

# *The Relation of Compresence in the Bundle Theory: Four Problems*

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## Abstract

There are many things that the bundle theory of objects is thought to accomplish—an explication of the more exact “composition” or make-up of existent substances, the truth-making scheme for propositions and perhaps even an ontological foundation for property theory. The aim of this paper is to carefully examine certain issues which follow from the independence of properties and the nature of compresence to see whether or not these two axioms can be held simultaneously. For if properties are independent entities, compresence is required. Likewise, if compresence is a fact about the metaphysical make-up of entities, the primacy of properties must be maintained. This paper will examine four distinct potential problems for the bundle theory of substance by focusing on the compresence relation—these are what I will term the founding problem, the *de re* problem, the character problem and the agential aspect problem. After laying out each problem, this paper will offer some putative defenses from the bundle theory and lend rejoinders to them. This paper will conclude that no version of the bundle theory so far advanced is able to successfully answer all four of these objections and that therefore either the theory must be conceptually expanded and revised or rejected.

**Keywords:** Substance, Properties, Bundle theory, Compresence relation

## Introduction

There are many things that the bundle theory of objects is thought to accomplish: an explication of the more exact “composition” or make-up of existent

substances, the truth-making scheme for propositions and perhaps even an ontological foundation for property theory. But though there have been many differing goals and prospects for the application of the bundle theory, there is one goal which stands above and is a foundation for them all: to explicate an ontology wherein properties are primitive and objects are derivative entities. This being the case, no small toll is exacted upon one who wishes to accept and maintain the bundle theory of substance as doctrinal. One must not only accept that properties have a kind of independent existence, but also that there is a special relation, compresence,<sup>1</sup> which governs the “bundling” of particular properties into the objects which exist. Both of these claims may be seen as traditionally plaguing the bundle theory, but they have been answered by thinkers as many times as they have been rejected.

However, there are a few key issues surrounding these two problems which become apparent upon investigation—ones which, if they are to be found as faults, pose a serious threat for the coherency of the bundle theory of objects. The aim of this paper is to carefully examine these issues which follow from the independence of properties and the nature of compresence to see whether or not these two axioms can be held simultaneously. For if properties are independent entities, compresence is required. Likewise, if compresence is a fact about the metaphysical make-up of entities, the primacy of properties must be maintained. This paper will examine four distinct potential problems for the bundle theory of substance by focusing on the compresence relation—these are what I will term the founding problem, the contingency problem, the *de re* character problem and the agential aspect problem. After laying out each problem, this paper will offer some putative defenses from the bundle theory and lend rejoinders to them. This paper will conclude that no version of the bundle theory so far advanced is able to successfully answer all four of these objections and that therefore either the theory must be conceptually expanded and revised or rejected.

## 1. The Founding Objection

The first problem to be outlined in this paper is what I have termed the “founding” problem. The nature of compresence is often construed as a relation which holds between all of the particular properties of an object; whether this relation is two or three placed is of no consequence to the argument to be given here. But although some have maintained that relations between entities are irreducible,<sup>2</sup> most thinkers agree that relations between objects are founded in the properties of the respective objects. That is, these properties function as the truth-makers, as it were, of the relational facts that are true about the objects that are participants

<sup>1</sup> I am using “compresence” in the sense of a “tying relation”—not merely “collocation”, or a group which results from vicinity and spatiotemporal relations. There are various absurdities related to the very notion of “collocation”—see the footnotes of (Grupp, 2004) and Section 4 of (Simons, 1999) for a few.

<sup>2</sup> Most recently, Mertz (1996).

in a relation.

We are thereby seemingly justified in asking of the bundle theory where exactly the foundation of the compresence relation is “located” which holds between particular properties which make-up an object. The question is: is the compresence relation *internally* founded, in the particular properties themselves, or *externally* founded, in some other component such as a second-order property? It seems that either alternative leaves something to be desired explanatorily.

### *1.1. Two Conceptions of an External Foundation of Compresence: Second-Order Properties & Sub-Bundles*

Let us suppose that the compresence relation between some particular properties is externally founded—that is, that what governs the binding of properties is not in virtue of the nature of the properties which it in fact binds. Now there is the initial worry here that the bundle theorist simply *cannot* take this route of explanation, for her theory is one wherein objects are taken to be reducible to and are, in fact, nothing more than the sum of a bundle of properties. And granting this, how could such a theory reasonably posit some further element in an object which governs the relation of compresence if it is, so to speak, outside of the properties which comprise an object? But putting this initial concern behind, let us examine this conception, as it were, from the inside, accepting its premises and attempting to point out a few conceptual difficulties therein.

