# Natural classes of tropes

## Classes Naturais de Tropos

José Tomás Alvarado[1]
Pontificia Universidad Católica de Chile

**Abstract**
Douglas Ehring (2011) has proposed a conception of natural classes of tropes to fulfill the roles usually attributed to universals. Natural classes of tropes can avoid the difficulties that affect the classic theory of tropes – as claimed by D. C. Williams and Keith Campbell – where tropes are simple and, by themselves, are particulars and have an intrinsic nature. Natural classes of tropes are also preferable to primitive resemblance classes of tropes, because they can explain the characteristics of the relation of resemblance and can also ground an internal relation of resemblance between tropes. It is contended here that the conception proposed works very differently whether tropes are conceived as modifier tropes or as module tropes. In the first case, tropes cannot be grouped directly in natural classes, because tropes have no intrinsic character. They ground the character possessed by their bearer, but they themselves have none. So, the character attributed to a trope due to its belonging to a natural class is dependent, on its turn, on the natural classes or the resemblance classes into which the *objects* that bear those tropes enter. In the second case, tropes do have a character. Then, they can enter 'directly' into natural classes. The problem in this case, though, is that tropes seem to have many different characters and seem vulnerable to the traditional problems of the 'imperfect community' and the 'company' that affect resemblance nominalism.

**Keywords**: properties, tropes, natural classes, resemblance classes, problem of the imperfect community, problem of the company.

**Resumo**
Douglas Ehring (2011) propôs uma concepção de classes naturais de tropos para cumprir as funções normalmente atribuídas a universais. As classes naturais de tropos podem evitar as dificuldades que afetam a clássica teoria dos tropos - como alegado por D.C. Williams e Keith Campbell - onde tropos são simples e, por si mesmos, são particulares e têm uma natureza intrínseca. As classes naturais de tropos são também preferíveis às primitivas classes de semelhança de tropos, porque elas podem não só explicar as características da relação de semelhança, como também podem fundamentar uma relação interna de semelhança entre tropos. Argumenta-se aqui que a concepção proposta aplica-se de forma muito diferente a depender se os tropos são concebidos como tropos modificadores ou como tropos módulos. No primeiro caso, tropos não podem ser agrupados diretamente em classes naturais, porque tropos não têm caráter intrínseco. Eles fundamentam o caráter de seu portador, mas eles mesmos são desprovidos de caráter. Assim, o caráter atribuído a um tropo devido à sua pertença a uma classe

---
[1] Professor do Instituto de Filosofia da Pontificia Universidad Católica de Chile. Av. Vicuña Mackenna, 4860, Macul, 7820436, Santiago, Chile. E-mail: jose.tomas.alvarado@gmail.com

natural é dependente, por sua vez, das classes naturais ou das classes semelhantes em que os objetos que possuem esses tropos se inserem. No segundo caso, tropos têm um caráter. Deste modo, eles podem entrar "diretamente" em classes naturais. O problema, neste caso, porém, é que os tropos parecem ter muitos carácteres diferentes e parecem vulneráveis aos problemas tradicionais da "comunidade imperfeita" e da "companhia" que afetam a semelhança nominalista.

**Palavras-chave:** propriedades, tropos, classes naturais, classes de semelhança, problema da comunidade imperfeita, problema da companhia.

Many have defended the view that universals can be eliminated, or reduced by classes of tropes, i.e. classes of individual properties[2]. Douglas Ehring has presented one of the more recent and sophisticated defenses of this idea (cf. 2011, 173-241). Tropes seem to be an attractive alternative to traditional ontologies with universal properties and objects, and also to traditional nominalistic ontologies that only postulate particular objects. In contrast with the first ones, an ontology where classes of tropes fulfill the functions attributed to universals does not require any weird entity located – in its entirety – in different disconnected regions of space-time. In opposition to the second ones, tropes are entities with much more delicate conditions of identity than objects. Traditional objections directed against, for example, resemblance nominalism, do not appear so forcefully against ontologies with tropes[3].

In the 'classical' theories of tropes as they are presented, for example, in the works of D. C. Williams (1953a, 1953b) and Keith Campbell (1981, p. 483-485; 1990, p. 38-40), the functions of universals are fulfilled by classes of tropes all resembling each other. In these classical presentations the relation of resemblance – or quasi-relation, if you prefer – is an internal relation that does not imply any ontological addition. Several problems have appeared for this conception (cf. Moreland, 2001, p. 50-73). Ehring is defending a view that is much better prepared to resist them. First, he contends that if resemblance classes of tropes are going to be postulated, the resemblance relation should be primitive and external. But, second, natural classes of tropes are for him even better for the theoretical functions envisaged. With natural classes of tropes, the characteristics of the relation of resemblance can be explained and should not be taken as a matter of brute primitive facts.

In the first part of this work Ehring's position and its alleged advantages will be presented. Then, in the second part, several problems of Ehring's position will be discussed and assessed.

