

# The Ontological Form of Tropes

Refuting Douglas Ehring's Main Argument against Standard Trope

Nominalism

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*Penultimate Draft*

## **Abstract**

According to Standard trope nominalism, there are simple tropes, which do not have parts or multiply distinct aspects. Douglas Ehring's *reductio ad absurdum* against this Standard view concludes that there are no simple tropes. In this paper, we provide a response to Ehring on behalf of the Standard view. Ehring's argument may be resisted (1) by distinguishing the ontological form of tropes from their contribution to the ontological content of the world and (2) by construing tropes as having primitive identity. At the same time, the Standard trope nominalism is elaborated by the distinction between ontological form and content, for which there are also independent reasons.

106 words (abstract)

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## Introduction

In this paper, we answer Douglas Ehring's most convincing argument against Standard trope nominalism in his recent book (2011). Such an answer is still missing in the literature.<sup>1</sup> Ehring's argument concludes that there are no simple tropes. This is in contradiction with the Standard view. So Ehring's argument has a form of *reductio ad absurdum* of Standard trope nominalism, according to which there are simple tropes, that is, tropes that lack parts or multiple, non-identical intrinsic "aspects".

Our claim is that Ehring's argument against the simplicity of Standard tropes is not sound; it is premised on a principle, which is not correct. Therefore Ehring's *reductio ad absurdum* against the Standard view fails. The incorrect principle in the argument is that *if a and b are related by arbitrarily different internal relations, then a and b are not simple*. It involves a hidden premise that entities in distinct arbitrarily different internal relations have parts or multiple, non-identical aspects. Arbitrarily different internal relations are internal relations that vary independently from each other. In his argument, Ehring shows that exact resemblance and numerical distinctness among tropes are arbitrarily different internal relations. On this basis, he concludes, by the incorrect principle, that exactly resembling and numerically distinct tropes are not simple.

We shall show that the principle is incorrect for two main reasons. First, the *ontological content* of the world on trope nominalism should be distinguished from the *ontological form* of tropes. The holding of the exact resemblance of tropes, which describes the ontological content, is independent from the holding of the numerical distinctness of tropes, which spells out their ontological form, and *vice versa*. So our response to Ehring draws on the distinction between ontological form and ontological content, employed, for instance, by E.J. Lowe, Kevin Mulligan and Barry Smith. Actually, our response to Ehring is not only defending oneself against criticism; we elaborate on the

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<sup>1</sup> For responses to a similar but distinct criticism of the Standard view, see Maurin (2005).

Standard trope nominalism by the ontological content/form distinction. Our second main reason for denying Ehring's principle is that the identity of tropes is primitive: tropes do not have informative and non-circular identity conditions provided by distinct entities.

Ehring's motivation to argue against Standard trope nominalism is due to his own non-standard, natural-class view of tropes (2011, ch. 6). He explains resemblance of objects by the primitive relation of being a member of a natural class holding of tropes – in contrast to the Standard explanation in virtue of the existence of resembling particular thin natures, which are borne by the objects.<sup>2</sup> So Ehring does not identify tropes with *thin natures*, which identification is essential to the Standard view by D.C. Williams (1953), Keith Campbell (1990), Peter Simons (1994), Anna-Sofia Maurin (2002) and us (2010, 2014, Keinänen 2011), among others. According to the Standard view, tropes bestow only a single property on the objects that bear them, for example  $-e$  charge on electrons and  $e$  charge on positrons. The Standard view also involves the tenet that there are mereologically simple tropes.

The paper has four parts. In the first section, we discuss Ehring's *reductio* and judge his argument to the result that exact resemblance and numerical distinctness among tropes are arbitrarily different internal relations. The second section is devoted to the characterization of the ontological content/form distinction, for which we argue in the third section. We respond to Ehring's *reductio* in the fourth section, which also concludes the paper.

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<sup>2</sup> Standard trope nominalism provides a neat and parsimonious solution to the problem of universals: the metaphysical explanation of resemblances of objects. Trope-bundle theory, on which objects are composed of nothing but particular thin natures, is also able to account for the bearing of properties by objects nicely (e.g. Campbell 1990, ch.1; Keinänen 2011, Keinänen & Hakkarainen 2010 and 2014). For the review of the other advantages of trope nominalism, see Ehring 2011, ch. 2.

