Book Review

Tropes: Properties, Objects, and Mental Causation by Douglas Ehring. Oxford: Oxford University Press, 2011. viii+250 Pp. £37.50.

1 Overview

Tropes is a systematic investigation into the metaphysics of properties, aiming to motivate and defend trope theory, and more specifically Natural Class Trope Nominalism (NCTN). Ehring's book treats an impressive span of relevant positions, considerations, debates and objections with charity and clarity; it's also a real page-turner, at least if one has (as I do) a taste for analytic twists and turns.

The components of Ehring's view, corresponding roughly to chapters in his book, are as follows:

(1) The distinction between universals and particulars— needed to make sense of tropes as properties which are particulars, but not universals— is best understood in terms of a difference in identity conditions: universals, but not particulars, conform to the identity of indiscernibles.

(2) Tropes exist— moreover, enduring tropes exist— as needed to distinguish moving from stationary property instances. Types are collections of tropes; a trope can be a member of multiple collections, and so fall under multiple types.

(3) Whether two tropes are identical is primitive— not metaphysically analysable in terms of qualitative similarity, spatiotemporal location, or objects bearing the tropes.

(4) Objects are bundles of tropes; more specifically, as a variation on Sider's (1996) stage theory, objects are momentary mereological sums of compresent tropes, where compresence is a primitive (and also momentary) self-relating bundling relation, and the persistence of objects is understood in counterpart-theoretic terms.

(5) Problems with mental causation can be addressed by taking tropes to be the causal relata, taking mental and physical tropes to be identical (avoiding causal overdetermination), and taking mental

and physical types (collections of tropes) to be distinct (preventing reductionism).

(6) The best version of trope theory is NCTN, on which trope membership in natural classes is prior in the order of metaphysical explanation to trope natures and object resemblance.

(7) Certain objections to NCTN can be answered by adopting a counterpart theory of properties.

In what follows, I'll discuss these components in turn.

2 The distinction between universals and particulars

What distinguishes universals from particulars? As Ehring shows, accounts on which universals but not particulars come with fixed numerical constraints, are incomplete, or can be exemplified rule tropes out of court; and while a spatial account, on which universals but not particulars can be wholly present in non-overlapping locations, is compatible with tropes, it is subject to counterexamples involving multi-located extended simples and time-travelling particulars. A spatial account can be modified to allow that particulars can be wholly present in non-overlapping locations if they stand in certain external relations, but such a revision is stipulated rather than illuminating.

Ehring then offers up the 'exact similarity' account (Williams 1953), on which universals but not particulars conform to the identity of indiscernibles in failing to have 'the potential for having a wholly distinct duplicate' (32). This approach accommodates tropes, and nicely *explains* why universals have a capacity for multiple location irrespective of what external relations are in place. Ehring's discussion convinced me that a similarity-based criterion is the best of the available options.

3 The existence of (enduring) tropes

Many advantages have been claimed for tropes, including that they provide both a comparatively non-mysterian basis for object resemblance and a parsimonious basis for an account of objects as bundles of properties, and are well-suited to be the objects of perception and the causal relata. In his *Causation and Persistence* (1997), Ehring also argues that tropes, and more specifically enduring tropes, are needed to distinguish two ways in which a property might persist: first, property instance persistence (call this 'PIP'); second, (mere) property type persistence ('PTP'), where a property instance is replaced (perhaps in the same object) by another instance of the same type.

Here Ehring expands on this line of thought. He first considers whether the universalist can distinguish PIP and PTP in either three-dimensional

(endurantist) or four-dimensional (perdurantist) fashion. A universalist endurantist approach is a non-starter if what endures are universals, since the same universals are instantiated in cases of PIP versus PTP; and if what endures are rather exemplifications of universals (whereby an object exemplifies a universal at a time), then the difference must lie in PIP's involving a non-universal exemplification relation— that is, an enduring trope. A universalist perdurantist approach initially does better: if a persisting property instance involves momentary exemplifications of universals' being related by (a 'genidentity' relation involving) spatial contiguity, qualitative similarity, and causation, the difference between PIP and PTP can reflect a difference in causal connection. But, Ehring then argues, this strategy won't work to distinguish between stationary (SPIP) and moving (MPIP) property persistence in the following case:

> *The Indeterministic Sphere Case*: Consider two perfectly homogeneous, qualitatively indistinguishable spheres, made of non-particulate, non-atomistic matter in exactly similar surroundings. In the case of both spheres, the laws dictate that there is a 50% chance that the color property in the NW quadrant at t_1 will relocate to the SW location at t_2, and there is a 50% chance that the NW color property at t_1 will remain at the NW location at t_2. . . . [O]ne sphere spins but the other remains stationary. At any moment in its history, however, each sphere's intrinsic properties (understood as universals or property types) and its relations to other objects at that time do not vary whether or not it is rotating. (p. 57)

Ehring's argument takes the following form:

(1) A universalist perdurantist distinguishes PIP and PTP by appeal to a causal difference between exemplifications.