## Advantages of natural classes of tropes

The classical theory sustains that tropes are simple entities that, at the same time, are particular and have an intrinsic nature. If one considers a trope of exactly

---

[2] There is a subtle difference between these alternatives. If one 'eliminates' facts of kind A by facts of kind B, one is endorsing the view that there are no A-facts because there are *only* B-facts. If one 'reduces' facts of kind A by facts of kind B, instead, one is accepting that there are A-facts, but they are nothing more than B-facts. In this case, the difference depends on whether a defender of tropes will accept or not the existence of 'universals'. One alternative for the friend of tropes is to sustain that classes of tropes constitute a base to which facts about universals can be 'reduced'. So, in a sense, there are 'universals' – i.e. in a very general sense, there is something that is 'one over many' – but they are nothing but classes of tropes. Another alternative is to sustain that there are no universals, but there are classes of tropes that can fulfill the theoretical functions usually attributed to them (cf. for a similar distinction, Robb, 2005, p. 468). These alternatives will not be further considered in this work.
[3] For example, it has been contended that the traditional challenges of the 'company' and the 'imperfect community' do not appear when classes of resembling objects are replaced by classes of resembling tropes. Cf. Campbell, 1990, p. 32-34; but also cf. Manley, 2002.

149

5 grams of mass, for example, the reason that explains why this trope resembles every other trope of exactly 5 grams of mass is only the intrinsic nature of the trope. In general, an internal relation is taken to be a relation that is supervenient on the intrinsic nature of the *relata*[4]. The 'intrinsic nature' of an object is the collection of its intrinsic properties. Then, any possible world in which two objects, $a_1$ and $a_2$, have the same intrinsic properties is a possible world where they will be in the same internal relations. If, for example, $a_1$ has a mass of exactly 5 grams and $a_2$ has a mass of exactly 5.1 grams, then $a_1$ is in the relation of *having more mass than* with $a_2$. The fact that $a_1$ is heavier than $a_2$ is nothing besides the fact that $a_1$ has the mass that it has and that $a_2$ has the mass that it has. Tropes are individuals, so they seem apt for being in internal relations. Of course it makes no sense to say that a trope of 5 grams of mass has the 'intrinsic property' of having 5 grams of mass, for the trope *is* the property. But for the trope of having 5 grams of mass the character by which it is the trope that it is, is simply its own intrinsic nature. Given their intrinsic natures, tropes resemble each other or don't. Resemblance classes of tropes seem to be grounded in the intrinsic natures of the tropes that are part of those classes. Their natures are sufficient to determine the existence of the resemblance relations between the tropes. The resemblance classes that are supposed to work as universals, then, are the classes of all and only the tropes that resemble each other.

An internal relation of resemblance is especially appropriate to avoid the regress that might affect the conception (cf. Maurin, 2002, p. 74-116). An internal relation is no addition of being to its grounding. Suppose, on the contrary, that the relation of resemblance were an external relation[5] not supervenient to the natures of its *relata* and also a trope like any other. That is what one would expect if one defends the general conception that properties are tropes. If there is a genuine relation between tropes, then it should be a trope. But the tropes of resemblance between tropes resemble each other. Hence the resemblances between tropes of resemblance should also be tropes – they cannot be instantiations of a unique universal, for there are no universals. Then a regress is fired in which there are tropes of resemblance between tropes, and tropes of resemblance between resemblances between tropes, and tropes of resemblance between resemblances of resemblances between tropes, etcetera. Two strategies have been tried to stop this regress: (i) one can sustain that the facts of resemblance between tropes are primitive facts, not dependent on the intrinsic nature of the tropes involved and not further explainable by other facts[6]; and (ii) one can instead argue that the relation of resemblance is

---

[4] An internal relation has also been taken to be a relation essential for its *relata*. Cf. Maurin, 2002, p. p. 87-91. For other alternative formulations of an 'internal relation' cf. Schaffer, 2010, p. 348-351. On the other hand, the notion of an 'intrinsic property' has been extremely debated. Probably, there is no unique concept of 'intrinsic' property but several. In what follows, an 'intrinsic' property will be understood as a property whose possession by an object is indifferent to the fact that the object is alone or accompanied. An object is 'alone' in a possible world w if and only if there is no other object in w. An object is 'accompanied' in w if and only it is not alone in w. For this definition, cf. Lewis and Langton, 1999. There are several qualifications to this definition that are required to cover cases of disjunctive properties. It is not necessary to enter here into those qualifications because according to the conception of properties assumed here there are no disjunctive properties (cf. Armstrong, 1978b, p. 19-23).

[5] An external relation will be taken to be just a non-internal relation. Cf. for another formulation of the distinction, Lewis, 1983, p. 25-26.

[6] This kind of strategy has been developed by defenders of resemblance nominalism (cf. Lewis, 1999, p. 14-16; Rodriguez-Pereyra, 2002, p. 62-65). The facts about what properties each object has are facts about what other objects each one of them resembles – or doesn't. It makes no sense in a nominalist conception to sustain that the resemblances between objects are grounded in their intrinsic natures, because there is no 'nature' of the objects besides the primitive facts about resemblances. Resemblances, hence, should be taken as external relations. The recourse to primitive facts of resemblance is justified for the nominalists because: (i) any theory has to postulate some or other primitive facts, and because (ii) defenders of immanent universals have also made recourse to a primitive 'relation' of instantiation that is not itself a universal (cf. Armstrong, 1978a, p. 108-111, 1997, p. 127).

just an internal relation, implying no addition of being to the intrinsic natures of the *relata*, as Campbell has argued. A conception, then, with tropes that have an intrinsic nature that grounds internal relations of resemblance seems to be a very good systematic alternative to traditional ontologies of universals free of the difficulties haunting different forms of nominalism.