As far as I can tell, there seem to be two different conceptions of an external foundation under this supposition which one might maintain, one which externally founds compresence in some further property and one which founds compresence in a smaller sub-bundle of the larger bundle which makes-up the “total” object<sup>3</sup>. Consider the first of these: that in bundles of properties there are, besides purely qualitative properties, further properties (“compresence” properties) which are “second-order” properties that bind together the more primitive “first-order”, perhaps non-relational, properties which constitute a particular bundle making up an object.

But this poses a familiar and long-standing conceptual problem to this sort of response—a kind of Bradleyian regress. For if the fact that two properties  $P$  and  $F$  are joined together in a compresence relation is grounded in some further property  $PF$ , there must be, according to this conception, some further property that links  $P$  and  $F$  with  $PF$  in the same bundle—one which in-itself requires some further “third-order” property ad infinitum. Now, the bundle theorist may maintain that second-order properties are merely supervenient on first-order properties in such a way that they are not to be counted among the *ontologically real* properties

<sup>3</sup> I focus on the following two conceptions of an externally founded compresence relation on account of the insistence of bundle theorists, in accordance with the theory itself, on a “one-category” ontology in which nothing besides properties are admitted as being ontologically “real”. To attempt to explicate an externally founded compresence relation as grounded in something other than a property seems to me to be betraying the conceptual foundations of the theory itself.

of an object—they are, perhaps, merely relational predications which the theory posits which make clear the fact that some two properties are compossible with one another.

However, supposing that the second-order property linking two first-order properties is not itself not taken to be an ontologically real property, then we must ask: if the bundle theorist wishes to reduce objects to properties and thereby seeks to countenance all properties as *real constituents* of objects, why then should there be a discernable difference between the ontological robustness of a first-order property and a second-order property? If the bundle theorist already asks us to conceive of what we normally think of as “ways things are” as “what things are made-up of”, how can it non-arbitrarily ask us to conceive of some “way an object is” as distinct from “what an object is”—e.g., what are the grounds for treating second-order properties as merely predicative and first-order properties as ontological building blocks?

Furthermore, suppose that we grant that second-order properties are merely predicative. Then, since under this conception the compossible relation between two properties is externally grounded in some other property, the bundle theorist will be effectively stating the following: the relation of compossible between two properties in a bundle is grounded in the fact that there is a compossible relation holding between these two properties. And surely this is in an important sense a regressive account, one which leaves no real grounding of the compossible relation and which suffers from an unwarranted and unexplained primitivism—i.e., the bundle theorist still has neither explained *what* the relation of compossible amounts to, nor given any acceptable reason for thinking that the relation itself is immune to a further reduction and is therefore truly primitive.

And so, if it is the case that this kind of regress must take place in this conception of the nature of compossible, it seems that this will be unacceptable for any serious theorist for the following reason: an object will be an infinitely complex ontologically expansive mass of properties with no definable end of property possession or predication. There will be no, as Aristotle phrased it, “first point beyond which it is not possible to find any part, and the first point within which every part is.”<sup>4</sup>

How is a bundle theorist to respond to this objection? One seemingly promising (and somewhat popular) avenue might be to deny that such a regress is in fact vicious, though it is most certainly infinite. Perhaps then the bundle theorist might opt for the second of the aforementioned options and claim that what grounds the compossible of two properties is that there is some other sub-bundle of the object which requires that these two properties be bound together. The property  $PF$  then will require no further compossible relation tying it to  $P$  and  $F$ , since it being a part of some sub-bundle of the bundle of properties which make up the object will, in itself, account for the fact that  $P$  and  $F$  must be bound together. In this way, sub-bundles will rely on other sub-bundles ad infini-

<sup>4</sup> *Metaphysics*, Book Delta.

tum, but this regress, like infinitely regressive causal chains, will not undermine the work of the relator.

But this response suffers from a flaw which renders it a useless attempt to salvage the coherency of the regress. For though this addendum might explain how it is that an externally founded compresence relation binds together two certain properties, it yet is merely an explanatorily pushing back—we are still left questioning what grounds the fact that the sub-bundle upon which the compresence of *P* and *F* is grounded in is itself in such a compresence relation. Namely, this explanation of the nature of compresence between two properties presupposes what the explanation itself is supposed to explain—the grounding of the fact that two tropes are compresent with one another. I do not see how a bundle theorist can respond to such an objection and rejoinder if he holds that the compresence relation is externally founded.