## 1. Ehring's Argument

Ehring's argument targets the statement in the Standard view that tropes do *not* "have distinct particularity-giving and nature-giving components" (Ehring 2011, 176). If they had these components, the components would render tropes complexes consisting of a particularity-giving component and a particular *exemplification of a property universal* (Ibid.). For example, *e* charge tropes would have non-identical particularity-giving and nature-giving components, the latter of which would be the exemplifications or instantiations of *e* charge property universal. By contrast, on the Standard view, each *e* charge trope is simple: it "lacks parts and lacks multiple, non-identical intrinsic "aspects"."<sup>3</sup> (Ibid.) The Standard view identifies each simple Standard trope with a thin nature (e.g. *e* charge), which is a particular, individual entity.

Ehring runs three passes of his argument. The last pass, which he considers the most convincing, goes as follows:

"If *a* and *b* are related by arbitrarily different internal relations then *a* and *b* are not simple. Trope *t*<sub>1</sub> is numerically different from trope *t*<sub>2</sub> and trope *t*<sub>1</sub> resembles trope *t*<sub>2</sub> exactly. Resemblance among Campbellian tropes [identified with thin natures] and the difference relation are internal relations that are arbitrarily different than each other. Hence, *t*<sub>1</sub> and *t*<sub>2</sub> are not simple." (Ehring 2011, 179-80; cf. Hochberg 2004, 23-4; Moreland 2001, 70-1; Maurin 2005, 138)

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<sup>3</sup> For present purposes, it is sufficient that intrinsicness means that intrinsic *x* is possessed by an object independently of the existence of other objects that are not its proper parts. About "multiple, non-identical intrinsic 'aspects'", Ehring says that it "is unnecessary if it is assumed that a property of something is a part of that thing. However, since some will find this assumption to be questionable and since it is at least an open question whether something that lacked parts might have more than one intrinsic property, I have included the second conjunct." (Ehring 2011, 176-7) We shall follow Ehring here and talk about aspects in addition to parts in order to cover those possible views on which non-identical aspects are not parts (they could be modes, which are not parts of objects, for instance).

In order to see that Ehring's argument has the form of a *reductio ad absurdum*, it is useful to formulate it as a series of steps:

- 1) Suppose that trope  $t_1$  and trope  $t_2$  are simple Standard tropes<sup>4</sup>: they lack parts and multiple, distinct<sup>5</sup> intrinsic aspects, they are identified with thin natures and are particulars.
- 2) Suppose: "Trope  $t_1$  is numerically different from trope  $t_2$  and trope  $t_1$  resembles trope  $t_2$  exactly."
- 3) "Resemblance among Standard tropes and the difference relation are internal relations that are arbitrarily different than each other."
- 4) Hidden premise: entities in distinct arbitrarily different internal relations are not simple: they have parts or multiple, distinct intrinsic aspects
- 5) "If  $a$  and  $b$  are related by arbitrarily different internal relations then  $a$  and  $b$  are not simple."
- 6) "Hence,  $t_1$  and  $t_2$  are not simple": they have parts or multiple, distinct intrinsic aspects
- 7) Hence, a contradiction [(1) & (6)]
- 8) Hence, the Standard trope nominalism is false. (Ehring 2011, 179-80)

In our reformulation of Ehring's argument, we have inserted a premise between steps (3) and (5). We take it to be obvious that this hidden premise is needed for the argument to go through. Otherwise, it would not follow that the relata of arbitrarily different internal relations are not simple.

Initially, our response is that the consequence of Ehring's argument does not follow. Obviously, the key step in the argument is (3): distinctness and exact resemblance among simple Standard tropes are *arbitrarily different internal relations*. What does it mean? Let us begin with Ehring's

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<sup>4</sup> We talk about "Standard tropes" instead of "Campbellian tropes" because the Standard view is not unique to Campbell.