But other problems compensate for these advantages of the classical conception of tropes. Tropes are supposedly simple entities, at once (a) individual and (b) endowed with an intrinsic qualitative character. This simple but nonetheless dual nature of a trope in the classical conception leads to the "collapse-into-exemplification" objection (cf. Ehring, 2011, p. 177-184; Moreland, 2001, p. 53-71). The problem comes from the principle that a simple nature cannot be the grounding of two arbitrarily different internal relations.

*Non-Simplicity*: if $x_1$ is in two arbitrarily different internal relations with $x_2$ due to its intrinsic nature, then the intrinsic nature of $x_1$ is not simple.

Suppose that an object, say $a_1$, has two internal relations with $a_2$: $R_1$ and $R_2$. Internal relations are grounded in the intrinsic nature of the *relata*. The intrinsic nature of $x$ is constituted by all the intrinsic properties that $x$ has. Then, all internal relations that $x$ has with other objects should be grounded in the intrinsic properties of $x$. Leaving aside nominalist theories of properties, the same object $a_1$ can have an intrinsic property of mass and an intrinsic property of shape. There is no problem, then, if $a_1$ has the same mass as $a_2$, but not the same shape as $a_2$. The fact that $a_1$ has the same mass ($R_1$) as $a_2$ and does not have the same shape ($R_2$) as $a_2$, implies that $a_1$ has an intrinsic nature that is not simple, because it should be constituted by different intrinsic properties of mass and shape.

It is part of our common conception of an object that it is thickly charactered, that is, it has different characteristics or, at least, it is capable of having different characteristics (cf. Garcia, 2011, p. 8-11). In contrast with an object – at least under our common conception – a trope is a *thinly* charactered entity. A trope is an entity that only has a unique character or confers a unique character to its bearer. A trope of mass cannot also be something that confers size and shape to its bearer. A trope of mass should only be something that confers the mass of its bearer. Nothing more. If tropes have, then, an intrinsic nature and if tropes are – furthermore – simple, not built up from a character and a 'particularizer' individual, then they cannot enter into arbitrarily different internal relations. But it seems that they do.

Suppose two tropes $t_1$ and $t_2$. These tropes $t_1$ and $t_2$ perfectly resemble each other. But, also, these tropes $t_1$ and $t_2$ are different. By hypothesis, resemblance is an internal relation in the classical conception of tropes. But *being different from* also seems to be an internal relation, grounded in the intrinsic nature of its *relata*. Resemblance and difference are disconnected internal relations. They don't seem to be grounded in the same intrinsic property. In effect, how could the same entities, tropes $t_1$ and $t_2$, ground two different internal relations between them? One can understand the case of the mass of an object that grounds the internal relation of having the same mass as $a_2$ and the internal relation of having more mass than $a_3$. But a situation is unintelligible in which $a_1$ has the same mass as $a_2$ and $a_1$ has more mass than $a_2$. By the principle of *Non-Simplicity*, then, both $t_1$ and $t_2$ have a non-simple intrinsic nature. They are not thinly charactered[7].

---

[7] Ehring presents a second argument (cf. Ehring, 2011, p. 180-182) in which the principle by which the non-simplicity of the intrinsic nature of tropes is derived has as antecedent the case when a single entity $x_1$ has the internal relation of being perfectly resembling in respect to $F_1$ with $x_2$ and imperfectly resembling in respect to $F_2$ with the same entity $x_2$. It seems that this argument is not different from the previous one. The internal relations of being perfectly resembling in respect to $F_1$ and imperfectly resembling in respect to $F_2$ are just two arbitrarily different internal relations in the sense relevant for the principle of *Non-Simplicity* indicated above.

151

Suppose, further, two tropes $t_1$ and $t_2$. These tropes $t_1$ and $t_2$ imperfectly resemble each other. For example, $t_1$ is a mass-trope of 5 grams, and $t_2$ is a mass-trope of 10 grams. By hypothesis, imperfect resemblance is an internal relation in the classical conception of tropes. But these tropes also perfectly resemble each other in respect to being particulars. *Perfectly resembling in respect to being particulars* also seems to be an internal relation. Imperfectly resembling in mass and perfectly resembling in being particulars are disconnected internal relations. If tropes are really simple, how could they ground a perfect resemblance with respect to particularity and at the same time, and with the same object, ground an imperfect resemblance with respect to mass? By the principle of *Non-Simplicity*, then, both $t_1$ and $t_2$ have a non-simple intrinsic nature. They are not thinly charactered.

It is not necessary to enter here into a more detailed consideration of the argument[8]. This paper is concerned with the alternative theory of properties as natural classes of tropes. The classical conception of tropes is affected by this argument. It does not seem coherent to sustain that tropes have an intrinsic qualitative character – and hence that resemblances between those tropes are internal relations – are individuals *per se* and are simple. Two conceptions, though, appear to resist the difficulty: (i) resemblance classes of tropes with an external relation of resemblance, and (ii) natural classes of tropes. In both of these conceptions, there is no intrinsic nature of the tropes by which the resemblances between them are grounded. The 'nature' of a trope by which, for example, it is a 5 gram trope, is not just the way it is intrinsically, but either its primitive resemblance to other tropes – i.e. all and only the 5-gram-of-mass tropes – or its pertaining to a natural class of tropes –again, the class of all and only the 5-gram-of-mass tropes. This strategy follows the usual maneuvers employed by nominalists. It inverts our common conception by which the resemblance is grounded in intrinsic natures, or by which the pertaining of something to a 'natural' class depends on a previous intrinsic nature of those elements that are deemed relevant for the grouping. Now, the 'intrinsic nature' in question is dependent on the primitive facts of resemblance or the pertaining to a natural class.