(2) Distinguishing between MPIP and SPIP also requires identifying some causal difference between these cases.

(3) Some reductionist theory of causation is correct: causal facts are reducible to non-causal facts.

(4) On available reductionist accounts of causation, MPIP and SPIP are not causally different, at least if the non-causal reduction base excludes enduring tropes.

∴. A universalist perdurantist account of property persistence fails.

A similar theory in terms of causally connected momentary tropes will also fail (p. 65). If enduring tropes are posited, however, the difference can be accommodated:

> The color property is stationary if and only if the color trope that is wholly present at t_1 in the NW region of the sphere is wholly present at t_2 in the NW region of the sphere [and] the color property is moving from t_1 to t_2 if

and only if the color trope that is wholly present at t_1 in the NW region of the sphere is wholly present at t_2 in the SW region of the sphere. (p. 67)

He concludes that accounting for all forms of property persistence requires enduring tropes.

One obvious way to resist Ehring's conclusion is to deny that a reductionist theory of causation (which Ehring does not motivate here) is or must be correct. Less obviously, one might deny that in making out a difference between SPIP and MPIP the perdurantist is limited just to appealing to (a genidentity relation involving) spatial contiguity, qualitative similarity, and causation. I'll expand on this point in §5.2.

That said, a trope theory containing enduring tropes does accommodate the diverse ways in which properties can persist, in a way likely more elegant than any that might be crafted on a perdurantist account; and Ehring's argumentation against a universalist endurantist account of property persistence is compelling. Those inclined towards endurantism, as I am, might well take these results as providing good overall reason to posit enduring tropes.

4 The individuation of tropes

Qualitatively distinct tropes are not identical; but when are qualitatively identical tropes the same or different? Ehring follows Campbell (1990) in taking trope individuation to be primitive. Most time is spent resisting a view (see Schaffer 2001) on which qualitatively identical tropes are different just in case they are at some spatiotemporal distance from each other. If locations are instantaneous, a spatiotemporal criterion rules out enduring tropes: advantage primitivism. Supposing that locations may be extended, the battle is engaged over a complex set of issues pertaining to whether tropes can be 'swapped' (the redness *here* could be swapped with the redness *there*), whether tropes can 'slide' (the redness *here* could be *there*), and whether tropes can be 'piled' (multiple qualitatively identical tropes could be *here*).

The back and forth on these issues is intricate, so I'll just highlight one dialectical joint. Schaffer claims that an advantage of a spatiotemporal criterion is that, in combination with counterpart theory, it rules out the 'empty possibility' of trope swapping while making room for trope sliding. Ehring has a neat response, arguing that 'the possibility of trope sliding brings with it the possibility of positional trope swapping' (p. 84), via a series of cases where a circular pane of red glass is such that had the wind blown such-and-such a way, the pane of glass would have rotated 1 degree (2 degrees, . . ., 179 degrees). Each case is one of trope sliding, but case 180 is also a case of trope swapping. Ehring argues similarly (in my view, compellingly) against other purported advantages of a spatiotemporal criterion.

One final observation. In considering how a trope theorist who endorses counterpart theory for tropes can accommodate the possibility of trope swapping, Ehring says,

> This requires that the counterpart relation be context-relative. . . . [I]n contexts in which the possibility of swapping is genuine, the relevant counterpart relation . . . is such that the redness trope in the lower right quadrant in the relevant non-actual world is the best candidate for a counterpart to the redness trope in the upper left quadrant in the actual world. In those 'swapping is possible' contexts, the redness trope in the upper left quadrant in the relevant non-actual world is *not* a counterpart to the redness trope in the upper left quadrant. This requires dropping the requirement that x's counterpart must resemble x more closely than do the other things in that world . . . (p. 85, emphasis in original)

I'll return to this extended understanding of the resources of counterpart theory in the next section.

5 Objects as momentary trope bundles

Ehring endorses a view on which ordinary objects are identical to mereological sums of tropes. Mereological bundle theories make for an elegant account of instantiation or the 'characterizing tie': what it is for an object to have a property is for the object to have the property as a part. Such accounts face well known difficulties, however, including that mereological sums but not objects have their parts essentially, and that objects but not mereological sums can persist through change. In response to the first concern, Ehring follows Hawthorne and Cover (1996) in combining bundle theory with modal counterpart theory. In response to the second, Ehring follows Sider (2001) in combining bundle theory with a stage-theoretic version of perdurantism, whereby ordinary continuants are instantaneous stages, and object persistence is understood in terms of temporal counterpart theory.