<sup>5</sup> Henceforth, we shall not use Ehring's terms "numerical difference" or "non-identity" but "distinctness", which means negation of numerical identity and is standard terminology.

characterization of arbitrarily different relations (internal or not). Distinctness and exact resemblance among all simple Standard tropes are arbitrarily different relations if the following two conditions are satisfied:

1. *realization* of distinctness/exact resemblance among any simple Standard tropes does *not* metaphysically necessitate the *realization* of exact resemblance/distinctness<sup>6</sup>
2. not every *variation* with respect to distinctness/exact resemblance necessitates a *variation* with respect to exact resemblance/distinctness.<sup>7</sup> (Ehring 2011, 177-8)

Ehring is correct (2011, 178) in that distinctness and exact similarity among simple Standard tropes differ arbitrarily. The second condition about variation is satisfied almost trivially in the case of simple tropes on the Standard view. First, since simple Standard tropes are identified with thin natures, their exact resemblances cannot vary. Secondly, if distinct and exactly resembling tropes became identical, they would remain exactly resembling (because of being identical). Therefore, not every *variation* with respect to one of these relations (distinctness or exact resemblance) necessitates a *variation* with respect to another (exact resemblance or distinctness).

The first condition is also satisfied by simple Standard tropes: the realization of distinctness/exact resemblance among any of these tropes does not necessitate the realization of the other. We can see this by modifying Ehring's presentation slightly and considering three simple Standard tropes  $t_1$ ,  $t_2$  and  $t_3$ . Suppose first that they are distinct from each other. Clearly, this does not necessitate exact resemblances among  $t_1$ ,  $t_2$  and  $t_3$ . It is possible that  $t_1$  and  $t_2$ , for instance, exactly resemble but  $t_1$  and  $t_3$  do not ( $t_1$  and  $t_2$  are, for example,  $e$  charge tropes, whereas the third is  $t_3$  is an  $e/3$  trope). On the other hand, we may begin with the assumption that simple Standard tropes  $t_1$  and  $t_2$  exactly resemble. This does not necessitate distinctness or identity between  $t_1$  and  $t_2$ . It is possible, given their exact

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<sup>6</sup> Henceforth, we shall drop "metaphysical" qualifying modal terms. We will mean metaphysical modalities, unless otherwise noted.

<sup>7</sup> We fix Ehring's formulation slightly to allow the necessitation of distinctness from the *absence* of exact resemblance.

resemblance, that these entities are distinct or that they are identical. In other words, *the identity of indiscernibles* does not hold true of Standard tropes. According to Ehring's definition of being particular, particulars do not conform to the identity of indiscernibles (2011, 35). Hence, tropes are particulars in Ehring's sense.

We can therefore conclude that distinctness and exact resemblance among simple Standard tropes are, indeed, arbitrarily different relations. But are they arbitrarily different *internal* relations? In characterizing internal relations, Ehring follows Armstrong:

”A relation is internal [...] when given certain terms with certain natures, the relation must hold between the terms. It holds in every possible world that contains these terms and where these terms have these natures.” (Armstrong 1989, 43; quoted by Ehring 2011, 179)

In this paper, we employ Ehring's Armstrongian terminology in this respect for the sake of the argument. By Ehring's lights, distinctness and exact resemblance among all simple Standard tropes are internal relations. In the Standard trope nominalism, exact resemblances of simple tropes obtain in every possible world where the related tropes exist. Their holding is necessary, given the existence of their relata as certain natures, because simple tropes are identified with certain thin natures. Distinctness among simple Standard tropes is also an internal relation because arguably distinctness is necessary to distinct entities. It holds in every possible world where its relata exist; actually, we do not need the additional condition about natures in its case.<sup>8</sup>

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<sup>8</sup> According to Moore (1960 [1922]), internal relations are essential to the identity of their relata and hold necessarily if their relata exist, cf. Campbell (1990, 112). Due to holding necessarily, given the existence of the relata, exact similarity and distinctness among tropes are internal relations in this strong sense. They are also internal relations on Kevin Mulligan's characterization: “a relation is internal with respect to objects, a, b, c etc., just if, given a, b, c etc., the relation must hold among and of these objects.” (1998, 344)

## 2. Distinction between Ontological Content and Ontological Form

Ehring is correct: exact resemblance and distinctness among any simple Standard tropes are arbitrarily different internal relations. Still step (5) is not correct about these relations. It does *not* follow from the fact that simple Standard tropes *a* and *b* are related by distinctness and exact resemblance that *a* and *b* are *not* simple. Recall that there is a hidden premise at this point in Ehring's argument: entities in distinct arbitrarily different internal relations are not simple. So they have parts or multiple, distinct intrinsic aspects. It is because this hidden premise is false that step (5) is incorrect.