It is easy to see that the argument against classical tropes won't run against these new resemblance classes, nor against natural classes of tropes. Even if one accepts that difference between tropes and perfect resemblance in respect to particularity are, indeed, internal relations, now the relation of resemblance – perfect or imperfect – that gives rise to the resemblance classes that should work as universals is an external relation. It is now not sufficient to fire the principle of *Non-Simplicity*[9]. The same happens if instead of resemblance classes one appeals to natural classes of tropes. *Pertaining to a class* is certainly not an internal relation and does not suffice to fire *Non-Simplicity*.

---

[8] In the cases presented against the simplicity of classical tropes it is assumed that (i) *difference* and (ii) *resemblance in particularity* are internal relations. Internal relations – in the sense taken here – are supervenient on intrinsic properties. Hence, if difference and resemblance are, in fact, internal relations, their groundings should be intrinsic properties. Under a sparse conception of properties (cf. Lewis, 1999, p. 10-14) there might be some reason to question this supposition. The grounding of the supposedly internal relation of *difference* should be the character by which each one of the entities related *exists* and is *different* from the others. It is not uncontroversial that existence can be taken to be a sparse property. The difference of one entity and another, on the other hand, if it is not grounded in different and incompatible intrinsic properties, has been taken to depend on a primitive *haecceitas* that doesn't seem, either, to be an intrinsic sparse property. The same applies in the case of *particularity* – the character by which a particular is a particular.

[9] Ehring states correctly that Moreland was mistaken in this point (cf. Ehring, 2011, p. 181, note 12; Moreland, 2001, p. 64). There is no problem with a simple character that grounds an internal relation with an entity and, at the same time, enters – directly or indirectly – into an external relation with the same entity. There is no problem at all, for example, with a mass trope heavier than another mass trope, but located at 1 meter from it.

Here there is a theoretical motivation for endorsing either external resemblance classes of tropes or natural classes of tropes. This is coherent with a general conception where there are no universal entities that can be multiply instantiated. It is coherent with a mono-categorial ontology with just one general kind of entity: tropes. It seems adequate to deal with the objection presented above haunting the classical conception of tropes. Ehring further contends that natural classes of tropes are preferable to (external) resemblance classes of tropes. There are two reasons for this contention:

(a) If one accepts the existence of natural classes of tropes, resemblances between tropes are grounded in their intrinsic natures (cf. Ehring, 2011, p. 188-190). That is, the fact that tropes belong to certain natural classes endows them with a certain 'intrinsic' nature. That intrinsic nature grounds, afterwards, the fact that tropes resemble – or don't – each other. Adopting the view that natural classes instead of resemblance classes of tropes are that which plays the role of universals allows one to accommodate the intuition that resemblance is grounded in intrinsic nature and not the other way round.

(b) The formal characteristics of the relation of resemblance need not be something brute and primitive. They can be derived from the fact that tropes belong to different natural classes (cf. Ehring, 2011, p. 190-193). It is not necessary here to present the details of the derivation. Ehring contends that it can be shown that the relation of perfect resemblance is reflexive, symmetric and transitive, while the relation of imperfect resemblance can be shown to be reflexive, symmetric and non-transitive.

## Natural classes of module tropes or modifier tropes?

Ehring has considered several objections against the view that universals can be substituted for natural classes of tropes: some collapse objections (cf. Ehring, 2011, p. 193-202), which Ehring calls the 'classic objections' related to modal issues about the conditions of identity of classes and causation (cf. Ehring, 2011, p. 203-226), and objections related to the determinable and determinate properties (cf. Ehring, 2011, 227-241). Although there is a great systematic interest in them, the focus will be put here on another kind of difficulties. These difficulties come from a generally ignored distinction between two different ways of understanding the nature of a trope. Robert Garcia has called these different kinds of tropes "modifier tropes" and "module tropes" respectively (cf. Garcia, manuscript). The impact of the distinction on a conception of particular objects as bundles of tropes has been already described, but not the impact of the distinction on the conception of classes of tropes that can replace universals.

In our common conceptions of particular objects, they are thickly charactered entities, i.e. they are entities that have many different characters. "Character" here is a neutral denomination of whatever makes true the attributions we normally make to particular objects. Tropes in general are character grounders. The character they ground is non-shareable, in contrast with universals. The difference between a module trope and a modifier trope is that the former actually has the character it is grounding, while the latter doesn't. For example, if there is a sphere, the spherical character of the sphere is grounded in one or another trope the sphere possesses – assuming a general conception where properties are tropes. If one endorses a conception of modifier tropes, then the spherical character is something attributed directly to the sphere, while the modifier trope of sphericity is just a 'spherizer' that is non-spherical itself. The trope is something particular, that is numerically different from the object it is characterizing and that grounds the spherical character of

153

the particular. If one endorses a conception of module tropes, on the other hand, the trope that grounds the spherical character of the sphere is itself spherical. The manner in which this trope grounds the spherical character is by directly having that spherical character. Module tropes are character entities, but thinly and not thickly.