There is a wrinkle: if all the tropes in the bundle are enduring, then an object could persist without changing, via identity rather than a counterpart relation between stages, which would violate the desideratum that the account of persistence should apply whether or not an object is changing. Ehring's solution to this 'asymmetry problem' is to require that each stage include a momentary trope (pp. 102–3). Moreover, Ehring suggests, there is a natural candidate for said trope: the compresence relation, C, such that 'A *momentary* thing is a complete complex of properties which all stand in the relation of compresence to each other and the compresence relation that relates those properties' (p. 103).

5.1 Parsimony and bundle theory

Ehring's main stated motivation for bundle theory is that it is more parsimonious than a substance-attribute theory (p. 98). But as above, Ehring takes trope individuation to be primitive. He also maintains that 'there are reasons for thinking that compresence must be read as a primitive' (p. 133 n. 61). His view also requires modal counterpart theory, which might well bring new commitments (for instance, to concrete possible worlds or abstracta) in its wake. Finally, Ehring endorses NCTN, on which what makes a class 'natural' is also primitive.

With three primitives and modal counterpart theory on its side of the ledger, no clear advantage in parsimony accrues to trope bundle theory.

5.2 A tension between trope stage theory and enduring tropes

Recall that the motivation for enduring tropes is that a property perdurantist cannot distinguish between moving and stationary properties in the indeterministic spinning sphere case. But an analogous case can be cooked up involving moving or stationary objects— say, if the sphere is composed of indistinguishable atoms which discretely move (or don't move) at each time step. Supposing so, then why can't the arguments showing that we need enduring tropes be used to show that we need enduring objects? Conversely, if the analogous case doesn't motivate enduring objects, perhaps on the grounds that one can understand perdurantist persistence between object stages in terms of a 'context-dependent counterpart relation', then why can't the same move be made in the original case, undercutting the motivation for enduring tropes?

5.3 Problems with bundling compresence

Taking momentary compresence tropes to be part of an object's bundle generates two problems, only one of which Ehring addresses. First is the threat of regress: if the bundling of some tropes requires a compresence trope, which is also part of the bundle, why isn't another compresence trope needed in order to bundle the first compresence trope to the original tropes? And then another, and another? Ehring responds by taking compresence to be a self-relating relation: compresence tropes are self-binding, so that, for example, in a bundle containing non-compresence tropes t_1 and t_2, 't_1, t_2, and c_1 stand to each other in a *three-place* compresence relation, which is just c_1' (p. 133).

Even so, a second problem remains, which Ehring doesn't address. As above, an advantage of mereological bundle theory is its account of the characterizing tie; given that properties are tropes, for an object to have a property is for it to have the associated trope as a part. But ordinary objects do not have as a property *being such as to render some tropes compresent*. So either the assumption that compresence tropes are part of trope bundles or the operative account of characterization has to go.

5.4 A positive proposal

The problems with Ehring's bundle theory stem mainly from taking objects to be instantaneous stages. Enduring tropes are defensible, and under-utilized in his framework. Why not take the persistence of objects to be a matter of enduring tropes?

Perhaps Ehring failed to explore such an approach on the grounds that enduring tropes could make sense of how objects can persist, but not of how objects can change, giving rise to the aforementioned asymmetry problem.

But enduring tropes can provide a systematic basis for persistence. The general idea is that persistence is a matter of an object's being essentially constituted by certain enduring tropes, and persistence through change is a matter of at least some of these tropes being determinables which can be contingently determined in different ways (i.e., can stand in the determinable/determinate relation to different more determinate tropes). For example, it might be essential to a human person that they have a human shape, but not essential to that person that they be sitting or standing, fat or thin, tall or short.

On this approach to trope bundle theory, one need not introduce momentary compresence tropes into the bundles composing objects, so both the threat of regress and the undercutting of the account of characterization are avoided. Indeed, no notion of compresence is needed on this account. Instead, a trope bundle theorist can take an object's bundle to include a high-level enduring determinable trope— *being a human*, *being a tree*— that gathers more determinate essential and contingent tropes in a given bundle together, in a non-primitive, metaphysically explanatory way.

