or has the character it grounds) is really to ask whether the trope itself is spherical logically prior to its functioning as a character grounder. To frame the question more generally, to ask whether a trope is self-exemplifying (or has the character it grounds) is to ask whether the trope itself is characterized in the relevant way logically prior to its functioning as a character grounder.

So much for the caveats on “having character” and “self-exemplification”. Let them be understood in what follows. Nevertheless, in so far as it is feasible, perhaps it is best to avoid speaking of a trope “exemplifying” or “having” character and, instead, to speak of a trope “being characterized”. In keeping with this, I suggest we frame our general question as follows: *Is a trope itself characterized in the way of being characterized that it is supposed to ground?* Or, where *F-ness* names a trope and *F-ish* is the adjective for the way of being characterized that *F-ness* grounds, we could also put it this way: *Is F-ness itself F-ish?* The two ways of answering this question disambiguate the general concept of a trope into two types. A *yes* gives you the concept of a module trope and a *no* gives you the concept of a modifier trope.

To set the stage for considering their relative merits, it will be helpful to more closely consider each type of trope in turn.

A modifier trope is comparable to an immanent non-self-exemplifying universal, the difference being that only the latter is sharable. Like the universal, the modifier trope does not exemplify, have, or bear the character it grounds. Instead, a modifier trope grounds the character of its *bearer*: it *characterizes* its bearer in some single and specific way. On this view, a billiard ball is hard in virtue of its hardness trope and spherical in virtue of its sphericity trope, but the hardness trope is not itself hard and the sphericity trope is not itself spherical. The sphericity modifier trope is a non-shareable, non-spherical, *sphere-maker* or *spherizer*. Thus, a modifier trope is what we might call a *character-maker* in that it makes something else characterized but the trope is not itself characterized *in that way*. The latter qualification is important because it is misleading to say that a modifier trope isn't characterized at all. For example, although a sphericity modifier trope isn't naturally characterized (e.g. it isn't spherical), it is characterized both *formally* (being a property, being self-identical, being nonshareable, etc.) and *functionally* (being a sphere-maker).

A module trope is comparable to an immanent self-exemplifying universal, again, the difference being that only the latter is sharable. A module trope is also comparable to a modifier trope in that both are character grounders. Like a modifier trope, a module trope grounds the character of its bearer in some single and specific way. But unlike the modifier trope, the module trope is itself characterized in that way. On this view, a billiard ball is hard in virtue of its hardness trope and spherical in virtue of its sphericity trope, but the hardness trope is itself hard and the sphericity trope is itself spherical. Note that, aside from the character that it grounds, a module

trope has *no other* natural character. A sphericity module trope, for example, is spherical but *not otherwise* (naturally, non-formally) characterized; being spherical is the only way in which it is characterized: it is not also (say) massive or negatively charged. Thus, in effect, a module trope is a primitively singly-propertyed *object*. A sphericity module trope is a primitively merely spherical object.

With the modifier/module distinction in hand, we will now consider how modifier and module tropes are unequally suited for metaphysical work (sections 3-5) and fare differently with respect to character-grounding (sections 6-8).

3 Powers

Unlike modifier tropes, module tropes are not eligible to be the powers (or dispositions) of objects. Module tropes can play the role of powers only if powers can be self-exemplifying. Presumably, a self-exemplifying power would be a self-disposing power – a power that disposed *itself* in some way. However, in the literature on powers, the tacit but well-motivated assumption is that powers are not self-empowering or self-disposing, whatever that might mean. Rather, the natural and usual way to understand a power is to take a power to dispose its *bearer* in a certain way (Marmodoro 2010: 1). Thus, magnetism is not itself magnetic and fragility is not itself fragile; rather, magnetism disposes its bearer to attract nearby ferrous metals and fragility disposes its bearer to break under certain conditions. The assumption that powers are not self-disposing is especially clear and plausible in the analysis of higher-level powers, such as *the power to roll down an inclined plane*. An object has the latter power in virtue of having other (perhaps dispositional) properties including sphericity, rigidity, and heaviness. This requires each of the latter properties to dispose *something other than itself* – a distinct

bearer that is jointly disposed by lower-level powers and thereby has the higher-level power to roll down a plane. Thus, these lower-level powers are non-self-disposing; if they are tropes, they must be modifier tropes. In sum, in so far as powers are non-self-disposing, a trope ontology of powers will require modifier tropes.