Why does this distinction matter? Because one should endorse one or the other conception. Suppose one is supporting the idea that particular objects are just bundles of tropes. In this case modifier tropes won't work. Modifier tropes have no character themselves, they just ground the characters that some other entity has. If there are only tropes and no further kind of entity – like a substratum having the characters grounded in the tropes– then there is nothing to actually have any character. The conception of modifier tropes, then, seems to work better with an ontology with properties and substrata. On the other hand, if one endorses a conception of module tropes, then problems seem to appear if one is proposing an ontology with tropes and a bearer of those tropes. In this case, tropes have characters. Some of them are spherical, some have a mass, some have an electrical charge, some have a size. The bearer of all those tropes has also a spherical shape, a mass, an electrical charge and a size. So it seems that one ends up with, at least, *two* spherical things, instead of one. Properties are causally relevant. Properties – or the possession of the property by an object, if you prefer – enter into causal connections. Objects with mass attract each other, because they have mass. If a massive object attracts another massive object, what massive character is causally relevant? The object's massive character? The trope's massive character? Both of them? A module conception of tropes connected with an ontology with tropes and a bearer of those tropes seems to imply either situations of causal overdetermination or situations in which there is an epiphenomenal character. So, a module conception of tropes seems to work better with a bundle theory of particulars (but cf. Garcia, 2011, p. 25-26).

In the case of particular objects, there seems to be a clear connection between the two alternative conceptions of tropes. If one defends bundles of tropes as particular objects, then it is better to appeal to module tropes. If one defends the existence of a bearer of tropes, then it is better to appeal to modifier tropes. When it comes to classes of tropes that should satisfy the functions usually attributed to universals, though, the situation is not so clear. Ehring is a defender of a bundle theory of particular objects (cf. Ehring, 2011, p. 98-135), so he should endorse a module conception of tropes. Nevertheless, the examination here will not be restricted to classes of module tropes, for there is an intrinsic systematic interest in a wider consideration of both alternatives.

## Classes of modifier tropes

Suppose, in the first place, that tropes are modifiers, and not modular. In this case, tropes have no character themselves but they ground the character of their bearer. It makes no sense to sort out tropes by their characters in resemblance classes – at least if the resemblance relation is supposed to be an internal relation – because there is no 'intrinsic nature' of the tropes by which they could be grouped together. Or, more carefully, there is an 'intrinsic nature' in those tropes, but it is just to be character grounders without character. All of them have the same 'intrinsic nature', but this 'intrinsic nature' is not enough to discriminate between, for example, the resemblance class of spherical tropes and the resemblance class of 5-grams tropes. But objects do have a character and they are feasible candidates to enter into resemblance classes. They have shapes and mass and, hence, it makes sense to group them into resemblance classes of, for example, spherical objects and massive objects. The groupings of objects according to their respective characters can, then, motivate grouping the

tropes grounding those characters. There are no literally spherical tropes, but there are tropes that ground the spherical character of objects. Objective resemblances between objects can, then, be used to build resemblance classes of tropes.

What is surprising here is that there is no resemblance between tropes. When it comes to resemblance classes, the situation is just like in resemblance nominalism. The fact that there are tropes grounding the characters of objects does not play any important role. One does not want any universal, so one proposes something to play the role of a universal. It is a class of particular entities, selected either because they are all and only the particular entities resembling each other, or just because it is a natural class. When one appeals to a 'natural' class it seems – *prima facie* – that objective resemblance has no role to play here. But, of course, it has. A 'natural class' is 'natural' because it grounds objective resemblances between the members of the class. Now, the situation is that the character of the objects entering either the resemblance classes or the natural classes should not be grounded in the intrinsic nature of those objects. Resemblance or pertaining to a natural class should be primitive unanalyzable facts – primitive facts about objects not tropes! These classes of objects are that which is relevant to specify further classes of tropes.

When considering the theoretical situation without taking into account the differences between modifier and module tropes, one would be inclined to think that a feasible reduction of universals to classes of tropes should postulate – as presented above – that the nature of a trope comes from its pertaining to a resemblance class, or to its pertaining to a natural class. The fact, nonetheless, is much more convoluted. The nature of a modifier trope comes from its grounding the character of an object that pertains to a resemblance class or pertains to a natural class. The 'intrinsic natures' of tropes are ontologically dependent on the fact that the objects whose character they ground enter into some primitive resemblance relations with other objects, or pertain to certain natural classes. So, at last, the 'intrinsic character' of a trope comes from the fact that objects enter into certain primitive resemblance relations or pertain to certain natural classes. All that is relevant for the attribution of an 'intrinsic nature' of a trope is what is relevant for the attribution of an intrinsic nature to an object under resemblance nominalism.

The problem here is that if this is the theoretical situation, most of the rationale for the substitution of universals by tropes disappears. Tropes are supposed to avoid the difficulties that haunt traditional forms of nominalism. Tropes are supposedly free from the problems of the 'company' and the 'imperfect community' because they are not thickly charactered like current objects. It happens now, nonetheless, that any kind of division of tropes into natural classes or resemblance classes will inherit all the problems that affect those forms of nominalism, because there is no 'intrinsic nature' that can be attributed to those tropes, besides their grounding the characters – whatever they are – that comes from resemblance classes of objects or natural classes of objects. If one compares classes of tropes with classes of objects as *ersatz* universals, the supposed advantages of tropes over objects disappear.