6 Mental causation

There is a well known concern, pressed by Kim (1989 and elsewhere), according to which the assumption that every physical effect has a purely physical sufficient cause (*Physical Causal Closure*), along with the co-temporal dependence of mental on physical goings-on, leaves no room for the mental to be causally efficacious— vis-à-vis physical effects, in particular— except by invoking an implausible systematic causal overdetermination.

Ehring proposes a trope-based response to this problem, as a variation on the token-identity response proposed by Davidson (1970). Davidson assumes that the causal relata are events understood as spatiotemporal particulars, some of which can be jointly characterized as mental and as physical. Given that events are efficacious in virtue of being physical, and given that mental event M is identical to physical event P, M may also be efficacious, in a way avoiding overdetermination.

As Ehring motivates his preferred approach, Davidson's response is unsatisfactory, since it doesn't ensure that there is distinctively mental

causation; for why think that the one event is efficacious in virtue of being mental? This is what Horgan (1989) calls the 'problem of mental quausation', and Ehring suggests that it can be resolved by taking the causal relata to be tropes and taking types to be collections of tropes:

> The trope view allows the option of making mental causation compatible with the completeness of physical causation and exclusion by asserting that mental trope m is identical to physical trope p where that one trope falls into more than one class of tropes, a mental type class and a physical type class. (p. 141–2)

Which powers are associated with a given type reflects which powers are had in common among tropes in its subclasses; hence the class of red tropes— the type *red*— has the powers in common among the tropes in its subclasses *scarlet*, *burgundy*, and so on. More generally, multiply realized or determinable types have fewer powers than their realizer or determinate types. Given that M is multiply realizable, then 'M breaks down into mutually exclusive physical types [and] we can say, on analogy with "red", that the causal powers of M as a whole are just those exactly similar causal powers shared by all such physical subclasses' (p. 168).

Ehring's view, like other views coupling token identity with type distinctness, has a problematic consequence, namely, that a property token (here, a trope) of a given type can have more powers than are associated with the type. But if a property token has more powers than are associated with a given type, then that is good reason to think that the token is not of the type. Ehring registers this concern, and responds that he doesn't see the problem, since some particulars— namely, objects— have powers that some of their properties do not have. But Ehring's case rather supports there being a genuine concern here, since it seems to presuppose that if an object has some power that one of its properties doesn't have or bestow, then the object must have some *other* property suitably associated with that power.

Moreover, it seems to me that Ehring's solution is still subject to Horgan's complaint: granting that a single trope can fall under both mental and physical types, why think that the trope is efficacious in virtue of falling under the mental type? More needs to be said if Ehring's approach is to address the problem of mental quausation.

7 Natural Class Trope Nominalism

Accounts of tropes differ with respect to what is prior in the order of metaphysical explanation between the nature of tropes, their resemblance relations, and their membership in natural classes. On Standard Trope Theory (STT) (as endorsed by both Campbell and Williams) the natures of tropes are foundational, determining resemblance and membership relations. On

Resemblance Trope Nominalism (RTN), resemblance relations between tropes determine trope natures and membership relations. Ehring aims to motivate and defend NCTN, on which trope membership in natural classes determines trope natures and resemblance relations.

One might think that STT must be correct; for how could tropes stand in resemblance relations or be members of natural classes if they didn't have antecedent natures to ground their resemblance or membership relations? Even so, some claim that tropes on STT 'collapse into exemplifications of universals':

> Campbellian tropes ... are supposed to lack constituents that are not tropes, making them clearly distinguishable from exemplifications of universals. ... It has been charged, however, that Campbellian tropes have distinct particularity-giving and nature-giving components [opening up] the serious possibility that a Campbellian trope collapses into an exemplification of a universal (or ... some form of non-Standard trope). I will argue that this charge of 'non-simplicity' does hold against Campbellian tropes, giving us a reason to prefer an alternative conception of tropes. (p. 176)

Ehring aims to motivate NCTN by pushing this objection home, then providing reason to prefer NCTN to RTN. Here I'll focus on his development of the collapse objection to STT.

Ehring develops this line of thought by tying the complexity of a trope to that of its standing in 'arbitrarily different relations', and then arguing that relations of numerical identity or distinctness, and relations of qualitative similarity or difference, are arbitrary relations that a trope can stand in, such that Campbellian tropes do have distinct 'particularity' and 'nature-giving' components. He then considers and rejects certain responses that a proponent of STT might give.

The dialectical eddies are again complex; I'll just register an observation and then say how the proponent of SST might respond.

