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Companion to Intrinsic Properties

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Editor's Introduction

Talk of intrinsic properties is meant to draw attention to those features that something has “in itself,” that is, independently of the condition of other things. These intrinsic features are intuitively described as those a thing has in virtue of the way it alone and nothing else is, properties whose exemplification by some item does not consist in how it relates to any distinct things. The word ‘extrinsic’ is generally considered an antonym of ‘intrinsic’; any property of an item that does not fit the descriptions above is usually considered one of its extrinsic features.

The distinction between intrinsic and extrinsic properties plays a major role in a variety of philosophical debates and in many different areas of philosophy. In the field of ethics, talk of *intrinsic value* has long been a topic of debate. Do actions as well as individuals have intrinsic value? Assuming individuals have intrinsic value, which ones have it and why? Are only rational beings included? Or do the bearers of intrinsic value include sentient beings generally, ... anything with a life, nature itself?

In the philosophy of physics, there is the question of whether the causal powers of objects supervene on their intrinsic features, whether the relational properties of physics require an intrinsic ground, and whether all or even any fundamental physical properties are intrinsic. And assuming that fundamental physical items have an intrinsic nature, how can we ever have knowledge of that intrinsic nature given that we can only be aware of the effects? In metaphysics, there is the question of what constitutes genuine change (which seems to require a change in intrinsic properties), and whether change in the intrinsic properties of an individual is compatible with its *enduring* through time (being numerically identical at different times). Philosophers of mind wonder whether the content of our mental states supervenes on our intrinsic features or whether mental content is partly a function of the external items toward which our thoughts are directed. There is also the issue of whether consciousness extends beyond the intrinsic features of one's brain or even the rest of one's body. For the philosopher of art, there is the issue of whether aesthetic value is an intrinsic feature of an object, and if not, what relations to which external items ground aesthetic properties; and in epistemology, there is the long-standing question of whether the justification of one's beliefs is solely a function of one's intrinsic features.

Despite the significant role that talk of intrinsic properties has played in the philosophical literature, there has been great difficulty capturing the intuitive idea of an intrinsic property in a sufficiently plausible definition. In section 1

of this introduction, I review some of the most popular and influential attempts to define intrinsicness (with a few of these essays reprinted in this anthology). In section 2, I introduce the exciting new essays that have been written for this collection.

1 Earlier Work on Intrinsicness

In his discussion of intrinsic value, G. E. Moore offers a two-part analysis of intrinsic nature.

When I say, with regard to any particular kind of value, that the question whether and in what degree anything possesses it *depends solely on the intrinsic nature of the thing in question*, I mean to say two different things at the same time. I mean to say (1) that it is *impossible* for what is strictly *one and the same* thing to possess that kind of value at one time, or in one set of circumstances, and *not* to possess it at another; and equally *impossible* for it to possess it in one degree at one time, or in one set of circumstances, and to possess it in a different degree at another, or in a different set... (2) The second part of what is meant is that if a given thing possesses any kind of intrinsic value in a certain degree, then not only must the same thing possess it, under all circumstances, in the same degree, but also anything *exactly like* it, must, under all circumstances, possess it in exactly the same degree. Or to put it in the corresponding negative form: It is *impossible* that of two exactly similar things one should possess it and the other not, or that one should possess it in one degree, and the other in a different one. (1922, pp. 260–1)

According to part (1) of Moore's analysis, to say that a property of an item, e.g., a certain sort of value, depends on its intrinsic nature is to say that it's impossible for the item to have that property at one time and lack it at another. This implies that one's intrinsic properties are those that one has *necessarily*, those without which one cannot exist. It is arguable, however, that being intrinsic is not the same as being necessary. Michael Dunn (1990, p. 181) notes that there is a tendency for some philosophers to conflate the notion of being intrinsic with the notion of being necessary or essential. This conflation is a mistake since some properties we regard as intrinsic are contingent features of the items that have them, features the items can exist without. The mass of the rock, or any other physical object, would seem to be one of its intrinsic properties, although the rock could arguably continue to exist despite some changes in its mass. Also, some essential features seem to be extrinsic. Being a product of that particular sperm and egg is arguably an essential feature of you, although this feature is had by you in virtue of your relations to distinct individuals (and times).

Moore's condition (2) is a more plausible requirement for being intrinsic. Since intrinsic properties are those something has "in itself," they would seem

to be those whose instantiation does not depend on one's relation to other things. It would seem to follow that no matter what environmental differences there are between *x* and *y*, so long as *x* and *y* are duplicates, they will have all the same intrinsic properties. It is tempting, then, to think that a property *F* is an intrinsic property of *x* just in case *F* is had by all possible duplicates of *x*.

Of course, by 'duplicate' here one cannot mean what has *all* the same properties, for whatever has all the same properties as *x* will have all of *x*'s *extrinsic* properties. Features shared by all duplicates are guaranteed to be intrinsic only when the features duplicated are restricted to those that are intrinsic. So it seems that the notion of duplication that's relevant to defining 'intrinsic' is itself a notion to be understood in terms of intrinsic properties. As David Lewis notes, "things are perfect duplicates iff they have the very same intrinsic properties" (1983a, p. 197).

One way to avoid the circularity is suggested in the passage from Moore quoted above: "if a given thing possesses any kind of intrinsic value in a certain degree," then anything exactly like it "must, *under all circumstances*, possess it in exactly the same degree." The emphasis is mine, and I emphasize 'under all circumstances' to highlight the idea that an object's intrinsic properties are ones it would have no matter what changes were made to its environment. If this is an accurate way to think of intrinsic properties, then we should expect an object to retain its intrinsic properties even when all items external to it are removed. Borrowing from Chisholm's idea of a property being *rooted outside the times* at which it is had, Kim (1982) introduces the idea of a property being rooted *outside the objects* that have it. A property *F* is rooted outside the objects that have it just in case, necessarily, any object *x* has *F* only if some contingent object wholly distinct from *x* exists—where a wholly distinct object is one that is not identical with *x* and not identical with any of *x*'s proper parts. Kim then defines an "internal" property as one that is "neither rooted outside times at which it is had nor outside the objects that have it" (p. 60). Replacing 'internal' with 'intrinsic', the proposal is that intrinsic properties are those an object can exemplify while being alone in the world (i.e., without any wholly distinct contingent objects).¹ As Lewis expresses the idea, "extrinsic properties are those that imply accompaniment, whereas intrinsic properties are compatible with loneliness" (1983a, p. 198). Yet, as Lewis notes, there is an obvious flaw with this proposal—*loneliness*,

¹ Without the word 'contingent' no properties would qualify as intrinsic (assuming there are necessary beings). Since necessary beings cannot fail to exist, no properties can be had in the absence of necessary beings (assuming there are necessary beings).

being alone in the world, is extrinsic, “yet certainly it does not imply accompaniment and certainly it is compatible with itself” (p. 199).