The hidden premise is false because distinct internal relations may differ arbitrarily without rendering their relata non-simple, due to the difference between what E.J. Lowe's calls "ontological content" and "ontological form" (2006, 48).<sup>9</sup> We shall argue in section four, elaborating on Lowe's distinction, that this is precisely the case with exact resemblance and distinctness among simple Standard tropes. We will begin by explicating the distinction in this section.

Barry Smith (1981), together with Kevin Mulligan (1983), brought the distinction between ontological content and ontological form into the contemporary discussion from Edmund Husserl (1859-1938). This distinction is analogical to the logical contrast between the non-logical content of a proposition and its logical form (Smith 1981; Smith and Mulligan 1983; Lowe 2006, 48).<sup>10</sup> It is to be insisted, however, that ontological and logical form should not be conflated because the former is the form of *being* in general, whereas the latter is much more restricted: the form of *truth-bearers*, on the assumption that truth-bearers are entities (Smith and Mulligan 1983, 73; Smith 2005, ch. 5; Lowe 2006, 48).

It is not necessary for the present purposes to give a comprehensive account of the distinction between ontological content and ontological form, which is not an easy task. As a response to Ehring, it

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<sup>9</sup> Cf. Smith and Grenon 2004.

<sup>10</sup> Cf. Mulligan 1998 (343) for criticism of drawing a clear distinction between logical and non-logical.

suffices to characterize this distinction. This happens by employing three primitive concepts: ‘existence’, ‘nature’ and ‘manner’. By combining ‘existence’ and ‘manner’, we get a fourth concept, which is crucial for characterizing ontological form: ‘manner of existence’. ‘Existence’, ‘nature’ and ‘manner of existence’ may be characterized and introduced by way of examples but the first two and ‘manner’ cannot be given an eliminative non-circular definition because they are primitive concepts.

One may consider anything one believes to *exist*, a human body for instance. In one’s view, every such entity adds to the ontological *content* of the world: what beings there are. This is “ontology” in Quinean terms, one makes an “ontological commitment”. Most likely, the belief in this entity also involves a belief about its *nature*: a belief whose content is a description of the *entity* (e.g. the body weighs 100 kg).<sup>11</sup> Properties such as quantities (e.g. rest masses and electric charges) and perhaps qualities (e.g. the shape of a cube) provide paradigmatic examples of natures, which Campbell characterizes as the intrinsic (i.e. non-relational) characters of entities (1990, 6). For instance, in the classic substance-property ontology, the nature of a substance consists of its properties (Ibid.). Presumably, natures divide entities into kinds (e.g. masses, cubes).<sup>12</sup>

By contrast, if one also believes that an entity (e.g. the human body) *exists as* being numerically identical (it is the same with itself), one holds a belief about the *manner of the existence* of the entity: a belief whose content is a description of *its existence*.<sup>13</sup> The concept of identity does not describe the non-relational character of the identical entity, which determines its kind, but its manner of existence.<sup>14</sup> The crucial point is that one does *not* believe in any entity in addition to the entity being

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<sup>11</sup> The sentence that there is something does not entail that this entity has some nature. It is at least logically possible that there are entities without any essential nature. The advocates of bare particulars believe in such entities.

<sup>12</sup> The sense of “nature” employed here should not be conflated with “essence” since the nature of an entity is not necessarily essential to it. ‘Nature’ has a larger extension than ‘essence’. Moreover, we are not making any assumption about the ontological priority of existence and nature (cf. the age old-debate about the ontological priority of existence and essence). They might be ontologically on par.

<sup>13</sup> In principle, it seems not to be necessary for believing in the existence of an entity to hold that it has identity since it appears to be possible to believe in the existence of something as a mere unity. So it does not seem to be the case that every entity must have determinate identity-conditions (cf. Lowe 2006, 75).