The observation is that it is never made clear why, if tropes are complex, and so have a 'nature-giving' (presumably qualitative) component as well as a particularizing component, this would collapse tropes into exemplifications of universals. An exemplification involves some object instantiating a universal; but why can't the proponent of STT simply deny that the particularizing aspect of tropes is itself an object (perhaps because they, like Ehring, take tropes to be constituents of objects, not vice versa), or deny that the qualitative aspect of the trope is instantiated by its particularity aspect? Perhaps reflecting these considerations, Ehring focuses on arguing that the complexity of tropes undercuts a 'standard' understanding of a Campbellian trope as simple in having a nature which is identical to its particularity, and then arguing that there's no good way for the proponent of STT to recover, once the identity claim is undermined.

As Ehring admits, 'Campbell does not say that a trope's nature is identical to its particularity' (p. 183). Here's what Campbell says:

> Although . . . all tropes are particulars, and each of them has a nature, this does not involve conceding that a trope is after all complex (a union of particularity with a nature providing property). . . . [A] particular instance of orange will be a case of warm color, as well as a case of orange. But this does not imply that it is a union of two features, warmth and orangehood. [Similarly,] to recognize that a particular case of orange is a particular nature, hence a case of particularity, does not include a duality of being . . . The particularity of particulars is . . . incapable of distinct and independent existence. (Campbell 1990, pp. 56–7)

Ehring interprets Campbell as maintaining that while the nature and particularity of a trope 'can be separated in the mind . . . in reality they are identical' (p. 187). But I read Campbell as suggesting that the particularity of tropes should be understood on the model of the determinable/determinate relation. Determinables and determinates are distinct, but their distinctness does not consist in the determinates being a union of the determinable and some 'new feature'. As Karen Bennett once pithily said, 'determinates are not determinables with frosting on top'.

Ehring considers whether the particularity of a trope might be a determinable of its nature, in a way that would block trope complexity of a problematic variety, but maintains that this conflicts with a principle governing determinables and determinates:

> If D_1, D_2, and D_3 are same-level determinates of Q, then if D_1 is more similar to D_2 than it is to D_3, then D_1 is more similar to D_2 qua Q than it is to D_3 qua Q. . . . [A] yellowness trope is not *more similar qua particularity* to an orangeness trope than that yellowness trope is to a redness trope *qua* particularity. (p. 181, emphasis in original)

But there is no principle connecting overall similarity between same-level determinates of a determinable Q to their similarity in respect of (*qua*) Q. The closest operative principle is rather:

> *Determinate similarity/comparability*: If P and R are different same-level determinates of a determinable Q, then P and R are similar, and moreover comparable, in respect of Q. (Wilson 2017)

Determinate similarity/comparability is compatible with the particularity of a trope being a determinable of its (qualitative but non-universal) nature. To return to Ehring's case: though a yellow trope is more similar in respect of colour to an orange trope than it is to a red trope, these will all be *exactly similar*, hence comparable, in respect of particularity.

So there is no in-principle problem for STT or, more specifically, for Campbellian tropes, properly understood.

8 Objections to NCTN

That STT survives unscathed undercuts Ehring's main motivation for NCTN. Still, it is good to know what our metaphysical options are. Ehring closes by addressing certain objections to NCTN, sometimes offered as showing the view to be a non-starter. These include that NCTN rules out the genuine possibility that a property might have fewer or more instances than it actually has; that NCTN cannot make sense of local causal relevance; and that NCTN cannot make sense of certain features of the determinable/determinate relation. Each objection can be answered, Ehring creatively argues, if property counterpart theory is adopted.

Granting these results, does it follow that NCTN is at least a live option? Perhaps, but the deeper problems with the core thesis that 'a trope has no nature when considered independently of its class membership' (p. 194) remain, undercutting the original motivations for tropes as providing a comparatively non-mysterian basis for resemblance between objects, consonant with perceptual experience. How can a trope be the direct object of experience if its nature is constituted by 'the set of all the natural classes of which it is a member' (p. 188), and there is no 'independent' local means by which such membership might be perceived? Most importantly, how can tropes get sorted into natural classes in the absence of their having independent natures? What would be the metaphysical basis for such sorting? That the naturalness of classes is primitive doesn't help matters. Ehring addresses the priority concern in a couple of footnotes, effectively responding that, as Lewis (1986) notes, every theory must have its primitives. But as Lewis also observes, some primitives are better than others.

If NCTN is an option, it remains, in spite of Ehring's valiant efforts, a distant one. But other of results of Ehring's stand, including powerful cases for there being primitively individuated enduring tropes, which, as per my suggestion above, can be used to found a new account of object persistence. In any case, results are one thing, execution another. This is a finely executed investigation, which will repay the attention of metaphysicians interested in the structure of reality.

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