4 Fundamental determinables

Unlike modifier tropes, module tropes are not eligible to play the role of fundamental determinables. Determinables are less than fully specific properties like *mass*, *color*, and *shape*. Fully determinate properties ‘fall under’ the latter and are properties like *mass 1 kg*, *scarlet*, and *sphericity*. A *fundamental determinable* is a determinable property that is distinct from and irreducible to fully determinate properties (Wilson 2012: 5; for more on the determinate/determinable distinction, see ch. XX, this volume). On module trope theory, a fundamental determinable would seem to be impossible. Suppose that *triangularity* is a fundamental determinable trope. On module trope theory, *triangularity* would be self-exemplifying: triangularly shaped, but not in any fully determinate way. It would be three-sided and three-angled, but none of the angles would have a specific degree and none of the sides would have a specific length. Thus, *triangularity* would be a triangle but it would be neither equilateral, isosceles, nor scalene. Such a module trope seems impossible. Likewise for other fundamental determinables, such as mass, color, and charge. If they exist, it seems impossible that they are self-exemplifying and so they could not be module tropes. However, they could be modifier tropes. On modifier trope theory, *triangularity* is not self-exemplifying. Here, the trope is not itself triangularly shaped – neither indeterminately triangularly shaped nor fully determinately triangularly shaped. Thus, there is nothing

impossible about *triangularity* being a modifier trope. Likewise for other fundamental determinables. In sum, for the modifier trope theorist, postulating fundamental determinables is a live option; for the module trope theorist it is not. This is a pro tanto advantage for modifier trope theory in so far as a case can be made for fundamental determinables. Here the jury is out. Although some trope theorists reject fundamental determinables and, instead, identify them with property-classes of fully-determinate tropes (Campbell 1990; Ehring 1996, 2011; Williams 1953), others argue that an adequate trope theory will require them (Wilson 2012; Garcia 2015b). If the case succeeds, then trope theory requires modifier tropes.

5 Perception and causation

Unlike modifier tropes, module tropes are eligible to play a direct role in perception and causation – to be the immediate objects of perception and the terms of causal relations.

With respect to perception, consider the greenness trope of a leaf. On module trope theory, the trope is itself colored. As such, it is the sort of entity that you could directly perceive by attending to the leaf. In contrast, on modifier trope theory, when you attend to the leaf, the colored entity that you directly see is not the greenness trope but its bearer, which the trope colorizes. The greenness modifier trope is not colored and thus is not the sort of entity you can directly perceive. But the greenness modifier trope is not unique in this regard. On modifier trope theory, a sweetness trope is not sweet, a temperature trope is not (say) hot, a smoothness trope is not smooth, and so on. Thus, unlike module tropes, modifier tropes are ineligible to play a direct role in perception.

With respect to causation, consider the hotness trope of a stove. On module trope theory, the hotness trope is itself hot. As such, it is the sort of entity that could directly cause a burn

on your hand. In contrast, on modifier trope theory, when you burn your hand on the stove, the hot entity that causes the burn is not the hotness trope but its bearer. Although the stove is hot in virtue of its hotness trope, the trope itself is not hot and thus is not the sort of entity that could directly cause the burn. But hotness modifier tropes are not unique in this regard. On modifier trope theory, mass tropes are not massive, charge tropes are not charged, and so on. Thus, unlike module tropes, modifier tropes are ineligible to play a direct role in causation.