Being compatible with loneliness is not sufficient for being intrinsic, but there is the more sophisticated notion of being *independent of accompaniment* which comes closer to defining what it is to be intrinsic. Rae Langton and Lewis introduce the notion in their famous 1998 essay, “Defining ‘Intrinsic’,” reprinted in this collection.² A property is independent of accompaniment just in case its *presence or absence* is compatible with *either loneliness or accompaniment*. That is, F is independent of accompaniment if and only if (i) a lonely object can have F, (ii) a lonely object can lack F, (iii) an accompanied object can have F, and (iv) an accompanied object can lack F. If intrinsic properties are characterized as those that satisfy (i)–(iv), then the property of being lonely is correctly classified as extrinsic, since being lonely does not meet conditions (ii) or (iii). Langton and Lewis recognize that we need a bit more than (i)–(iv) to ensure that a property is intrinsic. They note the disjunctive property, being *either cubical and lonely or else non-cubical and accompanied*. This property is independent of accompaniment. It can be had or lacked by either a lonely object or an accompanied one; it’s had by a lonely cube and an accompanied circular object, and it’s lacked by a lonely circular object and an accompanied cube. Yet, it seems that this disjunctive property does not qualify as intrinsic since each disjunct contains a conjunct that is extrinsic. (Likewise, the negation of this disjunctive property also seems to be extrinsic, although it, too, meets conditions (i)–(iv).)

To correctly classify problematic disjunctive properties, Langton and Lewis (hereafter, “L & L”) amend the account by appealing to *natural* properties. Lewis (1983b) offered a duplication account that relied heavily on the notion of a natural property, defining duplicates as those that have exactly the same perfectly natural properties,³ and then proposing that a property is intrinsic just in case it can never differ between duplicates.⁴ In the L & L account, the reliance on the notion of a natural property is not as heavy. They define a disjunctive property as one that is not natural while its disjuncts are; or if naturalness admits of degrees, the property is less natural than the disjuncts. Then they define *basic intrinsic* properties as those that are independent of accompaniment,

² Reprinted with permission of Rae Langton and Stephanie Lewis, and with permission of Wiley & Sons, Inc.

³ A *perfectly natural* property is a fundamental physical property.

⁴ Lewis (1986) later requires that duplicates not only share perfectly natural properties, but also that “their parts can be put into correspondence in such a way that corresponding parts have exactly the same perfectly natural properties, and stand in the same perfectly natural relations” (p. 61).

not disjunctive properties, and not negations of disjunctive properties. By defining duplicates as those that have exactly the same basic intrinsic properties, they are then able to define an intrinsic property as one that can never differ between duplicates. Now the property of being *either cubical and lonely or else non-cubical and accompanied* is correctly classified as extrinsic since it is a property that can differ between duplicates (i.e., between those with the exact same basic intrinsic properties).

The reliance on the notion of naturalness has been a main source of complaint with the L & L account (and with Lewis' 1983b and 1986).⁵ Peter Vallentyne (1997) offers a definition that relies on the idea of intrinsic properties being those one can have all alone in the world, while managing to avoid any appeal to the controversial notion of a natural property. His essay, "Intrinsic Properties Defined," is reprinted in this collection.⁶ Here's a brief preview. We have the notion of what a world might be like where everything remains the same except that a few objects or times are removed. Now imagine a *maximal* contraction of a world, where we remove from a world as much as we can while leaving a certain object *x* at a certain time *t*. Then we have what Vallentyne calls an "*x-t* contraction." With the notion of an *x-t* contradiction, Vallentyne shows how to capture the idea that intrinsic properties are those whose presence or absence does not depend on what the rest of the world is like. He proposes that a property *F* is intrinsic just in case for any world *w*, object *x*, and time *t*, if *x* has *F* in *w* at *t*, then *x* has *F* at *t* in each *x-t* contraction of *w*, and likewise for the negation of *F* (i.e., if *x* has not-*F* in *w* at *t*, it does so at each *x-t* contraction of *w*).

This analysis correctly classifies the disjunctive properties that caused trouble for the L & L account without having to rely on natural properties. Being *either cubical and lonely or else non-cubical and accompanied* is correctly classified

⁵ Stephen Yablo warns: "there is something uncomfortable about taking an intrinsicness-fact that is very clearcut ... and putting it at the mercy of something as controversial, and (apparently) irrelevant, as the relative naturalness" of a disjunction and its disjuncts (1999, p. 2). Gene Witmer, William Butchard, and Kelly Trogon (2005) question whether we even have a concept of naturalness. While Lewis (2001) insists that the cost of doing without the notion of naturalness is too great, Witmer et al. reply: "The problem here is not a matter of having a concept and assessing the costs and benefits of using it. Rather, the problem is a matter of having no clear concept the costs and benefits of which can even begin to be assessed" (p. 329). At least this much seem correct, "If we want to clarify a notion which is a relatively ordinary one, presumably the notions we use to provide that clarification ought to be in better shape than the one to be clarified" (p. 331), but intrinsicity seems to be a notion better understood than naturalness. Although, see Ted Sider's (1996) defense of relying on a primitive notion of naturalness.

⁶ Reprinted with permission of Peter Vallentyne and Springer.

as extrinsic on Vallentyne's account, for an accompanied non-cube lacks the disjunctive property in *x-t* contractions where it is lonely. Another merit of Vallentyne's account is that by not relying on the notion of duplicates, his definition is able to correctly classify *non-qualitative* properties (those whose specification requires reference to particular items, e.g., *liking Norman* vs. *liking some human*). L & L admit that their definition applies only to *qualitative* properties, since intrinsic properties are not had by all of one's duplicates if they are non-qualitative. And it seems that there are intrinsic non-qualitative properties, e.g., the property of being *identical with Alice*. Vallentyne's account gives the apparently correct result that being identical with Alice is intrinsic since any *x* that has this property (i.e., Alice herself) has it in all *x-t* contractions, and any *x* that has the negation of this property (anyone or anything other than Alice) has the negation of the property in all *x-t* contractions.