There is a further and – it seems – much serious difficulty with natural classes of modifier tropes or resemblance classes of modifier tropes. Endorsing this doctrine renders the direction of ontological dependencies[10] rather obscure. In principle, it is

---

[10] The concept of 'ontological dependence' has not been easily analyzed. An obvious formulation is the following: $x$ depends ontologically on $y =_{df} \Box((x \text{ exists}) \rightarrow (y \text{ exists}))$. It has the problem that it makes everything ontologically dependent on, for example, numbers (if there are any) and it cannot discriminate the direction of dependency between and object, say $a$, and its singleton $\{a\}$ (cf. Lowe, 2009). Maybe one solution is to resort to the distinctions introduced by Fine in which ontological dependencies are connected to 'essences' (cf. Fine, 1995). Maybe, also, one can simply postulate the relation of ontological dependence or 'grounding' as a primitive irreflexive, asymmetric and transitive relation (cf. Schaffer, 2009). This last option will be preferred in this work.

155

supposed that – in the context of a trope ontology – characters of objects are grounded on the tropes those objects posses. But those tropes have no intrinsic nature besides the natural classes to which they belong, or the resemblance classes in which they are included. These natural classes or resemblance classes of tropes – as the case might be – are ontologically dependent on the resemblance classes or natural classes of objects. So, it seems to turn out that the character those tropes are grounding is dependent on the 'intrinsic nature' of the objects they are supposedly characterizing. The 'intrinsic nature' of a trope is grounded, then, on the 'intrinsic nature' of the objects bearing those tropes. But tropes are, in principle, character grounders of those objects themselves. So, it seems that there is a 'grounding loop' here. One option is to get rid of tropes as character grounders completely. If they don't fulfill any useful theoretical function, why postulate them? Another option is to reject that the 'intrinsic nature' of a trope comes from the fact that objects that bear those tropes pertain to certain natural classes or resemble such and such other objects. But this second option fails, for tropes don't have *any* intrinsic nature beside the character they are grounding.

It is true that Ehring is free from these difficulties, because in the context of a bundle conception of objects module tropes and not modifier tropes should be preferred. This is an important systematic problem, though, and one that should be considered seriously by defenders of ontologies with tropes and substrata (cf. for example, Heil, 2003, p. 126-192, 2012, p. 12-32).

## Classes of module tropes

There is an important difference in the situation when it comes to natural classes of module tropes or resemblance classes of module tropes – as the case might be. In principle, module tropes do have a character, for they ground characters by having them. So, it is not necessary in this case to appeal to resemblance classes of objects to generate 'intrinsic character' in the tropes, as in the case of modifier tropes. As module tropes have an 'intrinsic nature' by themselves, they can be grouped 'directly' in resemblance classes or natural classes that, then, can fulfill the functions usually attributed to universals.

The situation, though, as indicated above, is that no trope, modular or not, has any 'intrinsic character' by itself. Resemblances between tropes either are primitive and external or they are grounded in the fact that those tropes belong to the same natural class, where 'belonging' is also a primitive external relation. Only by these primitive external relations can any 'intrinsic nature' be attributed to a trope. As 'grounding' is a transitive relation, characters are, finally, grounded on natural classes or resemblance classes. That is, the character of an object is grounded on its tropes. As tropes are here modular, they ground the character of the object that bears them or includes them by having that character. But the ground by which any modular trope can have any character is the fact that that trope resembles other tropes or the fact that that trope belongs to a natural class. In both cases, the character of a trope is grounded in primitive external relations. Hence, by transitivity, characters of objects are grounded on primitive external relations, just as in traditional nominalistic ontologies.

That should not be a very important problem. Ehring's ontological framework is a mono-categorial one, with tropes working both as objects and as universals. Working as objects, they are bundles of module tropes. Working as universals, those module tropes constitue natural classes – the same would have applied to primitive resemblance classes. It could be convenient, though, to consider the comparative advantages that a framework like this one has in relation to some forms of resemblance nominalism. Ehring's ontology of tropes is mono-categorial, but it

**156**

is also mono-categorial the ontology of the defender of resemblance nominalism. Ehring's ontology explains the intrinsic character of objects by primitive external relations, and the same happens in resemblance nominalism. Ehring's ontology has no universal entities, and the same happens in resemblance nominalism. So, what is the advantage of a trope ontology over classic resemblance nominalism? It cannot be quantitative economy: when the nominalist has just one entity, the defender of tropes has many. It cannot be qualitative economy: both ontologies are mono-categorial; they are even on this score.

One cannot appeal here, either, to the fact that tropes are charactered entities while objects obtain their character in resemblance nominalism from primitive external relations of resemblance, because the same applies now to the thin character eventually possessed by module tropes. I can imagine just one advantage for an ontology of module tropes. As module tropes are thinly charactered, they seem not to be affected by the challenges of the 'company' and the 'imperfect community' that haunt resemblance nominalism. The problem, now, is that precisely the recourse to primitive external relations to ground the character of those tropes eliminates the advantage of trope ontologies over resemblance nominalism[11].