### 1.2. *Two Conceptions of Compresence as Internally Founded: Logical Entailment and Property Complexity*

Suppose then that one holds that the compresence relation between properties holds in virtue of some fact about the properties themselves – this is the conception of the compresence relation as *internally* founded. Now there is an initial intuitive objection that I want to point out in the conception of properties being the foundation for the compresence relation between them. Consider an individual apple *A*, whose properties are *Red*, *Shiny* and *Porous*; formally,  $A = \{RSP\}$ . Now, consider the situation wherein the apple loses the property of being red *R*, due to oxidization, and gains the color brown *B* or wherein it loses its luster *S* and gains a rather dull appearance *D*. For the purposes of illustration, suppose that the first case obtains.

The apple, losing the property *R* then gains the property *B* and the object thereby has gone from  $\{RSP\}$  to  $\{BSP\}$ . In this change of properties, it is the case that *R* becomes no longer compresent with *S* and *B* does in its place. But, as it is the case that the individual apple *A* continues to persist and the property *B* continues in *R*'s place, being now compresent with *S* where *R* formally was, does this not suggest that it is not on account of either *R* or *S* that these two properties were so conjoined in a relation of compresence? For if their replacement is as easy as it is accommodating, why should we be led to posit anything internal to *R* and *S* which initially bound them in the first place?<sup>5</sup>

But, putting this initial concern aside, there are two main objections for the internally founded conception of compresence that I want to point out. Both of these center around the nature of *how* it is that any two particular tropes are joined in a relation of compresence—that is, is this binding a matter of logic or a kind of material entailment?

<sup>5</sup> Mertz raises a similar point in his (1996).

### 1.2.1. *Compreence as Logical Entailment*

Firstly, consider the former option. Granted, it must be the case that some properties are logically founded on one another in such a way that one could not be present in any compresent bundle with out the other thereby being present as well—take for example the properties “colored” and “red”. And this kind of logical entailment will surely be sufficient in an explication of the comprence relation between an object’s essential properties—those which it could not possibly lack and all of which an object *must* possess.<sup>6</sup>

But surely the bundle theorist does not want to claim that this kind of logical entailment is what comprence is between *every* and *all* the properties of an object. Consider, for example, the individual apple which loses *R* and gains *B*. Clearly, if it is the case that at any time during the existential career of *A* it loses *R* from the bundle  $\{RSP\}$ , then it is logically contingent that *R* and *S* be so bundled in a relation of comprence—that is to say, the opposite of this relation is possible and it is therefore contingent. And so what are we to say about this kind of substantial change in an object’s properties wherein there is seemingly no logical connection between the two which necessarily bound them together in a relation of comprence? That is, it cannot be a matter of pure logic that this comprence relation between *R* and *S* holds, for it might have been otherwise—something which the relation of logical entailment rules out.<sup>7</sup>

### 1.2.2. *Compreence as a Complex Property Relation*

Now let us consider the second of these options, that this relation of comprence is a kind of material entailment—not so much of a matter of logic as a consequence of the *natures* of the properties in question.<sup>8</sup> We have a viable model for this kind of conception in the manner in which the metaphysician might argue for the acceptance of properties in a proper ontology: properties are explanatorily beneficial in explaining causation—both qualitative and quantitative. So we admit the existence of properties in objects in order to account for these kinds of phenomena. In this same way, the bundle theorist might argue that we ought to admit that the properties themselves which, in some manner or another, make up the object are to be understood as fairly complex as well. That is to say, the “everyday” properties of an object have their own distinctive character which

<sup>6</sup> Though the bundle theorist must then commit to a theory which connects the essential properties of an object together as purely a matter of logic, a claim which many *de re* essentialists are wholly opposed to in light of the 20<sup>th</sup> century assault on metaphysical speculation *à la* Quine. There are thinkers who do want to make this kind of move, though they are not explicitly bundle theorists—see Plantinga (1979).

<sup>7</sup> Simons himself dismisses the notion of logical entailment as encompassing the comprence between each and every property of an object, rejecting Husserl’s “color” and “shape” example as a case that does not characterize the relation between every property in a bundle. See Simons (1999).

<sup>8</sup> This kind of move is much more plausible if, as many do, understand properties as “particularized ways of being” or *tropes*. Obviously, a property realist (in the Platonic sense) will encounter problems in attempting to hold this kind of entailment.

governs in which ways they will join with other properties in compresence relations.

How is this to be understood? The bundle theorist might explain this in the following way: the fact that these two properties *R* and *S* are compresent with one another for a certain period of time is a matter of the *individual nature* of *R* and the individual nature of *S*. There will be then nothing more to explicate here—we have reached the conceptual ground floor in a basic ontological fact. After all, the bundle theorist might add, in philosophical analysis we must eventually come to explanatory stopping points—why not reach one here? However, I think that this is nothing more than a backing out in an attempt to save face for the theory.