The ineligibility to play a direct role in perception and causation marks an important disadvantage of modifier tropes. According to many trope theorists, a principal motivation for preferring tropes to universals is the fact that tropes, unlike universals, are suited to be the immediate objects of perception and the terms of causal relations (Campbell 1981; Ehring 1997; Lowe 2006; Schaffer 2001; Williams 1953). On modifier trope theory, this motivation is lost.

6 Thin and thick character

In the remainder I will consider how each type of trope fares with respect to character-grounding. For this it will be useful to draw a distinction concerning character. I take it to be a Moorean fact that there are naturally characterized entities. By “entity” I mean object or thing in the most general sense. By “naturally characterized” I mean ways of being characterized that “carve the world at the joints” – characteristics in virtue of which entities objectively resemble each other or have fundamental causal powers (Koons and Pickavance 2015: 116). There is no consensus on *which* characteristics are natural, but for the sake of the argument I will presume they include *being negatively charged*, *being spherical*, and *being hard*. We can distinguish two related phenomena concerning natural character.

First, there is the phenomenon of *thin*-character. There is thin-character if there is an entity x such that x is (predicatively) F , where F is a non-formal and (non-conjunctive) natural property. Note that an object can be thinly-charactered without being *merely* thinly-charactered. In its role as a character-grounder, each trope is supposed to account for thin-character. In the case of a billiard ball, there is an x such that x is spherical. The ball's sphericity trope accounts for the latter case of thin-character.

Second, there is the phenomenon of *thick*-character. This occurs when there is an entity that is thinly-charactered in more than one way. That is, there is thick-character if there is an entity x such that x is F and x is G , where F and G pick out distinct (non-conjunctive) natural properties. As character-grounders, tropes are supposed to jointly account for thick-character. In the case of a billiard ball, there is an x such that x is spherical and x is hard. The ball's sphericity trope and hardness trope jointly account for the latter case of thick-character. Thick-character is a pervasive feature of the manifest world (Garcia 2016). It is also a central explanandum in disputes about the existence and nature of properties. As it involves *one* entity being naturally characterized in *many* ways, Gonzalo Rodriguez-Pereyra (2002) calls the need to account for it the "Many Over One" problem and argues that it is the essence of the perennial Problem of Universals.²

7 Modifier tropes as character-grounders

As character-grounders, modifier tropes would seem to be more mysterious and less parsimonious than module tropes. I will consider each implication in turn.

² Keith Campbell (1981) calls it "the problem of concrete individuals".

The first implication concerns the inscrutability of character-grounding. On modifier trope theory, an object is thinly-charactered in some way in virtue of having a trope that is not itself charactered in that way. A sphericity modifier trope is not itself spherical, yet somehow makes its bearer is spherical. Thus, on modifier trope theory, there are two important aspects of character grounding. First, a modifier trope must be numerically distinct from the bearer it characterizes. That is, modifier tropes engage in irreflexive character-grounding, or what I will call *character-making*. Second, character grounding produces something at the object-level that bears no qualitative resemblance to anything at the trope-level. This threatens to make character grounding rather mysterious.

In contrast, module trope theory can at least mitigate the mystery. Here, the fact that the module trope is itself thinly-charactered provides the trope theorist with at least a minimal resource for explaining how the trope grounds the sphericity of its bearer. She might, for example, deny that character grounding is irreflexive and simply take the bearer's being spherical to amount to nothing more than the bearer's having a proper part (a trope) that is spherical (Garcia 2016). In sum, unlike modifier tropes, module tropes go some distance toward dispelling what D.C. Williams calls "the ancient mystery of predication" (Williams 1953: 11).