Vallentyne relies on the idea that taking stuff away from the world should not affect whether an item has some intrinsic property *F*. Stephen Yablo (1999) appeals to the idea that *adding more* to the world should not affect whether one has *F*. If *F* is an intrinsic property of object *x* in one world, then it should be a property that *x* retains in a world with all the same stuff plus some more items. Yablo also notes that there are intimate connections between the part-whole relation and intrinsicity; e.g., there is the fact that if *x* is part of *y*, then *x* cannot change intrinsically without *y* changing intrinsically as well, and the fact that if *x* is part of *y*, then *x* and *y* have a region of intrinsic match. Inspired by these considerations, Yablo proposes as an initial attempt that a property *F* is intrinsic iff for any individual *x*, and possible worlds *w*₁ and *w*₂, such that *x* is a proper part of *w*₁ and *w*₁ is a proper part of *w*₂, *x* has *F* in *w*₁ iff *x* has *F* in *w*₂. Like Vallentyne's account, this proposal gives the intuitively correct results in many cases. An added benefit is that unlike Vallentyne's account, Yablo goes on to develop the core idea just expressed in a way that allows that some of our essential properties are extrinsic. Vallentyne recognizes that some apparently extrinsic essential features (e.g., having a particular origin—some specific date or zygote) are classified as intrinsic on his account, and while he does defend the idea that such properties are intrinsic,⁷ it would seem desirable to have a definition that allows essential properties to be extrin-

⁷ Vallentyne contends that it is not so implausible to regard such properties as intrinsic since they are "metaphysically glued" to each of their bearers, and therefore, "in an important sense, there is no dependence since there is no room for variation on what the rest of the world is like" (1997, p. 217).

sic. And in this respect at least, Yablo's account is preferable.⁸ His essay, "Intrinsicness," is reprinted here.⁹

The last reprint in this collection is Brian Weatherson's "Intrinsic Properties and Combinatorial Principles."¹⁰ In this essay Weatherson develops the basic idea of L & L that intrinsicness is a matter of independence of accompaniment, but he develops it in a way that avoids three main objections to the L & L account. One objection is Yablo's complaint (mentioned in fn. 5) that the theory rests on "controversial, and (apparently) irrelevant" judgments about relative naturalness. Another objection to the L & L account that Weatherson's analysis answers is presented by Dan Marshall and Josh Parsons (2001). Marshall and Parsons mention the property of being *such that there is a cube*. This property (like various other quantificational properties) is independent of accompaniment and seems to be non-disjunctive; so it is implausibly classified as intrinsic on the L & L account.¹¹ Another threat to the L & L account is what Ted Sider (2001) calls "maximal" properties, i.e., properties of an object that are not had by the object's proper parts. Being a rock is maximal since no undetached portion of a rock is itself a rock. However, if that portion were set free by having the surrounding sandstone chipped away, then it would be a rock. So x's being rock depends on the way things are outside of x: it depends on the absence of any rock that contains x as a proper part. This suggests that being a rock is extrinsic. But it would seem to count as intrinsic on the L & L account, since it is independent of accompaniment, and being quite natural it also seems non-disjunctive in the L & L sense.¹²

8 However, there are some apparently extrinsic properties that are necessary features not just of some objects, but of everything that exists. These *universally necessary* features (or "*indiscriminately necessary*," as Weatherson and Marshall 2013 call them) include being *such that either Socrates is wise or Socrates is not wise* (as Dunn 1990, p. 184 mentions) and *coexisting with a number* (assuming numbers exist necessarily). These two seem to be extrinsic, yet each of the accounts mentioned above (including Yablo's – and Weatherson's, which is introduced next) classifies all indiscriminately necessary properties as intrinsic.

9 Reprinted with permission of Yablo and Edward Minar (editor of *Philosophical Topics*).

10 Reprinted with permission of Weatherson and Wiley & Sons.

11 Being *such that there is a cube* can be rephrased as the disjunctive property, being either a cube or accompanied by a cube, but being *such that there is a cube* does not appear to be disjunctive in L & L's sense of being less natural than each of the disjuncts (since being *such that there is a cube* seems no less natural than being accompanied by a cube).

12 Incidentally, Vallentyne's account gives the arguably correct result that being a rock is extrinsic. If something is a rock, it is a rock in all x-t contractions, but this is not true of the negation of being a rock. Yablo's account also allows that being a rock qualifies as extrinsic. Both accounts also give the apparently correct result that being *such that there is a cube* is extrinsic.

Like the L & L definition of intrinsicity, Weatherson's account is "combinatorial" in that it analyzes being intrinsic by specifying principles regarding which combinations of intrinsic properties are possible. There is the L & L principle that intrinsic properties are independent of accompaniment. Weatherson adds a few more combinatorial principles. One is a Boolean closure principle, according to which: (B) if *F* and *G* are intrinsic properties, then so are *F-and-G*, *F-or-G*, and *not-F*. Another principle is: (T) If *F* and *G* are intrinsic and there is a possible world with $n + 1$ pairwise distinct things, and something in some world is *F* and something in some world is *G*, then there is a world with exactly $n + 1$ pairwise distinct things such that one is *F* and the other n are *G*" (p. 373). The basic idea of (T) is that any two intrinsic properties that can be instantiated can be instantiated together any number of times. With these two combinational principles, we get the right result that being *such that there is a cube* is not intrinsic. Suppose that the property is intrinsic. Then by (B), not being such that there is a cube is also intrinsic. Now, it's possible for being such that there is a cube to be instantiated and also possible for its negation to be instantiated. So given (T) it follows that there is a world in which something is such that there is a cube and something is not such that there is a cube. This is impossible. So with Weatherson's combinational principles we get the right result that being such that there is a cube is not intrinsic. Weatherson offers further combinatorial principles to classify being a rock as extrinsic and to classify certain problematic disjunctive properties (e.g., those of the form *being F and lonely or non-F and accompanied*) as extrinsic without appealing to naturalness. (However, Weatherson does admit the need to appeal to naturalness to get the intuitively correct results in certain special cases.)

2 New Essays

In addition to the classic essays mentioned above, this anthology contains several new papers on intrinsic properties. The first is David Denby's "Essence and Intrinsicity."

In earlier works, Denby (2006, 2010) offers a combinational account, utilizing the notion of being independent of accompaniment. Yet, whereas L & L spoke of properties had independently of other *objects*, Denby focuses on properties had independently of other *properties*. He proposes that an object's intrinsic properties are independent of the properties of other items, but they are not independent of the intrinsic properties the object itself has. An object's extrinsic properties, on the other hand, always depend on intrinsic properties of other individuals. To make these ideas precise, he relies on the notions of *internal* and

external independence, where (very roughly and omitting Denby's detail) F is internally independent of G when x's having or lacking F is independent of x's having or lacking G, and F is externally independent of G when x's having or lacking F is independent of the presence or absence of G for items other than x. An intrinsic property is then characterized as a property that fails to be internally independent of some other intrinsic property, but is externally independent of every property.

In his "Essence and Intrinsicity," written for this collection, rather than defining intrinsicity, Denby uses the concept of an intrinsic property to define what it is for a property to be *essential*. A property's being necessary does not entail that it is intrinsic: being accompanied by the number 9 is a necessary feature of you and me (assuming numbers exist necessarily) but it is not intrinsic. There is also the fact, as Kit Fine (1994) highlights, that a property's being necessary does not entail that it is essential; being a member of the singleton set, {Socrates}, is a necessary feature of Socrates but it seems it is not part of his essence. So essential properties should not be defined as those had necessarily. Denby proposes, instead, to define essential properties as those necessary features that are also intrinsic. He defends this provocative proposal against anticipated objections, and in the second half of his essay, he further supports the analysis of essential in terms of intrinsic by revealing how the family of intrinsic properties has a certain structure that helps us understand some important facts about the nature of essences.