Suppose we do admit that we have reached the conceptual ground floor—what then have we to say about the nature of compresence? We can confidently and firmly state the following: *these* properties are compresent with *these* properties because *these* are *these* properties; or, as Simons puts the matter, “a bundle of tropes is held together by whatever relation holds it together.”<sup>9</sup> Since when were explanatorily primitive grounds so barren of explanation—not merely at the ground floor, but even possessing *absolutely no* implications for the first or second levels? One might not, for instance, agree with the Leibnizian ground floor axiom of the principle of sufficient reason, but at least it has consequences for the levels of explanation above it.

So then a more explanatorily plausible way to explicate the *individual nature* of a property is to hold that everyday properties themselves are composed of further properties and that these properties explain how it is that the compresence relations occurs between two everyday properties. But here we only run into more theoretical mischief. Under this conception there will be no violation of the primary ontological commitment of the bundle theory, but there *will* be an inexplicable back-tracking in the original position of the bundle theorist, as properties will not be, *tout court*, the fundamental “atoms” of the ontological landscape of the universe.

And furthermore, is it then the case that some property *P* is composed of some further properties *E* and *F* and these properties are predicable of *P* as if it were a *subject*—a role which only a properly compresent bundle can play? Clearly the bundle theorist cannot accept the latter conception, but, by my lights, it can equally not maintain the former. And, for the sake of argument, suppose that we do accept the bundle theorists claim of infinitely complex everyday properties, assuming he will not want to, seemingly arbitrarily, stop the possession of properties by properties at some point. We will then have no solid ontological foundation for any object whatsoever and we will have, as the saying goes, turtles all the way down. For if the bundle theorist posits everyday properties possessing further, more primitive properties as the reason for two everyday properties being compresent, why then should we not have to ask what it is about the more

<sup>9</sup> Simons (1999, p. 51)

primitive properties within an everyday property that ties them together?—thus the downward regression.

## 2. The Contingency Objection and the Problem of False Change

There is, in opposition to the bundle theory, the all too familiar objection that the bundle theorist cannot account for the contingency of property possession. In short, if an object *just is* a bundle of properties, it cannot change these properties in any respect whatsoever without it thereby becoming a different individual—e.g., if  $\Box x = \{RSP\}$ , then  $\Box x \neq \{BSP\}$ .<sup>10</sup> How then are we to account for our modal intuitions, namely that *this* object might have had different properties, and theoretically allow for change in an object's properties? If the bundle theorist were to claim that  $x$  is able to lose  $R$  and gain  $B$  in its place—that  $R$  is only contingently possessed by  $x$ —would it not be the case that there would be  $x$  at  $t_1$ ,  $\{RSP\}$ , and a wholly different individual at  $t_2$ ,  $\{BSP\}$ ?

So it seems that we have, by the identity conditions presupposed by the bundle theory of substance, two different objects. For, as Van Cleave notes, we do not here have a change in the properties of one and the same object, but rather the replacement of one object for another;<sup>11</sup> call this the “false change” objection. And this is because, according to the bundle theory, an object *just is* the bundle of properties it possesses. So, contra the claim of the bundle theorist who wishes to maintain property contingency, it apparently *could not* be the case that an object change the properties which it possesses—to do so would be to become another individual, something only a handful of contemporary thinkers would be willing to grant as a remote modal possibility.<sup>12</sup>

### 2.1. The Nuclear Theory and the Family Requirement Response

I want to examine here what I consider to be the most prominent response whose aim is to account for modal contingency in the property possession of an object while maintaining the bundle theory. This is the *nuclear theory* of objects, maintained by Simons, wherein an object is a bundle of properties—in the *core* of this bundle are its essential properties, on the *fringe* are its accidental.<sup>13</sup> This kind of conception then, will allow for a bundle theory which does not count each

<sup>10</sup> To see that this claim is correctly attributed to the theory, consider Lewis and others who observe a strict application of the Principle of the Identity of Indiscernibles: where there are differing properties there are different individuals; it is for this reason that Lewis does not admit particulars inhabiting more than one world. There are, of course, two different manners in which one might understand PII. The first concerning the ontological properties of an object, the second concerning its qualitative *appearance*—it is the first of these which Lewis and other world-bound theorists endorse. So although Lewis and others will argue for the possibility of qualitative indiscernibility between objects in differing worlds, this will not, to them, constitute a violation of PII.

<sup>11</sup> Van Cleave (1999, p. 98).

<sup>12</sup> Certainly Ruth Marcus' remarks about the necessity of identity are pertinent evidence here for the absoluteness of identity. See also Wiggins (2001) for similar arguments to this effect.