The difficulties of the 'company' and the 'imperfect community' seem to come from the fact that objects are thickly charactered. Attention will be focused here on the 'imperfect community' challenge. Resemblance classes are supposed to do the work usually attributed to universals. Those resemblance classes are defined as the classes of all and only resembling objects. That is, any object that resembles each one of the objects belonging to one of the classes also belongs to the class, and any object that belongs to the class resembles each other of the objects belonging to the class (cf. Rodriguez-Pereyra, 2002, p. 53-95). By definition, resemblance is here transitive, although in general imperfect resemblance is not. Suppose a class of three objects: $a_1$ is red and spherical, $a_2$ is spherical and has a height of 1 meter, and $a_3$ has a height of 1 meter and is red. It happens here that $a_1$ resembles $a_2$ because both are spherical, $a_2$ resembles $a_3$ because both have a height of 1 meter, and $a_3$ resembles $a_1$ because both are red. This is a resemblance class, but our intuition is that this class is not really selecting one property. Several strategies have been devised by defenders of resemblance nominalism to cope with this problem (cf. Lewis, 1999, p. 14-15; Rodriguez-Pereyra, 2002, p. 156-185). It is not necessary to enter into the details of those strategies. As objects have at the same time color, shape and height, cases like the one presented can appear. A sphericity trope, on the other hand, is just spherical. But is it? A sphericity trope is also co-located with, for example, a certain height and a certain color. So, it can enter in an imperfect resemblance class of tropes every one of which resembles all the others. For example, two tropes can resemble because they are co-located with something spherical – of course every trope is co-located with itself –, two tropes can resemble because they are co-located with something red, and two tropes can resemble because they are co-located with something of 1 meter of height. So, one can specify an imperfect resemblance class of tropes to which belong a red trope, a sphericity trope and a 1-meter-height trope. The recourse to natural classes is of no avail here, because natural classes are 'natural' because they ground objective resemblances. Either there are primitive resemblances that generate an imperfect class of tropes like the one presented, or there is a natural class that grounds certain objective resemblances: exactly the objective resemblances generating the imperfect class indicated.

---

[11] Manley (2002) has argued before that resemblance classes of tropes suffer from the same classic problems of resemblance nominalism: the challenge of the 'imperfect community' and the 'company'. The argument that is going to be presented here is independent from the arguments displayed by Manley.

The obvious rejoinder to this line of argument is to point out that 'being co-located with something spherical' is not an intrinsic property or character. Under any analysis of 'extrinsic property' it turns out to be extrinsic, and not intrinsic, and resemblance classes or natural classes should be built upon 'intrinsic' characteristics. The problem here is that *there is no* 'intrinsic character' for module tropes in advance and, then, there is no a priori distinction between intrinsic and extrinsic characters of those tropes. Consider again the dialectical situation. Module tropes got their 'intrinsic character' either by their entering into primitive external relations of resemblance or by their belonging to natural classes – which is also a primitive external relation. Only after the fact that a module trope has entered into any of these primitive external relations can any extrinsic attributions be distinguished from the intrinsic ones. There are no extrinsic attributions if there are no intrinsic ones. Before it is clear what the 'intrinsic character' of a trope is, it is also not clear what an 'extrinsic' attribution to it is. But, to fix the 'intrinsic character' of a module trope, primitive external relations are required. But those primitive external relations cannot discriminate between 'resembling in respect of being spherical' and 'resembling in respect of being co-located with something spherical'. Hence, module tropes are as affected by imperfect classes as objects are.

The 'intrinsic character' of a module trope comes just from the primitive external relations of this trope with other tropes. It is not clear that those primitive external relations by themselves are really discriminating between, for example, resemblance relations that constitute imperfect communities of tropes like the one presented above and resemblance relations that can work as *ersatz* universals. There are no criteria in advance for distinguishing between 'intrinsic' and 'extrinsic' characters so that imperfect communities can be blocked from the beginning. Of course, there is no problem if defenders of module tropes appeal to the same strategies that have been used by nominalists – multigrade relations of resemblance (cf. Lewis, 1999, p. 14-15) or the strictures imposed by Rodriguez-Pereyra (cf. 2002, p. 156-185) to evade imperfect communities. The point is that the overall situation between trope ontologies and nominalism is, again on this score, even.

## Conclusions

Ehring's defense of natural classes of tropes can avoid several of the problems affecting the classical conception of tropes, as defended by D. C. Williams and Keith Campbell, for example. In the classic conception tropes have an 'intrinsic qualitative character' and are also individuals *per se*. Their intrinsic character can ground, then, objective internal relations of resemblance with other tropes. The resemblance classes generated are supposed to work as universals. Tropes understood in this way, nonetheless, can enter into several different internal relations with the same entities, but that seems incompatible with a simple nature. By hypothesis, though, tropes are simple entities, not built up from a qualitative character *and* a particularizer component.

The solution proposed by Ehring is similar to that entertained by nominalists. Instead of supposing that tropes have an intrinsic character that, afterwards, grounds internal relations of resemblance, classes that are supposed to work as universals should be built up from primitive external relations of resemblance or simply by natural classes, whose 'natural' character is also primitive. Ehring prefers natural classes, because they can ground a certain 'intrinsic character' in the tropes belonging to those classes and, then, can ground some internal resemblance relations, and also because they can ground the typical formal strictures of the resemblance relation.

158

It has been pointed out here that this theory can have wildly different consequences if one understands the notion of 'trope' either as a modifier trope or as a module trope. A modifier trope is a trope that grounds a certain character in its bearer but it has none. A module trope is trope that grounds a character in its bearer by having one. Modifier tropes do not seem appropriate for bundle conceptions of objects, so Ehring certainly should prefer module tropes. In any case, Ehring's theory of natural classes as *ersatz* universals faces problems under any of those interpretations. If tropes are modifier tropes, the 'intrinsic' character by which tropes could be grouped in natural classes – or resemblance classes, as the case might be – is possessed by objects, not by tropes. Hence, classes of tropes have the same problems – no more, no less – as classes of resembling objects. If this is the situation, what is the advantage of a trope ontology over resemblance nominalism? It also happens under this supposition that it is not clear whether the characters of objects are grounded in the tropes they bear or the other way round. In effect, tropes can be said to have an 'intrinsic nature' here only because they are borne by objects that belong to several resemblance classes or several natural classes. The 'intrinsic character' of tropes, then, seems to be grounded in primitive external relations into which *objects* – not tropes – enter.