The second new essay in this collection is Gene Witmer's, "A Simple Theory of Intrinsicity." It's helpful to understand Witmer's simple theory against the background of the less simple theory he developed with William Butchard and Kelly Trogdon. Witmer, Butchard, and Trogdon (2005) offer a definition that relies on the idea that intrinsic properties are independent of accompaniment, but unlike the L & L account, theirs does not depend in any way on the notion of a natural property. They add to the "Simple Independence" requirement (that intrinsic properties are those that are independent of accompaniment) the "Strong Independence" constraint that intrinsic properties are not had *in virtue of* any properties that are not independent of accompaniment. They propose: "Property P is intrinsic iff, for any possible individual x, if x has P, x has P in an intrinsic fashion," where "x has P in an intrinsic fashion iff (i) P is independent of accompaniment and (ii) for any property Q, if x has P in virtue of having Q, Q is also independent of accompaniment" (2005, p. 333).¹³

¹³ While the disjunctive property, being *either cubical and lonely or non-cubical and accompanied*, is independent of accompaniment, neither disjunct is independent of accompaniment.

The Strong Independence Constraint relies on the notion of properties had *in virtue of* other properties. With this talk of being had *in virtue of*, Witmer et al. are appealing to a dependence relation of major interest in recent metaphysics—the *grounding* relation. In Witmer's essay for this anthology, the idea of independence from accompaniment is eliminated, with the notion of grounding now doing all the work. The result is a more elegant theory, and with plausible results in a wider range of cases.

One intriguing component of Witmer's essay is his defense of the view that the *global* notion of an intrinsic property should be viewed as more basic than the *local* notion. The global notion is employed when we speak of a property itself being intrinsic, and the local notion is used when we talk about a property had intrinsically (or extrinsically) by some individual at some time. As Dunn instructs, there is a difference between "*being an intrinsic property* (as a kind), and *intrinsically being a property of a given individual* (as a specific happening)" (1990, p. 183, original emphasis). Dunn illustrates by noting that a square object has the property of being *square-or-accompanied* intrinsically, even though the property itself is often considered extrinsic (since it is possible for it to be had extrinsically, e.g., by accompanied circular objects). Lloyd Humberstone (1996) introduces the labels 'local' and 'global' in the context of intrinsic properties and illustrates the distinction with the example of *being either made of tin or adjacent to something made of tin*. This property would seem to count as an intrinsic feature of tin objects but it is an extrinsic feature of adjacent tinless items. Now, it is tempting to define the global notion in terms of the local: a property is plausibly defined as intrinsic just in case it is always exemplified intrinsically. As Humberstone puts it, "the intrinsic properties are precisely those which are locally intrinsic to all their possessors" (1996, p. 228). Witmer, however, argues that despite this tempting and standard view, the global notion is more basic, with the local notion to be defined in terms of it.

The idea that the global notion is the more fundamental is quite contrary to the thoughts on intrinsicity expressed by Carrie Figdor. In her 2008 essay, "Intrinsically/Extrinsically," Figdor reveals that those mixed cases, in which a prop-

Since an object has the disjunctive property either in virtue of having the first disjunct or in virtue of having the second, the Witmer et al. analysis gives the intuitively correct result that the disjunctive property is never had intrinsically. Their analysis also gives the presumably correct result that being a rock is extrinsic, for while being a rock is independent of accompaniment, an object has that property at least partly in virtue of the absence of surrounding material of the same kind, which is not independent of accompaniment. Being such that there is a cube is also correctly classified as extrinsic on their account since while it is independent of accompaniment, the property is had by non-cubes in virtue of being accompanied by distinct cubical objects.

erty is had intrinsically and also extrinsically, are not confined to the designer properties of metaphysicians (e.g., being made of tin or next to something made of tin). When we focus on less contrived properties, we also find many mixed cases. Figdor considers (among others) the properties of being witty and being a good basketball player. Some individuals have these properties solely in virtue of what they are like in themselves, independently of their environments. Others have them only because they are in the right external circumstances (e.g., being in the company of another witty person, or being on the court with a superstar). With the help of these mixed cases, Figdor (2008) argues that we should understand the I-ly/E-ly distinction (having a property intrinsically vs. having a property extrinsically) independently of the I/E distinction. Talk of having properties I-ly, she claims, indicates independence from contextually relevant counterfactual circumstances. When we ask whether something has value intrinsically, “we are asking whether it would still be valuable in relevant counterfactual circumstances, not where its value is spatiotemporally located” (2008, p. 698). Which counterfactual circumstances are relevant and when depends on our explanatory purposes, as she describes in detail. If these ideas are correct, then there is reason to suspect that in addition to mixed-cases in which one individual or object has a property intrinsically and another has it extrinsically, there are ultra-mixed cases in which the very same item has the same property intrinsically and extrinsically at the very same time. In her essay, “What’s the Use of an Intrinsic Property?,” written for this anthology, Figdor makes it clear that these ultra-mixed cases can and do obtain. Consider, for instance, an item that is valuable due to its internal properties and at the same time valuable also because it is valued by others. As Figdor explains, such cases threaten the global notion of intrinsicality, especially the exclusivity of the global notion (the implication that a property cannot be both intrinsic and extrinsic). She further argues that we can legitimately question whether the global notion is of any philosophical value, and in the latter half of her essay she illustrates by showing how the global notion fails to illuminate various metaethical debates.

Even if one denies that the same property can be had both intrinsically and extrinsically, one might still allow that in some cases *necessarily coextensive* properties differ in their intrinsicality. The intrinsic/extrinsic distinction certainly is *intensional* since there are coextensive predicates, ‘F’ and ‘G’, where ‘F’ denotes an intrinsic property and ‘G’ denotes an extrinsic property (suppose ‘F’ = ‘being an aardvark’ and ‘G’ = ‘belonging to my friend Tony’s favorite animal type’). The intrinsic/extrinsic distinction would also be *hyperintensional* if it were the case that there are necessarily coextensive (cointensive) predicates, ‘F’ and ‘G’, such that ‘F’ denotes an intrinsic property and ‘G’ denotes an extrinsic property. As M. Eddon (2011) demonstrates, a strong case can be made that

the intrinsic/extrinsic distinction is hyperintensional. And yet, each of the highly influential accounts mentioned in section 1, along with the analysis Vera Hoffmann-Kolss offers in her 2010 book, *The Metaphysics of Extrinsic Properties*, entail that the intrinsic/extrinsic distinction is *not* hyperintensional.¹⁴ Hoffmann-Kolss defends this consequence in her essay, "Is the Intrinsic/Extrinsic Distinction Hyperintensional?," written for this collection. She argues that as typically construed, the intrinsic/extrinsic distinction involves two dependence claims: that intrinsic properties are those whose instantiation by any *x* depends only on what *x* is like, whereas extrinsic properties are those whose instantiation by some *x* depends on what individuals distinct from *x* are like. With these dependence claims, Hoffmann-Kolss shows how Eddon's conclusion can plausibly be resisted.