<sup>13</sup> See Simons (1999).

property as essentially possessed, allowing for certain properties to succumb to the Heraclitian flux.

Now the properties which compose the core are, according to Simons, *foundationally related* to one another—that is, they each could not exist without the other; this entails then, that the fringe properties are neither foundationally related to each other nor to the properties of the core. However, even having granted this as an adequate explication of essential compresence, we must ask: how is it that these accidental properties which compose the fringe of a bundle are compresent with its essential properties? The nuclear theory suggests that the compresent relation is to be understood as a relation which obtains between the essential properties composing the core and the accidental properties orbiting the fringe, governed by what Simons calls a *family requirement*.

The family requirement states that, given these essential core properties, there must be accidental fringe properties from a certain *family* (read: kind) that the object possesses. Here the nuclear theory can avoid the pitfalls of trying to explicate the compresence relation in terms of internally founded logical entailment—an essential core need not possess *these* accidental fringe properties, but it *must* possess accidental properties *of the same kind* as these; the requirement is, according to Simons, “specific, not individual.”<sup>14</sup> Now at first blush this conception of bundles seems to be a fairly satisfying account of the contingency of an object’s (under the bundle-theory conception) property possession, but there are at least two interrelated objections which I should want to raise.

Firstly, according to the family requirement, a property is contingent if and only if it is not foundationally related to the core of an object which possesses it, though the particular family which the property belongs to is. But is there not here a certain air of circularity? What we want to know is *how* it is that certain properties are to be conceived as contingently related to a particular core. Stating that these properties are contingent *because* they are not necessarily foundationally related to the core of an object is not satisfying. What have we explained when all we have said is: for a property to be contingent, it must not be foundationally related to the core of an object? What we want to know is: what is the reason that certain properties are not founded in such a way that they, but not others, could not possibly be present in this particular bundle without some others being present as well? In other words, I do not see that the nuclear theory has any non *ad hoc* ground to distinguish between *core* and *fringe* properties—nuclear theory offers no real criteria of *what it is* for a property to be contingent.

Secondly, it seems to me that to explain this contingency of property possession by stating that the families of certain properties are necessarily foundationally related to the core of an object, but that the *particular* properties in this family are not is merely to push back the explanation. Can we not ask then why it is that *this* particular family is foundationally related to the core of the object? That is, why it is that *this* bundle requires some properties of *this* kind? This is

<sup>14</sup> Simons (1999, p. 59).

not an unreasonable question to ask since it is the case that some theories of *de re* modality can *prima facie* account for such a necessity—counterpart theory, for instance, offers the explanation that an object has certain family requirements in virtue of all of its counterparts having the exact same family requirements. But, as far as I can tell, it seems that the nuclear theory is not able to account for the contingency of property possession in a non-circular and non *ad hoc* manner.<sup>15</sup>

## 2.2. *The Bundle-Bundle Theory and Temporally-Indexed Bundles*

Is there any response by the bundle theorist which might extinguish the flames of this formidable objection? Casullo, in his “A Fourth Version of the Bundle Theory”, offers a “bundle-bundle” formulation of the bundle theory, which he inherits partly from Castañeda.<sup>16</sup> Under this conception, objects are to be conceived as “temporally extended series of momentary things”, or enduring complexes of what normal “bundles” are assumed to be—namely, compresent properties<sup>17</sup>. In this way, objects can maintain their identity throughout time in that they are composed of “momentary bundles” which are bundled together to form the more complex “bundle-bundle”—and *this* bundle is the complete object. In a way, Casullo’s bundle-bundle theory posits objects as larger, more complicated bundles of temporally-indexed sub-bundles.

Is this then an adequate response to the “false change” objection? I think that it is not. To be sure, to make this kind of move *is* to be able to posit a bundle theory that is conceptually prepared to answer the charge that objects cannot change over time. But what the bundle-bundle theory is not conceptually prepared to do is to account for the charge that objects cannot have different properties *per se*—that is, that they could not have possessed *any* different properties in its *complete set* of its properties. That the bundle-bundle theory is able to account for an object having different sets of properties at different times does not save it from the fact that it cannot account for an object having a different definitive set (of sets) of properties.

And this is the crucial point in the “false change” objection—that the sum of the properties that an object possesses, be they conceived as smaller “sub-bundles” of properties or just plain properties, cannot be contingently possessed without thereby altering the identity of the object in question. So much then for Casullo’s response and, as far as I am concerned, so much for the bundle theory’s adequacy in answering the problem of contingency.

<sup>15</sup> As I will attempt to show later, it seems to me that the family requirement essentially boils down to the acceptance of a kind of logical entailment between the core of an object and the family which it requires—and herein arise the aforementioned objections previously raised against this kind of internal logical entailment.