The second implication concerns parsimony. Trope theory is often advantageously paired with a bundle theory of substance. According to bundle theory, an object is a whole whose constituents are all and only properties, suitably interrelated in some way (for more on trope bundle theory, see ch. XX, this volume). Not all trope theorists adopt bundle theory (Heil 2012; LaBossiere 1994; Lowe 2006; Martin 1980). However, those who do adopt it do so partly on the grounds that, unlike universals, tropes do not require an additional

category of differentiating entities (substrata or bare particulars³) to individuate qualitatively indiscernible objects (Campbell 1990; Ehring 2011; Maurin 2002; and Schaffer 2001). Thus, tropes are said to have the advantage over universals of allowing for a parsimonious mono-category ontology while avoiding mysterious and paradoxical substrata (Schaffer 2001: 248).

This advantageous pairing is thwarted by modifier tropes. Although neither version of trope theory needs substrata to differentiate substances, there is other work for substrata to do for which modifier tropes are not suited. As a character-grounder, a trope is supposed to account for the fact that something is thinly-charactered. For example, a sphericity trope is supposed to account for the fact that something is spherical. On module trope theory, because the trope *qua* spherical is itself thinly-charactered, there is the option of identifying it with the trope-bearer – with the “something” that is spherical.⁴ On modifier trope theory, this is not an option because the trope is not itself spherical. Thus, the entity which is spherical (in virtue of the modifier trope) must be numerically distinct from the trope and the sort of entity that not only can *be* spherical but can be *made* to be spherical. In other words, the trope-bearer must be a *distinct* and *characterizable* sort of entity. Thus, to account for character – thin or thick – a modifier trope theory requires, in addition to the category of tropes, a category of trope-bearers – not to differentiate substances, but to be the literal subjects of characterization. This is one of the traditional roles played by a substratum – an entity of notorious repute. Indeed, as noted, avoiding substrata is a central motivation for preferring tropes to universals. Unfortunately, it is doubtful that modifier trope

³ For more on bare particulars, see Bailey 2012, Garcia 2014, and Pickavance 2014.

⁴ I call this thaumatrope theory (Garcia 2016).

theory enjoys this motivation. A modifier trope bundle theory seems to be a non-starter.

8 Module tropes as character-grounders

Module trope theory faces its own challenges concerning character. To see this we need to complicate the above distinction between thin and thick character and revisit our original concept of a module trope. With respect to the degree to which a module trope is itself naturally characterized, there seem to be three options. First, it might be *merely thinly* characterized: naturally characterized in exactly one way. Second, it might be *maximally* characterized: naturally characterized in all the ways that its bearer is naturally characterized. Third, it might be *middlingly* characterized: more than merely thinly characterized but less than maximally characterized.

Call the view that module tropes are maximally characterized *maximal trope theory*. Presumably, no one will be tempted towards this view, but it will be instructive to consider why. First, the trope would be a complete qualitative duplicate of its bearer, putting them in causal competition and threatening causal overdetermination (see below for more on this type of problem). Second, and more instructively, the view would be equivalent to austere-nominalism-plus-tropes. The austere nominalist accounts for maximal character without postulating properties; instead, she takes it to be primitive and at the level of the ordinary object. The maximal trope theorist deploys the same strategy, but at the trope level: her trope would be a primitively maximally characterized entity. However, if you accept primitive maximal character at the trope level, you might as well accept it at the ordinary object level and eschew tropes altogether. Thus, the maximal theory is both unmotivated and extravagant.

This leaves the module trope theorist with a choice between adopting *middling trope theory* and *merely thin trope theory*.⁵ Either option faces challenging implications.

The first implication is that both options require character-making and trope bearers. On neither will the existence of module tropes suffice to account for maximal character. If module tropes are merely thinly characterized, then a plurality of tropes only gives you the co-existence of merely thinly characterized entities. Similarly, if module tropes are middlingly characterized, then a plurality of tropes only gives you the co-existence of middlingly characterized entities (see Garcia 2016 and 2020 for relevant discussion). Thus, by themselves, module tropes cannot account for maximal character – the character of ordinary objects. Rather, on either option, for maximal character, module tropes must be character-makers and must jointly characterize a distinct and characterizable bearer, thereby making it maximally characterized. In this way, like modifier tropes, module tropes require trope-bearers.