Despite Hoffmann-Kolss' compelling defense, in my "Intrinsic/Extrinsic: A Relational Account Defended," written for this collection, I grant (for the sake of discussion) that intrinsicality is hyperintensional and I try to decide whether a *grounding* approach is best suited to capture this hyperintensionality, or whether the appeal to *identity* (of instances of intrinsic properties with instances of internal properties) described in my 1999 definition of 'intrinsic' is preferable. Perhaps not surprisingly, I defend the latter (with the help of Marshall's 2013 critique of grounding analyses), and I also respond to some objections that have been raised to my 1999 account.

In section 1, I mentioned the 2001 essay that Marshall wrote with Parsons, where they show that the L & L analysis has trouble with quantificational properties, e.g., being such that there is a cube, that seem to be extrinsic even though they are independent of accompaniment. In his 2009 essay, Marshall argues that (in the absence of any special assumptions about properties) an adequate definition of 'intrinsic' in terms of only broadly logical notions is bound to fail. By "broadly logical" notions, Marshall includes those that can be expressed with the vocabulary of first-order predicate logic, the modal notions of possibility and necessity, the mereological notions of part and whole, and the notions of identity and set membership. In his paper, "Yablo's Account of Intrinsicity," which he wrote for this anthology, Marshall argues specifically against Yablo's (1999) broadly logical analysis. He considers Yablo's analysis in its concretist

¹⁴ In *The Metaphysics of Extrinsic Properties*, she presents a *relational* analysis of the intrinsic/extrinsic distinction. The basic idea underlying a relational account is that *F* is extrinsic just in case one has *F* due to one's relations to distinct items; otherwise *F* is intrinsic. In her book, Hoffmann-Kolss develops a sophisticated relational account that, she argues, improves on other relational accounts (including my 1999 definition) and also improves on various non-relational (e.g., duplication and combinatorial) analyses.

form (with the assumption that possible worlds are concrete items) and in its neutral form (compatible with all accounts of possible worlds), and shows that in either form Yablo's account and various modifications of it are unsuccessful.

Given the failure of previous attempts to characterize intrinsicity, one might wonder whether there is a coherent notion here to be defined at all.¹⁵ Alternatively, one might wonder whether the failure to successfully define 'intrinsic' is due to the notion's being *primitive*. In "Primitivism about Intrinsicity," presented here, Alexander Skiles addresses some important issues that have received little attention in the literature on intrinsic properties. There is the basic issue of what it could be, exactly, for intrinsicity to qualify as primitive, and what a viable primitivist account of intrinsicity could and should look like. There is also the question of what reasons there are to believe that primitivism about intrinsicity is true, and whether compelling arguments can be given to oppose the view. Skiles' clear and detailed exploration of these issues is of great service to those wondering about the prospects of primitivism, and his discussion is one that should also be minded by those who continue to search for an adequate reductionist analysis.

The final two essays in this anthology are not concerned with defending or refuting any particular approach to defining intrinsicity. What they reveal, instead, is what the physical sciences can tell us about intrinsic properties. In an earlier paper, Michael Esfeld (2003) describes how quantum theory provides evidence that the fundamental physical properties are not intrinsic. Since physics can only reveal the way in which things are related to one another, we can believe either that (i) there are fundamental physical properties of the intrinsic variety, but we cannot know them, or that (ii) at the level of basic physics, there are only the relations that items bear to each other. Esfeld (2003) points out that while purely philosophical considerations cannot decide between these two positions, quantum theory provides reason to accept (ii) rather than (i). In his new paper, "Physics and Intrinsic Properties," Esfeld further develops the argument that quantum theory supports (ii). He describes a view of the physical world in which matter is primitive stuff distributed in space, and the properties of physics are dispositions that fix the temporal development of the distribution of matter in space. As Esfeld explains, in classical mechanics, these physical properties can be thought of as the intrinsic properties of particles. However, quantum physics suggests that there is only one structure or holistic property that relates

15 Note Dennett's (1988, p. 67) suspicions about the notion.

all matter and fixes the temporal development of its distribution in space, and therefore that none of the basic properties of physics are intrinsic.

Earlier in this section I mentioned Eddon's (2011) compelling defense of the view that intrinsicity is hyperintensional. In "Intrinsic Explanations and Numerical Representations," which she wrote for this anthology, Eddon defends Hartry Field's support of "intrinsic explanations" of physical phenomena. Field argued that with his treatment of quantity, (i) we are able to provide intrinsic explanations of a variety of physical phenomena and (ii) we are also able to provide intrinsic explanations of why certain numerical representations of quantities are acceptable and others are not. Eddon refutes arguments that have been offered against both claims, arguments that rely on the fact that our numerical representations of quantitative features are largely a matter of convention. It is true that the numerical representations of quantitative features that we employ are conventional. Yet, Eddon shows, the conventionality of these numerical representations does not entail the conventionality of the features themselves. The conventionality of our numerical representations is perfectly compatible with (i)'s being true. Eddon does agree that Field's framework fails to establish (ii). She shows, however, that we can modify his framework so that we can provide intrinsic explanations for why some numerical representations are better than others.

Much thanks to the authors who have contributed to this collection—David Denby, Maya Eddon, Michael Esfeld, Carrie Figdor, Vera Hoffmann-Kolss, Dan Marshall, Alex Skiles, and Gene Witmer. Their addition to the literature on the intrinsic/extrinsic distinction is of great value to all of us who are trying to understand the nature of intrinsicity. Thanks, also, to Rae Langton, Peter Vallen-tyne, Brian Weatherson, and Stephen Yablo for agreeing to have their important work on intrinsic properties reprinted here.¹⁶

¹⁶ I am grateful, also, to Gertrud Grünkorn, Christoph Schirmer, and the rest of the Philosophy Editorial Staff at De Gruyter. I also thank Peter Atterton, Steven Barbone, and Tom Weston at San Diego State for their advice on formatting, and much thanks to Kimberly Unger for all her help with proof-reading. And special thanks to Blanca Francescotti for her undying emotional support.

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Rae Langton, David Lewis

Defining ‘Intrinsic’*

Something could be round even if it were the only thing in the universe, unaccompanied by anything distinct from itself. Jaegwon Kim once suggested that we define an intrinsic property as one that can belong to something unaccompanied. Wrong: unaccompaniment itself is not intrinsic, yet it can belong to something unaccompanied. But there is a better Kim-style definition. Say that *P* is *independent of accompaniment* iff four different cases are possible: something accompanied may have *P* or lack *P*, something unaccompanied may have *P* or lack *P*. *P* is *basic intrinsic* iff (1) *P* and *not-P* are non-disjunctive and contingent, and (2) *P* is independent of accompaniment. Two things (actual or possible) are *duplicates* iff they have exactly the same basic intrinsic properties. *P* is *intrinsic* iff no two duplicates differ with respect to *P*.