<sup>16</sup> Casullo (2001).

<sup>17</sup> *ibid.*, p. 138.

### 3. The *De Re* Character Objection

The next objection that I want to raise against the bundle theory is what I will term the “character” problem. The heart of this objection is that the bundle theory of objects cannot account for the *modal character* of an object in two distinct ways: the limit and specificity of property possession. That is, the *limit* which is set by an object distinguishing which properties are able to be possessed by it and which are not and the *specificity* by which an object declares that *these* properties are the ones which are actually possessed by it and no others.<sup>18</sup> This is what is meant when I speak of an object’s *modal character*. To raise this objection in a more direct fashion: how does the compresence relation govern the *de re* modality of particular bundles of properties?

Now, the bundle theorist may interject that I am asking for too much of their theory—that the utility of the bundle theory is merely to analyze the structure of objects, not explain the *de re* modal government of their particular constituents. But notice that if the compresence relation does not function as the *de re* modal governor of the properties of an object, it will thereby not play an active role in which properties are possessed by an object at which times (or in which world-contexts). If this is the case, the bundle theorist is committed to the following claim: the unique relation which binds certain properties together to form a particular object has no active role in deciding which properties are bound together to form the particular object. It seems to me that, according to the commitment of the bundle theory that there is nothing more to objects than properties and their compresence relationship, the relationship itself must govern the binding work in such a way.<sup>19</sup>

#### 3.1. *The Limitation of Property Possession*

Let us consider the first part of this objection, the limitation of property possession inherent in the modal character of objects and the compresence relation’s inability to account for such a limitation. The objection here is that the compresence relation has no conceptual resources to account for the limitation of property possession in objects. In other words, what is it *about* the relation of compresence that would allow it to be sufficient for it properly setting a limit on the property possession of objects? Adams expresses the substance of this worry in the following way: “Presumably every haecceity is compatible with some but not all consistent qualitative properties [...] But what is the ground of this nec-

<sup>18</sup> It is important to note that these two requirements are interrelated, but not identical. Wiggins stresses both of these points in his essentialist sortal theory: a substance-sortal must set an objective boundary of property possession of the members of its extension (all of the objects which fall under this sortal) as well as prescribe *these* typical properties to *this* particular sortal-kind. See his (2001).

<sup>19</sup> I think it is the case that any particular explanation will involve both the compresence relation of some particular object and the compresence relation of one or more objects, as well as the properties which happened to be compresent in each of the objects. But surely it is not *solely* a matter of the properties of the respective objects.

essary capacity and incapacity?”<sup>20</sup>

Perhaps the nuclear theory might be able to offer a way in which the com-  
presence relation has the conceptual resources to account for the limitation of  
property possession in objects. As we have seen, the nuclear theory suggests that  
the family requirement holds between the essential core properties of an object  
and its fringe accidental properties—the core requires properties from a partic-  
ular family to be com-present with it, but not any specific properties from this  
family. In this way, the nuclear theory seems to be able to account for the modal  
character of an object’s limitation of property possession—only those properties  
which belong to the families which are required by the core of the object are  
able to be possessed by the object. This then seems to set a proper limit to the  
property possession of an object.

However, it seems to me that the family requirement, while perhaps account-  
ing for this limitation in a very general manner, cannot account for the more spe-  
cific limitation of property possession in an object’s modal character. Consider  
again an apple which is peeled at time  $t$  in world  $W$ , and so loses the property of  
having skin  $S$  at  $t$  in  $W$ . Now, clearly the property  $S$  belongs to a proper family  
of the apple, for it is a characteristic of an apple to be able to possess properties  
which belong to the family which involves aspects of skin qualities. However,  
*this* particular apple does not have the *de re* possibility of possessing the prop-  
erty  $S$ -at- $t_1$ -in- $W$ .

What then is the reason for this incapacity and modal deprivation of the ap-  
ple? Clearly this property belongs to a proper family of the object, but it is  
yet not thereby able to possess this property. In short, how does the family re-  
quirement account for particular properties not being able to be possessed whose  
families are allowed and necessarily foundationally founded in the core? It seems  
to me that it cannot account for such a manner of limitation and that the lim-  
itation that it does govern is far too general, accounting only for kind or type  
allowance, rather than substantive *de re* limitation of the properties of an object.  
The com-presence relation must, in contrast to being an active agent in the causal  
network of bundles of properties comprising objects, set a *once and for all* limit  
to the property possession of objects—and this seems unacceptable, it being an  
active and contingent relation.