<sup>14</sup> It is to be insisted that the concept of manner of existence does not entail that “existence” has more than one meaning. We take it to be univocal. Yet entities may exist in various different manners (cf. below).

identical (e.g. the human body); rather, this is a belief about the manner in which the entity exists as a constituent of the world (e.g. that the human body is the same with itself). The belief about the identity of the entity concerns therefore the ontological *form* of the world.

Manners of existence may be said to be *formal features of entities*.<sup>15</sup> Formal features are not entities, additional tropes for instance.<sup>16</sup> So formal features cannot be said to be identical to anything, *pace* Ehring, because the relata of the relation of identity must be entities (Ehring 2011, 183). Thus, formal features are not identical to or distinct from the entity having that feature, an entity of *some* category. Rather, formal features are manners of existence of entities.

Arguably, other examples of formal features than identity are *being one* (unity), *being individual* (being identical and being one), *being particular* (*being universal* for the realist), *being a part*, *being a whole*, *being dependent* and *being dependee*. Their concepts contribute to the description of the manner of the existence of entities as one, identical and one, as particular, as a part, a whole, dependent and dependee.

The distinction between ontological content and ontological form, put explicitly in terms of the *representation* of the world (a metaphysical view or theory), may be explicated as follows. The ontological *content* side of the representation consists of its ontological commitments and possibly descriptions of the natures of the commitments, which correspond to *entities*. Part of this side may be, for instance, that there is *e* charge. By contrast, the ontological *form* side of the representation describes the manner of existence of the entities. The *e* charge, for example, is believed to exist as identical. If this belief represents the world correctly, identity is a formal feature of the *e* charge entity in contrast with its nature, that is, *e* charge. This formal feature is described by predicate term “is

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<sup>15</sup> We use “feature” in an ontological non-committal way. Therefore we use it instead of “property” for manners of existence.

<sup>16</sup> Plausible examples of tropes, from the point of view of our *a posteriori* scientific knowledge, are basic physical quantities (e.g. determinate charges, rest masses and spin quantum numbers).

identical” applying to the entity. In Lowe’s terms, it is a “formal ontological predicate” (Lowe 2006, 193).<sup>17</sup> The nature is described by the *ontological* predicate “is *e* charge”. Formal ontological predicates describe formal features of entities, whereas ontological predicates describe their nature.

Accordingly, ontological *relational* predicates contribute to the description of the nature of entities and formal ontological relational predicates contribute to the description of the formal features of entities. Ontological relations and formal ontological relations, respectively, are relations holding among entities.<sup>18</sup> Exact resemblance is an ontological relation, whereas identity is a paradigmatic example of a formal ontological relation.<sup>19</sup> Their corresponding predicate terms contribute to the description of the nature of entities and their formal features.

### **3. Argument for the Ontological Content/Form Distinction**

There are independent reasons for the distinction between ontological content and ontological form. The main independent reason is that this distinction satisfies the theoretical virtue of *modesty* (Kriegel 2013, 20, cf. Quine & Ullian 1978, 68ff.). When the distinction is embraced, there is no need to make ontological commitments in the case of formal features. So one’s ontological commitments are modest; one makes fewer claims when one embraces the concept of ontological form. At the same time, there is no decrease in the explanatory power of the theory involving the distinction; being identical, being one, being particular etc. are accounted by construing them as formal features of entities. One gets the same result with weaker assumptions.

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<sup>17</sup> While the set of ontological commitments matches “ontology” in Quinean terms, ontological form does not equate with Quine’s “ideology”. According to Quine, ideology of a theory is the “stock” of its predicates and occasion sentences (Quine 1983, 501). Not all predicates or concepts of a metaphysical theory need to be formal ontological.

<sup>18</sup> In addition to identity, plausible examples of formal ontological relations include distinctness, mereological relations and relations of existential dependence (such as rigid and generic dependence). They determine how an entity exists as a constituent of world (e.g., as a part of other entities) or how it *can* exist as a constituent of the world (relations of existential dependence), cf. Smith & Mulligan (1983).

<sup>19</sup> Consequently, we do not endorse the tenet that tropes resemble in respect of their formal features. This suspension undermines Ehring’s second argument against the Standard trope nominalism. The second argument is premised on the assumption that tropes resemble in respect of their particularity (Ehring 2011, 182).