I Kim and Lewis

Jaegwon Kim defined an *intrinsic* property, in effect, as a property that could belong to something that did not coexist with any contingent object wholly distinct from itself.¹ Call such an object *lonely* or *unaccompanied*; and call an object *accompanied* iff it does coexist with some contingent object wholly distinct from itself. So an intrinsic property in the sense of Kim’s definition is a property compatible with loneliness; in other words, a property that does not imply accompaniment.²

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* We thank C. A. J. Cody, Allen Hazen, Richard Holton, Peter Menzies, George Molnar, Denis Robinson, Barry Taylor, and those who discussed this paper when it was presented at the 1996 Australasian Association of Philosophy conference. We also thank the Boyce Gibson Memorial Library. One author owes a particular debt to Lloyd Humberstone, who prompted her interest in contemporary (as opposed to eighteenth century) work on the metaphysics of intrinsic properties. Preliminary versions of some of the ideas in the present paper were raised in Langton’s ‘Defining “Intrinsic”’, Appendix 2 of *Kantian Humility*, Princeton University Doctoral Dissertation, 1995. They are applied to Kant in the dissertation, and in a book, tentatively titled *Kantian Humility*, Oxford University Press (1998).

1 Jaegwon Kim, ‘Psychophysical Supervenience’, *Philosophical Studies* 41 (1982, pp. 51–70).

2 This way of putting it simplifies Kim’s formulation by foisting on him a view he is not in fact committed to: the view that things that persist through time consist of wholly distinct temporal parts at different times. Given that view, one way for you-now to be accompanied is for you to persist through time, so that you-now coexist with your past or future temporal parts. But Kim himself remains neutral about the metaphysics of temporal parts; so what he actually says is as follows. Property *G* is *rooted outside the time at which it is had* iff, necessarily, for any object *x* and time *t*, *x* has *G* at *t* only if *x* exists at some time before or after *t*; *G* is *rooted outside the things*

David Lewis objected that loneliness itself is a property that could belong to something lonely, yet it is not an intrinsic property. He concluded that Kim's proposal failed. He also conjectured that nothing resembling Kim's definition would work, and if we want to define 'intrinsic' we had best try something altogether different.³

II A Kim-style Definition

That sweepingly negative judgement was premature. Though Kim's definition does indeed fail, a definition in much the same style may succeed.

First step. One intuitive idea is that an intrinsic property can be had by a thing whether it is lonely or whether it is accompanied. It is compatible with either; it implies neither.

Second step. Another intuitive idea is that, although an intrinsic property is compatible with loneliness, a thing's being lonely is not what makes the thing have that property. Lacking the property also is compatible with loneliness. And likewise with accompaniment: if a property is intrinsic, being accompanied is not what makes something have that property. Lacking the property also is compatible with accompaniment.

Putting the first and second steps together, we have that all four cases are possible. A lonely thing can have the property, a lonely thing can lack the property, an accompanied thing can have the property, an accompanied thing can lack the property. For short: having or lacking the property is *independent* of accompaniment or loneliness.

So can we define an intrinsic property as one that is independent in this way?—Subject to some qualifications, yes; but not in full generality.

A first qualification is that the proposed definition, and likewise all that follows, is to be understood as restricted to pure, or qualitative, properties—as opposed to impure, or haecceitistic, properties. There may be impure extrinsic properties, such as the property of voting for Howard (as opposed to the pure extrinsic property of voting for someone). There may be impure intrinsic properties, such as the property of being Howard, or having Howard's nose as a proper part (as opposed to the pure intrinsic property of having a nose as a proper

that have it iff, necessarily, any object *x* has *G* only if some contingent object wholly distinct from *x* exists; *G* is *intrinsic* – Kim's term is 'internal' – iff *G* is neither rooted outside times at which it is had nor outside the things that have it. We shall ignore this complication henceforth.

3 David Lewis, 'Extrinsic Properties', *Philosophical Studies* 44 (1983, pp. 197–200).

part).⁴ These impure properties are had only by Howard, and not by Howard's duplicates, or even (perhaps) his counterparts. Our proposal is offered as a way of distinguishing amongst the pure, or qualitative properties, those which are intrinsic, and those which are extrinsic. Impure properties are set aside as falling outside the scope of the present discussion. To be sure, we might eventually wish to classify impure properties also as intrinsic or extrinsic. But that is a task for another occasion.

III The Problem of Disjunctive Properties

Our proposed definition, as it stands, plainly does not work for disjunctive properties. Consider the disjunctive property of being either cubical and lonely or else non-cubical and accompanied. This property surely is not intrinsic. Yet having or lacking it is independent of accompaniment or loneliness: all four cases are possible.

So we require a second qualification: our definition should be deemed to fall silent about disjunctive properties. All it does is to divide non-disjunctive intrinsic properties from non-disjunctive extrinsic properties.

(The same goes for any definition that selects some one or two or three of the four cases, and says that a property is intrinsic iff all the selected cases are possible. Again, the property of being cubical and lonely or else non-cubical and accompanied will be misclassified as intrinsic.)

If a property is independent of accompaniment or loneliness, its negation also is independent. Yet if a property is intrinsic, so is its negation; and if a property is not intrinsic, neither is its negation. So we would expect trouble with negations of disjunctive properties. The property of being neither cubical and lonely nor non-cubical and accompanied is independent of accompaniment or

⁴ Pure and impure relational properties are described in E. J. Khamara, 'Indiscernibles and the Absolute Theory of Space and Time', *Studia Leibnitiana* 20 (1988, pp. 140–59). The notion of pure and impure intrinsic properties, by analogy with Khamara's distinction, was raised by Rae Langton (in conversation) and discussed by Humberstone in 'Intrinsic/Extrinsic', *Synthese* 108 (1996, pp. 205–67) (accepted for publication in 1992), and in Langton's *Kantian Humility* (Princeton University Doctoral Dissertation, 1995). The notion of an 'interior property' attributed by Humberstone to J. M. Dunn includes both impure and pure intrinsic properties (J. M. Dunn, 'Relevant Predication 2: Intrinsic Properties and Internal Relations', *Philosophical Studies* 60 (1990, pp. 177–206)). Humberstone distinguishes the family of duplication-related concepts of intrinsicness from the interiority conception, and from a notion he calls non-relationality of properties.

loneliness: all four cases are possible. Yet it is not intrinsic. So the definition proposed so far fails in this case too.⁵

What is a disjunctive property? Not just any property that can be expressed as a disjunction! Any property at all can be expressed as a disjunction: something is *G* iff either it is *G*-and-*H* or else it is *G*-and-not-*H*. But we think most philosophers will be willing to help themselves to some version or other of the distinction between ‘natural’ and ‘unnatural’ properties. Given that distinction, we can go on to capture our intuition that some properties are ‘disjunctive’ in a way that other properties are not.