The second implication concerns character duplication and the threat of causal overdetermination. The above requirement on maximal character raises a unique difficulty for both options within module trope theory. Consider a maximally characterized object, *O*, which is spherical and hard (etc.). On trope theory, *O* is spherical in virtue of its sphericity trope and hard in virtue of its hardness trope. On modifier trope theory, the hardness trope is not hard and the sphericity trope is not spherical, so between *O* and its tropes there is only one hard entity and one sphere (and they are one and the same). However, on module trope theory, the hardness trope is hard and the sphericity trope is spherical, so between *O* and its tropes there are two hard entities and two spheres. Indeed,

⁵ Indeed, the literature displays ambivalence on these options; see Garcia 2015b.

wherever there is a sphericity module trope that is a character-maker, there are two numerically distinct spheres: the trope and the bearer which is spherical in virtue of that trope. This generalizes: whether they are middlingly or merely thinly characterized, module tropes can account for maximal character only if they are character-makers and thus, wherever you have an F-ness trope, you will have two numerically distinct F-things.⁶ In this way, accounting for maximal character seems to saddle module trope theory with the systematic duplication of character.

It is generally thought that character duplication is an unwelcome result. To take one example⁷, consider the dispute about material constitution and its puzzle concerning the statue and the clay. On the constitution view, Michelangelo's *David* and the marble that composes it are numerically distinct but share exactly the same material parts. This is alleged to have the unwelcome implication that *each* weighs 6 tons. But suppose you put *David* on a digital scale. What quantity is shown on the scale's display? And what causes that effect? Just one of the 6 ton entities, or both? The answers are vexed but one implication is clear: character duplication is unwelcome because it forebodes causal overdetermination.

Unfortunately, it is not clear how to avoid causal overdetermination on a module trope theory that accounts for maximal character. Reconsider our maximally characterized

⁶ To forestall the trouble that awaits this conclusion, one might hold that the sense in which the trope-bearer is (made to be) characterized is *not* the same as the sense in which its character-maker is (primitively) characterized. I call this an equivocation strategy. Here, a sphericity trope is spherical and its bearer is spherical, but they are not spherical in the same sense; we equivocate when attributing "spherical" to them. Unfortunately, equivocation strategies have significant problems. For discussion, see Garcia 2016.

⁷ Other examples include a character duplication problem for bare particulars (see Bailey 2012 and Pickavance 2014) and the "Two Many Thinkers" problem for psychological approaches to personal identity.

object, *O*, which is spherical and hard. Suppose *O* is resting on a pillow. In this case, it is natural to say that the sphericity of the ball is directly causing the pillow top to have a concave shape. But if tropes are module tropes and character makers, then there are two spheres on the pillow: the sphericity trope and its bearer. Presumably, at least one of the spheres is directly responsible for the concavity of the pillow top. But which? Or is it both? Again, the answers are vexed. If both spheres cause the concavity, then there would be causal overdetermination. If only the trope causes the concavity, then *O* would be epiphenomenal. But between the trope and *O*, *O* is the only maximally characterized entity. Generalizing from this case would lead to the implausible implication that maximal character *in general* is epiphenomenal.⁸ If only *O* causes the concavity, then the trope would be epiphenomenal. Generalizing, this would mean that module tropes cannot, after all, play a direct role in causation and perception, thereby losing the above-noted central motivation for trope theory. Of these three alternatives, there is no obvious winner. Thus, whether module tropes are middlingly or merely thinly characterized, the verdict is out on whether and how they can account for maximal character while avoiding character duplication or causal overdetermination (see Gibberman 2022 for a promising attempt).