Note finally, and importantly, that the bundle theorist who wishes to use the  
family requirement to set a limit to the property possession of objects is com-  
mitted to the position of Platonic Realism. That this is so is evident on account  
of the family requirement requiring that there be some extra-objectual “kind” to  
which the core of the object is inextricably related. So the bundle theorist must  
commit himself both to the existence of abstract objects, families, to ground this  
internal foundation *and* the coherency of the realm of logic as ontologically dic-

<sup>20</sup> Adams’ point here is in reference to the connection between an independent haecceity and an  
object, conceived as distinct. His intended point then is of no importance here, but his idea and  
corresponding question are wholly applicable and poignant; we might replace “haecceity” here  
with “particular com-presence relation”. See his (1999).

tating the very nature of objects. It is evident that some thinkers will be willing to grant the former, myself not being among them, but who will stand for the latter of these as typifying *de re* modal claims?<sup>21</sup>

Notwithstanding the fact that *de re* modal claims are typically not taken to be governed by logic alone (or analyticity, etc.), this position seems untenable for the bundle theorist; though, it is certainly questionable *per se*, since it requires the existence of abstract objects. For if one is a bundle theorist and a Platonic Realist, it will then be the case that many different bundles may have one and the same core—or, at any rate, many different cores will be related to one and the same *abstracta* - thus not securing the individuality and distinct *de re* modal character of any particular bundle—*i.e.*, the *de re* limitation of property possession of one bundle will be, *tout court*, the same *de re* limitation for another.

### 3.2. *The Specification of Property Possession*

The second part of this objection concerns the aspect of the modal character of an object that I have termed its *specification* of property possession. The concern here is that the compresence relation which holds between the properties which compose an individual object does not seem to have the conceptual resources to account for the fact that objects at every point in time have *certain* properties, rather than others.<sup>22</sup> Our question then is what is it in virtue of which *these* tropes are compresent in this bundle instead of some others?

It seems that we cannot, in order to explain such specificity, invoke the fact that *this* compresence relation holds (presumably instead of some other), for this is really to give up and explain nothing. But perhaps here the nuclear theory might be able to offer a satisfying response to this objection. Might not it be the case that the core of an object specifies which properties the object will possess in that it prescribes that properties from *these* particular families *must* be possessed at all times? If this were so, we might attempt to explicate a view wherein the compresence relation specifies which properties an object will have at some particular time by it prescribing particular families under which any and every property of the object fall.

In this way, the compresence relation will specify the property possession of an object by ensuring a *foundational relation* between the core of an object and particular families, in the same way that the essential members of an object's core share this relationship with one another.<sup>23</sup> The nuclear theory then, in order

<sup>21</sup> McLeod, in his (2001), does excellent work in providing good reasons for holding that the form of *de dicto* statements, those not concerning entities, are logical in character and therefore that *de dicto* claims of necessity ought to be considered claims of *logical* necessity. He contrasts these to *substantive* modal claims, which concern entities. See especially Chapter 4.

<sup>22</sup> It should be noted that this objection is distinct from the previous objection. While the previous objection critiques the fact that compresence cannot explain why a particular object has certain limits of property possession, the current objection critiques the fact that compresence cannot explain why a particular object has *these* properties instead of some others.

<sup>23</sup> A foundational relation is called for here because the nuclear theorist must have it be the case

to account for the specificity of property possession, need only hold that the foundational relation is that which binds *these* families to *these* essential properties of the core of an object, thereby dictating which properties are to be possessed by the object.

Now, besides it being the case, as was previously mentioned, that the bundle theorist must be committed to holding a Platonic Realist position to secure the family requirement, there is the further and more pertinent worry that the specification done by a kind term cannot account for the particular *de re* modal properties of an object. And if the family requirement cannot secure the particular and specific *de re* modal properties of an object, prescribing which specific properties will be possible for it, it can equally not secure its particular and specific non-modal properties. In other words, the family requirement, as a kind of sortal essentialism, does not determine *particular* property possession.

As Mondadori puts the matter, the family requirement cannot secure the *distinct* possibilities of an object but only the *generic* possibilities. According to Mondadori, *generic* possibilities for objects do not adequately characterize its *de re* nature because they prescribe the specification of property possession not on account of the object's "deliberate causation", are not "distinctive [...] *specifically* of [the object]", being "no more specific to [a particular object] than to any [other object]".<sup>24</sup> Mondadori also notes that generic *de re* possibilities that an object possesses do not "single out a unique set of properties that, as of a definite time *t*, [an object] possess[es], thereby succeeding in singling out a unique and fully determinate possibility", since they have no definite goal (read: unexemplified property) that is unique to the object alone.<sup>25</sup> In other words, the family requirement cannot specify for an object any particular properties that *it alone* might obtain, since the ground of the possibility in one object falling under a certain sortal is precisely the same in one object as every other that falls under the same sortal.