Some of us will help ourselves to some sort of primitive notion of naturalness of properties. Others will accept an ontology of sparse universals, or of sparse tropes, that has a built-in distinction between natural properties and other properties. Still others will wish to characterize the natural properties as those that play some interesting special role in our thinking—but for our present purposes, even this vegetarian metaphysics will suffice. One way or another, most of us will be prepared to grant such a distinction.⁶ Here we must say farewell to those who will not make so free, and carry on without them.

What matters for now is not how we begin, but how we continue. Given some or other notion of natural properties, let us define the *disjunctive* properties as those properties that can be expressed by a disjunction of (conjunctions of)⁷ natural properties; but that are not themselves natural properties. (Or, if naturalness admits of degrees, they are much less natural than the disjuncts in terms of which they can be expressed.) That done, we can cash in our previous partial success, as follows.

Third step: the *basic intrinsic* properties are those properties that are (1) independent of accompaniment or loneliness; (2) not disjunctive properties; and (3) not negations of disjunctive properties.

The basic intrinsic properties are some, but not all, of the intrinsic properties. Other intrinsic properties include disjunctions or conjunctions of basic in-

5 A neater example is due to Peter Vallentyne (‘Intrinsic Properties Defined’, *Philosophical Studies* 88 (1997, pp. 209–19)): the property of being the only red thing. This is the negation of the disjunctive property of being either non-red or else both red and accompanied by another red thing.

6 See *inter alia* David Lewis, ‘New Work for a Theory of Universals’, *Australasian Journal of Philosophy* 61 (1983, pp. 343–77); David Lewis, ‘Against Structural Universals’, *Australasian Journal of Philosophy* 64 (1986, pp. 25–46, especially p. 26); Barry Taylor, ‘On Natural Properties in Metaphysics’, *Mind* 102 (1993, pp. 81–100); Mary Kathryn McGowan, *Realism or Non-Realism: Undecidable in Theory, Decidable in Practice* (Princeton University Doctoral dissertation, 1996).

7 The point of the parenthetical insertion is to remain neutral on the question whether all conjunctions of natural properties are themselves natural.

trinsic properties; and, indeed, arbitrarily complicated, even infinitely complicated, truth-functional compounds of basic intrinsic properties.

IV Duplication

Now we pause to recall a familiar pair of definitions. Two things (actual or possible) are (intrinsic) *duplicates* iff they have exactly the same intrinsic properties. (That is: iff all and only the intrinsic properties of one are intrinsic properties of the other.) *Intrinsic properties*, on the other hand, are those properties that never can differ between duplicates. A tight little circle—and, like all circles of interdefinition, useless by itself. But if we can reach one of the interdefined pair, then we have them both.

And we can. For how could two things differ in their disjunctive properties if they differed not at all in their non-disjunctive properties? And that goes for their disjunctive and non-disjunctive intrinsic properties as it does for their disjunctive and non-disjunctive properties in general. Likewise for all other forms of truth-functional combination, even infinitely complicated forms of truth-functional combination. So we have this:

Fourth step: two things are (intrinsic) *duplicates* iff they have exactly the same basic intrinsic properties.

Fifth step: a property is *intrinsic* iff it never can differ between duplicates; iff whenever two things (actual or possible) are duplicates, either both of them have the property or both of them lack it.

So our definitional circle has opened out into a little spiral. Those intrinsic properties that were left out at the third step, for instance because they were disjunctive, are admitted at the fifth step. The basic intrinsic properties afford a basis upon which all the intrinsic properties supervene. We have our definition.

V The Problem of Strong Laws

The modal status of laws of nature has become a matter of controversy. Some deny that laws are mere regularities; rather, laws are said to be regularities that hold by necessity.⁸ In other words, it is impossible for them to have counter-

⁸ See, for instance, Sydney Shoemaker, 'Causality and Properties' in *Time and Cause*, ed. Peter van Inwagen (Reidel, 1980); Chris Swoyer, 'The Nature of Natural Laws', *Australasian Journal of Philosophy* 60 (1982, pp. 203–23).

instances. But independence of accompaniment or loneliness is a modal notion. If laws are strong, maybe fewer properties than we think will turn out to be independent of accompaniment or loneliness. Then must we conclude that fewer properties than we think are intrinsic?

Suppose, for instance, that the only way that the laws permit for a star to be stretched out into an ellipsoid is for it to orbit around another massive star, and undergo distortion by the tidal effects of its companion. The property of being an ellipsoidal star would seem offhand to be an intrinsic property. In fact, it would seem to be a basic intrinsic property. However, this property is incompatible—nomologically incompatible—with loneliness.

But isn't that the wrong sort of incompatibility?—Not if laws are strong! In that case, if an ellipsoidal lonely star is nomologically impossible, it is impossible *simpliciter*. That would mean that the property of being an ellipsoidal star is not a basic intrinsic property—indeed, not any kind of intrinsic property—after all!

Some friends of strong laws may agree: they may say that our intuitions of what is intrinsic are made for a loose and separate world, and it is only to be expected that a world of necessary connections will defy these intuitions.

Well, that is one option. But there is another, perhaps better, alternative. If a theory of strong laws is to be credible, it had better provide not only a sense of 'possible' in which violations of laws are impossible, but also another sense in which violations of laws are possible. Perhaps that second sense cannot be provided. In that case the doctrine of strong laws is not credible enough to deserve consideration. Or perhaps that second sense can somehow be provided. (Friends of strong laws might think it a hoked-up, artificial sense.⁹ But no harm done, provided they acknowledge the possibility of lonely ellipsoidal stars, or whatnot, in some sense or other.) If so it is this sense of possibility, whatever it may be, that a friend of strong laws should use in defining 'intrinsic'.

The doctrine that God exists necessarily is problematic in a similar way to the doctrine of strong laws. Suppose it to be true. The property of being divinely

⁹ They might say that it is a matter of truth in all not-quite-literally-possible world-stories; or that it should be explained in terms of what possible worlds there are according to a certain Humean fiction. On fictionalist treatments of possibility, see Gideon Rosen, 'Modal Fictionalism', *Mind* 99 (1990, pp. 327–54), and 'Modal Fictionalism Fixed', *Analysis* 55 (1995, pp. 67–73); and for yet another slightly artificial sense in which violations of strong laws may count as possible, see Denis Robinson, 'Epiphenomenalism, Laws and Properties', *Philosophical Studies* 69 (1993, p. 31). And in working out these hoked up possibilities, they had better heed Allen Hazen's warning not to do so in a way that makes the definition circular, by using a principle of recombination stated in terms of intrinsic properties.

created turns out, surprisingly, to be a basic intrinsic property. How so?—Surely this property requires accompaniment by a divine creator, wherefore it is a property incompatible with loneliness.—No. An accompanied thing, we said, coexists with a contingent object distinct from itself. So accompaniment by necessarily existing God does not count.