Furthermore, the theory involving the ontological content/form distinction does not suffer from a serious problem of its main contender. This contender is the nominalist reification view that formal features are particular entities. In the context of trope nominalism, the following infinite regress about the formal feature of particularity ensues for the alternative view:

- 1) Suppose the truth of nominalism and the existence of tropes: there are only particulars and there are tropes.
- 2) Suppose that there is Standard trope  $x$  that is identified with  $e$  charge.
- 3) Thus, trope  $x$  is particular [from (1) and (2); “the is of predication”, in contrast with step (2)].
- 4) Suppose that the feature of  $x$  being particular is reified.
- 5) Thus, there is entity  $y$  that is identified with *the particularity of  $x$*  [from (3) and (4)].
- 6) Thus, entity  $y$  is distinct from  $x$  [from (2) and (5); because  $x=e$  charge].
- 7) Thus, distinct entity  $y$  is particular [from (1), (5) and (6)].
- 8) Suppose that the feature of  $y$  being particular is reified.
- 9) Thus, there is entity  $z$  that is identified with *the particularity of  $y$*  [from (7) and (8)].
- 10) Thus, entity  $z$  is distinct from  $y$  and  $x$  [from (2), (5) and (9); because  $y$ =the particularity of  $x$  and  $x=e$  charge].
- 11) Thus, distinct entity  $z$  is particular [from (1), (9) and (10)] and so on *ad infinitum*.

Two remarks about this argument are in order. First, step (6) follows from a highly plausible principle in addition to steps (2) and (5) (alike in the case of (10) and so on and so forth). This principle is the non-identity of distinguishables (if something true of  $x$  is false of  $y$ ,  $x$  is not identical with  $y$ ), which is the contrapositive of Leibniz’s Law (the indistinguishability of identicals). Trope  $x$  and entity  $y$  are not identical because something is true about  $x$  that is not true about  $y$ : that  $x=e$  charge.

Secondly, the argument does not presuppose that  $y$ ,  $z$ , etc. are tropes. In principle, they may be particulars of some other category (e.g. a bare particular or a set). Still the particularity of each of

these entities is reified. Assuming that one of these entities is a set does not halt the regress because sets are not their own members. For instance, if  $y$  is taken as a set, that is, as the set of particulars, it does not stop the regress since this set itself is particular, which cannot be coherently accounted by the set itself.

This infinite regress is vicious for the reason that it represents an explanatory failure about a general metaphysical problem (Hakkarainen & Keinänen 2016, 250; cf. Bliss 2013). Step (3) may be understood as a metaphysical *explanandum*. So the initial task of explanation here is to account for the particularity of  $y$ . The *explanans* is to postulate entity  $y$ , which is identified with the particularity of  $x$ . The next *explanandum* is the particularity of  $y$ , which is accounted for by the postulation of entity  $z$ , identified with the particularity of  $y$ . A pattern emerges. The two *explananda* are exactly of the same *type*: the particularity of an entity. This type of *explanandum* is repeated in an infinite number of times. The same type of *explanans* is equally repeated in an infinite number of times: entity $_{n+1}$  is identified with the particularity of entity $_n$ . So in each step, the *explanans* involves the *explanandum*. Hence, nothing at all is explained about the *general* metaphysical problem: the particularity of an entity (type of *explanandum*). No answer is given to the problem that is in question, no step forward is taken.

When particularity is construed as a formal feature, the regress is halted at (3); the particularity of  $x$  is not postulated as an entity. So construing particularity as a formal feature does not suffer from the same metaphysical explanation failure as postulating particularity as an entity. Moreover, it can tell us in which particularity consists: particularity is existing in a certain manner. This manner of existence can be given a theoretical description. Assuming nominalism, the strongest candidate for the theoretical description of particularity seems to be that particular entities can be exactly similar and distinct, which is also Ehring's characterization of particularity. All in all, embracing the ontological content/form distinction is clearly superior to its main contender: the reification of formal features. For this reason, and for being theoretically modest, it is justified to hold this distinction.