The third implication concerns a dilemma between middling trope theory and merely thin trope theory. It is not clear that the former is significantly better than maximal trope theory in avoiding a collapse into austere nominalism (or worse). The austere nominalist and middling trope theorist ultimately deploy the same strategy: postulate primitively *multiply* naturally characterized entities. Notice that the latter display the many over one phenomenon – an explanandum

⁸ See Garcia 2016 for further discussion of these alternatives.

that arguably is the central motivation for postulating properties (as noted above). Thus, in effect, the shared strategy denies that the many over one requires an analysis. It is strange, then, that unlike the austere nominalist, the middling theorist takes the character of *maximally* characterized objects – ordinary objects – to require an analysis and meets that requirement by taking maximal character to be grounded in less-than-maximally but multiply characterized tropes. This addition step seems unmotivated. If the shared strategy works for middlingly characterized entities, then it is not clear why it would not work for maximally characterized entities. But if it works for the latter, then we don't need the former. In this way, middling trope theory seems to collapse into austere nominalism.

A module trope theorist might try to forestall this collapse by taking tropes to be merely thinly characterized. Here, a sphericity trope is primitively and merely spherical. This strategy has the significant advantage of not denying that the many over one requires an analysis; it thus leaves intact a primary motivation for postulating tropes. However, the viability of this approach is threatened by what I call *thickening principles*. These have the following form: an entity is characterized under one determinable only if it is also characterized under another determinable. Plausible examples include *an entity is colored only if it is shaped* and *an entity is shaped only if it is extended*. Although whether and which thickening principles are true depends on numerous considerations, that there *are* true thickening principles is tacitly assumed by prominent advocates and critics of trope theory.⁹ Here, Jonathan Schaffer's (2003) view is instructive. He argues for the metaphysical possibility of a mass trope that

⁹ For discussion, see Denkel 1997: 604; Garcia 2015a, MS; Koons and Pickavance 2015: 99, 108, and 121.

is massive but not otherwise characterized. Such a module trope would be merely thinly characterized. If such a trope is possible, then there are no thickening principles concerning mass. However, the possibility of such a trope does not secure the viability of a merely thin trope theory because viability requires that *all* natural character is free from thickening principles – and perhaps even that all *possible* natural character is free (Garcia 2015b: 649). Such freedom is far-fetched.

To sum up the third implication, the choice between middling trope theory and merely thin trope theory poses a dilemma: the former threatens to collapse into austere nominalism whereas the latter implausibly requires that natural character is free from thickening principles.

9 Conclusion

As we've seen, the general concept of a trope admits of a distinction between modifier tropes and module tropes. The distinction has wide-ranging implications. Modifier tropes are uniquely eligible to be powers and fundamental determinables, whereas module tropes are uniquely eligible to play a direct role in perception and causation. Moreover, each type of trope theory faces unique challenges concerning character-grounding. Modifier trope theory faces challenges concerning the inscrutability of predication and the incompatibility with bundle theory, whereas module trope theory faces challenges concerning character overdetermination and a collapse into austere nominalism. These differences indicate that the modifier/module distinction divides the advantages of general trope theory and thus presents the trope theorist with a pivotal choice.