What to do? If we change the definition of accompaniment by striking out the word 'contingent', it will turn out that if anything at all exists necessarily, whether it be God or the number 17, then loneliness is impossible, so no property at all is compatible with loneliness. That cure only makes matters worse.

Or we might accept the conclusion that if God exists necessarily, then the property of being divinely created is intrinsic; and we might deem this conclusion to be a swift *reductio ad absurdum* against the idea of God's necessary existence. Altogether too swift! Or we might accept the bankruptcy of intuition in the face of divine mysteries.

Perhaps a better alternative is again to distinguish senses of necessity. Perhaps God's existence may be supposed to be necessary in some sense. Yet in a second sense, it still might be contingent. (We could expect disagreement about which sense is straightforward and which sense is artificial.) A conviction that the property of being divinely created is not intrinsic would then be evidence, for those of us who are prepared to take the supposition of God's necessary existence seriously, that it is the second sense and not the first that should be used in defining 'intrinsic'.

VI The Status of Dispositions

Some authors take for granted that dispositional properties, such as fragility, should turn out to be intrinsic. Others are equally sure they are extrinsic. Where do we stand?

The answer implicit in our definition is: it depends. We remain neutral (here) between rival theories about what it means to be a law of nature. Different theories of lawhood will yield different answers about whether dispositions are intrinsic in the sense of the definition. A satisfactory situation, we think.

Let us assume that a disposition (or at least, any disposition that will concern us here) obtains in virtue of an intrinsic basis together with the laws of nature. Then whether the disposition is intrinsic boils down to whether the property of being subject to so-and-so laws is intrinsic. We have three cases.¹⁰

¹⁰ Ignoring the possibility that not all laws have the same status.

Case 1. The laws are necessary, in whatever sense should be used in defining 'intrinsic'. Then the property of being subject to so-and-so laws is automatically intrinsic. (See Section VII.) Dispositions are likewise intrinsic.

Case 2. The laws are contingent, in whatever is the appropriate sense; and further, the laws to which something is subject can vary independently of whether that thing is accompanied or lonely. Then being subject to so-and-so laws will presumably turn out to be a basic intrinsic property.

Case 3. The laws are contingent; but the property of being subject to so-and-so laws (or perhaps the conjunction of that property with some aspect of intrinsic character) is not independent of accompaniment or loneliness. Suppose, for instance, that laws are regularities that hold throughout a large and diverse cosmos. Then a lonely thing (unless it were itself of cosmic size) would be subject to no laws, for lack of a cosmos to serve as lawmaker. Or suppose that laws of nature are divine decrees, but that the law-making gods are lowly gods and exist contingently. Then a lonely thing, unaccompanied by a law-making god (and not itself a god) would again be subject to no laws. Under either of these suppositions, something unaccompanied by a lawmaker would be subject to no laws. So dispositions would in this case be extrinsic.

Those who take for granted that dispositions are intrinsic may just be dismissing Case 3 out of hand. Or they may instead have a concept of intrinsic properties that is best captured not by our definition but by a version amended so as to ensure that dispositions (with intrinsic bases) will count as intrinsic, no matter what the correct metaphysical theory of lawhood may be.¹¹

Likewise, those who take for granted that dispositions are extrinsic may just be dismissing Cases 1 and 2. Or they may instead have a concept of intrinsic properties that is best captured not by our definition but by a version amended so as to ensure that dispositions will count as extrinsic, no matter what the correct theory of lawhood may be.¹²

11 Amended as follows: at the fifth step, after saying what it is for two things to be duplicates, end by saying that a property is intrinsic iff it never can differ between duplicates *provided that these duplicates are subject to the same laws*. Here we have adapted a suggestion put forward by Lloyd Humberstone in 'Intrinsic/Extrinsic', which in turn is an adaptation of a notion he finds in Kim's informal discussion, 'Psychophysical Supervenience', pp. 66–8. (Humberstone offers a nomologically sensitive notion of intrinsicness, according to which something is nomologically intrinsic – 'Kim+-intrinsic', in his terms – iff duplicates in worlds with the same laws never differ with respect to it.)

12 Amended as follows: wherever 'lonely' appears in the first and second steps of our definition, put instead 'lonely and lawless', where 'lawless' means 'subject to no laws'. (We might need to resort to some hoked-up sense of possibility to ensure that lonely and lawless things are

VII Consequences of our Definition

A property which necessarily belongs to everything never differs between any two things; *a fortiori* it never differs between duplicates. Therefore the necessary property (or, if you prefer to individuate properties more finely than by necessary coextensiveness, *any* necessary property) turns out to be intrinsic under our definition. Likewise, the (or any) impossible property turns out to be intrinsic.

Here is another way to make the point: necessary and impossible properties supervene on the basic intrinsic properties in the trivial way that non-contingent matters supervene on any basis whatever. There can be no difference in the supervenient without a difference in the basis, because there can be no difference in the supervenient at all.

Is this consequence acceptable?—We think so. True, the distinction between intrinsic and extrinsic is of interest mostly when applied to *contingent* properties: that is, properties that are neither necessary nor impossible. But it is harmless to apply it more widely. True, necessary or impossible properties can be specified in ways that make gratuitous reference to extraneous things—but the same is true of all properties. (As witness the property of being cubical and either adjacent to a sphere or not adjacent to a sphere.)

As already noted, the basic intrinsic properties are some, but not all, of the intrinsic properties. Intrinsic properties that are disjunctive, or that are negations of disjunctive properties, are not basic intrinsic. We have just seen that non-contingent properties also are intrinsic, but of course they are not basic intrinsic. (A property that cannot be lacked at all cannot be lacked by lonely or by accompanied things; one that cannot be had at all cannot be had by lonely or by accompanied things.) But are these the only cases in which the intrinsic properties outrun the basic intrinsic properties?—Our answer is a qualified 'yes'.

Suppose we assume that every accompanied thing has a lonely duplicate, and every lonely thing has an accompanied duplicate. (Here we are speaking of possible things that may or may not be actual.) That assumption may be controversial: on the one hand, it is part of an attractive combinatorial conception of possibility;¹³ but for that very reason it will be open to doubt from friends of strong laws, unless they devise a special sense in which violations of strong laws are 'possible'.

possible.) Here we have adapted a suggestion put forward in Vallentyne, 'Intrinsic Properties Defined'.

¹³ Such as that advanced on pp. 87–92 of David Lewis, *On the Plurality of Worlds* (Blackwell, 1986); or in D. M. Armstrong, *A Combinatorial Theory of Possibility* (Cambridge University Press, 1989).