#### 4. Response to Ehring

In section 1, we agreed with Ehring that the relations of exact resemblance and distinctness among simple Standard tropes differ arbitrarily. Realization of distinctness/exact resemblance among any simple Standard tropes does not necessitate the realization of exact resemblance/distinctness among them. Neither does every variation with respect to distinctness/exact resemblance necessitate a variation with respect to exact resemblance/distinctness.

Next we shall argue, with the help of the above-said, that this does not jeopardize the simplicity of Standard tropes. Ehring's hidden premise that entities in distinct arbitrarily different internal relations have parts or multiple, non-identical aspects is false. Therefore his step (5) is not correct about simple Standard tropes: "If  $a$  and  $b$  are related by arbitrarily different internal relations then  $a$  and  $b$  are not simple." Rather, simple Standard tropes can both be in arbitrarily different internal relations *and* be simple. Accordingly, it is our task to account for the fact that arbitrarily different internal relations among Standard tropes can have truly simple relata. Here the ontological content/form distinction proves to be useful. First we will show how it is possible that the internal relations of exact resemblance and distinctness among simple Standard tropes differ arbitrarily.

Let us first discuss how the holding of distinctness and identity of thin natures, which simple Standard tropes are, is independent from the holding of their exact resemblance. Distinctness and identity describe the ontological form of thin natures and exact resemblance spells out their contribution to the ontological content of the world. In other words, distinctness and identity are formal ontological relations, whereas exact resemblance is an ontological relation. In our schematic example above, we made an assumption about the ontological content of the world: there are thin natures, that is,  $e$  charges and  $e/3$  charge. The ontological relation of exact resemblance holds between  $e$  charges but not between  $e$  charge and  $e/3$  charge. Necessarily, given *only* that there are  $e$  charges and  $e/3$  charge,

$e$  charge exactly resembles  $e$  charge but  $e/3$  charge does not exactly resemble  $e$  charge (and *vice versa*).

However, given that the just mentioned assumption about the holding and non-holding of exact resemblance is correct, it is equally possible that *all* these entities are distinct from each other, that “ $e$  charges” are actually identical or that the  $e$  charges are exactly resembling instances of one and the same  $e$  charge property universal. There is nothing in the existence and nature of  $e$  charges and  $e/3$  charge as abstracted from their formal features that would necessitate any of these *specific* possibilities. Still  $e$  charges and  $e/3$  charge must arguably have *some* formal features in order to exist. The holding of exact resemblance among thin natures does not necessitate the holding of distinctness and identity among them. In this sense, the formal ontological relations of distinctness and identity, on the one hand, and the ontological relation of exact resemblance, on the other, are independent from each other. It is a *further fact* about the actual world that only the following relations of identity hold in the scheme:  $t_1=t_1=e$  charge,  $t_2=t_2=e$  charge,  $t_3=t_3=e/3$  charge.

In the other direction, the holding of distinctness of simple Standard tropes does not necessitate the holding of their exact resemblance. If simple Standard tropes are distinct, they may or may not be exactly resembling. The ontological relation of exact resemblance among simple Standard tropes, which describes the ontological content of the world, holds independently from the formal ontological relation of distinctness, which describes the ontological form.

Hence, the holding of exact resemblance of simple Standard tropes and the holding of their distinctness are mutually independent. Therefore these ontological and formal ontological relations can be arbitrarily different, which is the first part of our task of explanation. For the second task which is to show that the simple Standard tropes in these mutually independent relations can, indeed, be simple, another elaboration on the ontological content/form distinction is required.

In our example, we assumed the further fact that only  $t_1=t_1=e$  charge,  $t_2=t_2=e$  charge, and  $t_3=t_3=e/3$  charge hold in the scheme. This is in line with the view for which we have argued elsewhere that the identity of simple Standard tropes is primitive: they do not have informative or non-circular identity-conditions that are given by entities distinct from the tropes (Keinänen & Hakkarainen 2014). In other words, at least simple Standard tropes are identity-independent entities. On this issue, we agree with Campbell (1990, 55ff.). Our reason to hold this view is in a nutshell that it is the only coherent position about the identity of simple Standard tropes that does not rule out, as it ought not to, the possibility of co-located exactly similar simple Standard tropes (*pace* Maurin 2014, Ch. 2.3). Moreover, if the identity-conditions of simple Standard tropes were given by objects, a vicious circularity in identity-conditions would threaten trope-bundle theory, as Lowe argues (Lowe 1998, 205–209). On the trope-bundle-theory, objects are ultimately composed of simple Standard tropes, which give the identity-conditions for objects. So it would be circular to hold that objects, in turn, give identity-conditions for simple Standard tropes. Arguably, this circularity in identity-conditions would be vicious.