References

- Bailey, A.M. (2012) No Bare Particulars. *Philosophical Studies* 158(1): 31-41.
- Campbell, K. (1981) The Metaphysic of Abstract Particulars. *Midwest Studies in Philosophy* 6(1): 477-488.
- Campbell, K. (1990) *Abstract Particulars*. Oxford: Basil Blackwell.
- Denkel, A. (1997) On the Compresence of Tropes. *Philosophy and Phenomenological Research*. 57(3): 599-606.
- Ehring, D. (1996) Mental Causation, Determinables and Property Instances. *Nous* 30(4): 461-480.
- Ehring, D. (1997) *Causation and Persistence: A Theory of Causation*. New York: Oxford University Press.
- Ehring, D. (2011) *Tropes: Properties, Objects, and Mental Causation*. New York: Oxford University Press.
- Garcia, R.K. (2014a) Bare Particulars and Constituent Ontology. *Acta Analytica* 29(2): 149-159.
- Garcia, R.K. (2014b) Bundle Theory's Black Box: Gap Challenges for the Bundle Theory of Substance. *Philosophia* 42(1): 115-126.
- Garcia, R.K. (2014c) Tropes and Dependency Profiles: Problems for the Nuclear Theory of Substance. *American Philosophical Quarterly* 51(2): 167-176.
- Garcia, R.K. (2015a) Is Trope Theory a Divided House? In M. Loux and G. Galluzzo (eds.) *The Problem of Universals in Contemporary Philosophy*. Cambridge: Cambridge University Press: 133-155.
- Garcia, R.K. (2015b) Two Ways to Particularize a Property. *Journal of the American Philosophical Association* 1(4): 635-652.
- Garcia, R.K. (2015c) Tropes as Divine Acts: The Nature of Creaturely Properties in a World Sustained by

- God. *European Journal for Philosophy of Religion* 7(3): 105–130.
- Garcia, R.K. (2016) Tropes as Character-Founders. *Australasian Journal of Philosophy* 94(3): 499–515.
- Garcia, R.K. (2020) La Bundle Theory y el Desafío del Carácter Denso [Bundle Theory and the Challenge of Thick-Character], translated into Spanish by C. Rossi. *Revista de Humanidades de Valparaíso* 16: 111–136. An English version of this article is available upon request.
- Garcia, R.K. (MS) Moderate Nominalism: Tropes vs. Troopers. Unpublished manuscript.
- Giberman, D. (2022) Ostrich Tropes. *Synthese* 200(1): 1–25.
- Heil, J. (2012) *The Universe as We Find It*. New York: Oxford University Press.
- Koons, R.C., and T.H. Pickavance. (2015) *Metaphysics: The Fundamentals*. West Sussex, UK: Wiley-Blackwell.
- LaBossiere, M. (1994) Substances and Substrata. *Australasian Journal of Philosophy* 72(3): 360–370.
- Lowe, E.J. (2006) *The Four-Category Ontology: A Metaphysical Foundation for Natural Science*. New York: Oxford University Press.
- Marmodoro, A. (2010) *The Metaphysics of Powers: Their Grounding and their Manifestations*. New York: Routledge.
- Martin, C. (1980) Substance Substantiated. *Australasian Journal of Philosophy* 58(1): 3–10.
- Maurin, A.-S. (2002) *If Tropes*. Dordrecht: Kluwer.
- Maurin, A.-S. (2023) Tropes. In Zalta, E.N. (ed.) *The Stanford Encyclopedia of Philosophy*, Spring 2023 Edition. URL = <<https://plato.stanford.edu/archives/spr2023/entries/tropes/>>
- Pickavance, T. (2014) Bare Particulars and Exemplification. *American Philosophical Quarterly* 51(2): 95–108.

- Rodriguez-Pereyra, G. (2002) *Resemblance Nominalism: A Solution to the Problem of Universals*. New York: Oxford University Press.
- Rodriguez-Pereyra, G. (2015) Grounding is Not a Strict Order. *Journal of the American Philosophical Association* 1(3): 517-534.
- Schaffer, J. (2001) The Individuation of Tropes. *Australasian Journal of Philosophy* 79(2): 247-257.
- Schaffer, J. (2009) On What Grounds What. In D. Chalmers, D. Manley, and R. Wasserman (eds.) *Metametaphysics: New Essays on the Foundations of Ontology*. New York: Oxford University Press: 347-383.
- Williams, D.C. (1953) On the Elements of Being: I. *The Review of Metaphysics* 7(1): 3-18.
- Wilson, J.M. (2012) Fundamental Determinables. *Philosophers' Imprint* 12(4): 1-17.