Mondadori's distinction between *generic* and *distinct de re* possibilities has interesting and important consequences for the notion of the compresence relation, and the family requirement, as setting a true *de re* specification to the property possession of objects. For the family requirement, under the guidance of a sortal essentialist perspective, cannot specify any *distinct* possibilities for any particular bundle and so can offer no real—*i.e.*, causal—explanation as to why *this* property is in this bundle instead of some other.

#### 4. The Agential Source Objection

The last objection that I want to raise against the bundle theory and the nature of the compresence relation is what I have termed the *source* problem which con-

that *these* families are required non-contingently, given that *these* particular essential properties form the core of the object.

<sup>24</sup> (Mondadori, 1986, pp. 261–2).

<sup>25</sup> *ibid.*, p. 260.

cerns the inability of the relation of compresence to explain the why it is that only particular bundles can be considered proper objects—those which are their own source of action and passion. It has often been noted that objects are those things which are able to both *give* and *receive* certain affections, being the primary subjects of actions and of passions. Take, for instance, Leibniz, who stated that “activity and passivity pertain distinctively to individual substances” and that “[the] substantial can be defined [...] as the *source of modifications*”.<sup>26</sup> The insight here is that not merely any collection of properties can be identified as an individual object, but only those properties which have a kind of law-like connection among them, allowing their coherently consistent ability to both give and receive some act. It was with this principle in mind that Leibniz developed his notion of the *vinculum substantiale*, whose purpose was to distinguish *real* objects with *unitas per se* from mere *collections* of properties with *phenomenal* unity, such as herds or rainbows.<sup>27</sup> Hacking’s illustration of a pen and a berk, a “bundle of contiguous qualities” composed of “the bottom part of my pen, the inside of my thumb, and a bit of yellow paper”, is poignant here:

My pen and my berk differ. As a matter of fact, but not of logic, my pen, all by itself, can be thrown, heated, repaired, crushed, locked away, and wiped when wet [...]. It is hard to do many of these things to my berk, all by itself [...]. Pens do all sorts of interesting things and have all sorts of interesting things done with them. Berks might be like that, but are not.<sup>28</sup>

The objection here then is that it seems that the relation of compresence, or any merely *tying* relation, is conceptually unable to account for the fact that, of necessity, properties may only come together into *these* types of bundles—those which are proper sources of their own actions and passions. In other words, what is it *about* the relation of compresence which makes it the case that it is necessary that there are not such monstrous mereologically arbitrary entities abounding in the universe? The bundle theorist, I think, *must* be held responsible for offering an account of *why* it is that the relation which is posited to unite together a particular bundle of properties goes about binding such properties in such a fashion. For it seems clear to me that *that which* binds together properties is also *that which* determines *in which way* these properties are bound.

However, as far as I can tell, the bundle theorist can give no satisfying explanation as to *why* the compresence relation functions in this manner and in this manner alone, or *how* the relation of compresence functions in this way. Suppose the bundle theorist attempted to offer such an account—what could this explanation include? Is not such an explanation, for the bundle theorist who posits the

<sup>26</sup> Leibniz (1976, pp. 307 and 614 respectively).

<sup>27</sup> “Aggregates of simple substances such as an army or a pile of stones are semientities [...] all these things would be mere phenomena, though real, if there were only monads without substantial chains” (Leibniz, 1976, p. 614).

<sup>28</sup> Hacking (1972).

compresence relation, rather *outside* of the theoretical framework of the relation of compresence itself? How then will the bundle theorist attempt to offer such an explanation? And if he cannot, it seems to me that we should not be encouraged to endorse the bundle theorist's theoretical posit of the compresence relation.

### 5. Concluding Remarks

We have seen that the relation of compresence, the theoretical ontological glue between the properties of an object according to the bundle theory, fails to account for many of our contemporary conceptions of the nature of objects. The compresence relation not only has no clear foundation for its function, either internally or externally of the properties it binds together, but it also cannot account for *how* it binds together these properties in such a way that they are proper sources of their own actions and passions. Couple these conceptual failures with the fact that the relation of compresence cannot account for the *de re* modal contingency of property possession *nor* the modal character by which these kinds of changes are governed and prescribed, and it seems that the bundle theorist has left little explanatory utility for the compresence relation besides the blatantly tautological: properties are held together by that relation which holds them together. However, due to the arguments I have tried to draw out in this paper, I find the compresence relation, and hence the bundle theory, explanatorily unsatisfying and ultimately unacceptable.

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