Therefore it is a primitive fact on our and Campbell’s trope theory that only  $t_1=t_1=e$  charge,  $t_2=t_2=e$  charge and  $t_3=t_3=e/3$  charge hold in our example; the holding of these identity relations is not determined by any entity distinct from  $t_1$ ,  $t_2$  and  $t_3$ . Yet the fact that these and only these identity relations hold in the scheme necessitates the holding of another formal ontological relation, distinctness:  $t_1 \neq t_2 \neq t_3$ . Thus, neither is the holding of  $t_1 \neq t_2 \neq t_3$  determined by any entity distinct from these simple Standard tropes. The first two of these entities are also the sole relata of their exact resemblance. *Ex hypothesi*,  $t_1$  and  $t_2$  are thin natures and thin natures may resemble each other exactly without being complex. Consequently, it is possible that no entity distinct from  $t_1$ ,  $t_2$  and  $t_3$  determines the mutually independent holding of their exact resemblance and distinctness. The same holds true of the holding of their identity, which is independent from the holding of their exact resemblance.

As formal features, identity and distinctness of simple Standard tropes are not entities.<sup>20</sup> They are merely manners of the existence of  $e$  charge,  $e$  charge and  $e/3$  charge. They are neither identical to nor distinct from the  $e$  charge,  $e$  charge and  $e/3$  charge. Hence, there just is no need to postulate distinct relata for the identity and distinctness of these tropes, or to construe their identity and distinctness as distinct entities. The relata may be said to be simple and stand in mutually independent, and hence arbitrarily different relations.

This result does not compromise the internality of identity or distinctness. *If* it is assumed that actually  $t_1=t_1=e$  charge,  $t_2=t_2=e$  charge and  $t_3=t_3=e/3$  charge, *then* it can be said that identity is an internal relation by Ehring's lights. Both  $t_1=t_1=e$  charge,  $t_2=t_2=e$  charge and  $t_3=t_3=e/3$  charge hold in every possible world where  $t_1$ ,  $t_2$  and  $t_3$  exist because it is a highly plausible principle that if entities are actually identical, then they are necessarily identical. As was seen just above,  $t_1 \neq t_2 \neq t_3$  holds equally in these worlds on this assumption. Therefore we may safely conclude that Standard tropes can stand in arbitrarily different internal relations and be simple.

Consequently, step (5) in Ehring's argument, which would render  $t_1$ ,  $t_2$  and  $t_3$  not simple, is *not* correct about them; the hidden premise that entities in distinct arbitrarily different internal relations have parts or multiple, non-identical aspects is false. Hence, Ehring's negative conclusion about Standard trope nominalism does not follow from his argument. His argument is not sound as it is premised on an incorrect principle. So we have argued that the assumption of simple Standard tropes does not entail that simple Standard tropes are not actually simple. Ehring's argument against the Standard view fails.

Accordingly, we can restate the Standard view by means of the distinction between ontological content and ontological form. First, simple tropes are identified with existing thin natures. According to the Standard view, thin natures add something to what exist and to the nature of entities, that is,

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<sup>20</sup> As a consequence, our response to Ehring differs from Maurin's answer to Herbert Hochberg's similar criticism because she talks about "pseudo-additions" and uses the framework of truth making (Maurin 2005, 138).

they contribute to the ontological content of the world. Secondly, *being particular, individual, mereologically simple, categorially simple* and *being a part*, at least, are manners of existence of tropes, their formal features, without being additions of being over and above thin natures. This is constituting the ontological form of the world according to the Standard trope theory. Formal features of tropes, such as being particular and being individual, are not entities identical to or distinct from thin natures. Tropes are not to be identified with formal features, in contrast with thin natures.

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