If tropes are modular, problems seem less serious, but serious enough. Under this supposition tropes ground characters because they have them. For a trope to have a character, nevertheless, is to be a member of certain resemblance classes or certain natural classes, both of them generated by extrinsic primitive relations. The problem here is that the general ontology that results is – overall considered – less economical than plain resemblance nominalism. It means positing more entities than nominalists do and without further clear theoretical advantages over nominalism. The difficulty of the 'imperfect community' is considered here with some detail. The problem of the 'imperfect community' seems to come from the fact that objects are thickly charactered. But so are module tropes under the conception discussed are. A trope can be, for example, spherical, but also co-located with something red, and co-located with something of 1 meter of length. It is of no avail for the defender of tropes here to appeal to the 'extrinsic' character of attributions like 'being co-located with something spherical', because the only way to make a distinction between 'intrinsic' and 'extrinsic' characters is via the operation of the primitive external relations: primitive resemblance or belonging to a natural class. Of course, the defender of a trope ontology can apply the same resources to which resemblance nominalists have appealed. The point, though, is that trope ontologies finally turn out to be in no better position that plain nominalism. Why, then, postulate a less economical ontology? The rationale for trope ontologies ends up being seriously undermined[12].

# References

ARMSTRONG, D.M. 1978a. *Universals and Scientific Realism: Volume 1: Nominalism and Realism.* Cambridge, Cambridge University Press, 149 p.

ARMSTRONG, D.M. 1978b. *Universals and Scientific Realism: Volume 2: A Theory of Universals.* Cambridge, Cambridge University Press, 190 p.

ARMSTRONG, D.M. 1997. *A World of States of Affairs.* Cambridge, Cambridge University Press, 285 p. http://dx.doi.org/10.1017/CBO9780511583308

CAMPBELL, K. 1981. The Metaphysic of Abstract Particulars. *Midwest Studies in Philosophy*, **6**:477-488. http://dx.doi.org/10.1111/j.1475-4975.1981.tb00453.x

CAMPBELL, K. 1990. *Abstract Particulars.* Oxford, Blackwell, 187 p.

159

EHRING, D. 2011. *Tropes: Properties, Objects, and Mental Causation.* Oxford, Oxford University Press, 250 p.

FINE, K. 1995. Ontological Dependence. *Proceedings of the Aristotelian Society*, **95**:269-290.

GARCIA, R.K. 2011. Tropes as Character-Grounders: Modifier Tropes versus Module Tropes. Manuscript, 32 p.

HEIL, J. 2003. *From an Ontological Point of View.* Oxford, Clarendon Press, 267 p. http://dx.doi.org/10.1093/0199259747.001.0001

HEIL, J. 2012. *The Universe As We Find It*. Oxford, Clarendon Press, 303 p. http://dx.doi.org/10.1093/acprof:oso/9780199596201.001.0001

LEWIS, D. 1999. New Work for a Theory of Universals. *In*: D. LEWIS, *Papers in Metaphysics and Epistemology.* Cambridge, Cambridge University Press, p. 8-55. http://dx.doi.org/10.1017/CBO9780511625343.002

LEWIS, D.; LANGTON, R. 1999. Defining 'Intrinsic'. *In*: D. LEWIS, *Papers in Metaphysics and Epistemology.* Cambridge, Cambridge University Press, p. 116-132. http://dx.doi.org/10.1017/CBO9780511625343.007

LOWE, E.J. 2009. Ontological Dependence. *In:* E. ZALTA (ed.), *Stanford Encyclopedia of Philosophy*. Available at: http://plato.stanford.edu/entries/dependence-ontological/. Accessed on: 10/12/2013.

MANLEY, D. 2002. Properties and Resemblance Classes. *Noûs*, **36**:75-96. http://dx.doi.org/10.1111/1468-0068.00361

MAURIN, A-S. 2002. *If Tropes.* Dordrecht, Kluwer, 183 p. http://dx.doi.org/10.1007/978-94-017-0079-5

MORELAND, J.P. 2001. *Universals*. Montreal, McGill-Queen's University Press, 184 p.

ROBB, D. 2005. Qualitative Unity and the Bundle Theory. *The Monist*, **88**:466-492. http://dx.doi.org/10.5840/monist200588424

RODRIGUEZ-PEREYRA, G. 2002. *Resemblance Nominalism: A Solution to the Problem of Universals.* Oxford, Clarendon Press, 238 p. http://dx.doi.org/10.1093/acprof:oso/9780199243778.001.0001

SCHAFFER, J. 2009. On What Grounds What. *In:* D.J. CHALMERS; D. MANLEY; R. WASSERMAN (eds.), *Metametaphysics: New Essays on the Foundations of Ontology*. Oxford, Clarendon Press, p. 347-383.

SCHAFFER, J. 2010. The Internal Relatedness of All Things. *Mind*, **119**:341-376. http://dx.doi.org/10.1093/mind/fzq033

WILLIAMS, D.C. 1953a. On the Elements of Being: I. *The Review of Metaphysics*, **7**:3-18.

WILLIAMS, D.C. 1953b. On the Elements of Being: II. *The Review of Metaphysics*, **7**:71-92.

160