The Identity of Indiscernibles (II) Argument against

But, (PCI) and (BT) jointly imply the Identity of Indiscernibles (II):
Agreement on all properties entails identity.

So, the realist bundle theorist must reject either (PCI) or (BT), or both.

But, or so the argument continues, (II) is
Hence, the debate about realist bundle theory hinges on (II). Is it false?

The constituents of a particular are (just) its properties.

This leads Loux to formulate a revised version of realist bundle theory (BT).

Loux (Black) considers a universe containing only two spheres (a and b).
The spheres have the same shape, color, mass, texture, size, etc. Indeed, they seem to share all properties. As Loux puts it “they are so similar that no one can tell the difference between them.” Could this be a counterexample to (II)?

What about the properties A = being identical with a, and B = being identical with b. Don’t a and b fail to share these properties? After all, a exemplifies property A, but b does not, and b exemplifies property B, but a does not.

Loux argues that the (realist) bundle theorist is not allowed to appeal to such properties, since such properties presuppose an “irreducible” notion of a particular: one that cannot be be understood as a bundle of attributes — without simply begging the question at hand. Such properties are impure.

This leads Loux to formulate a revised version of realist bundle theory (BT).

(BT*) The constituents of a particular are (just) its pure properties.

(BT*) and (PCI) entail something stronger than (II), namely:

(II*) Agreement on all pure properties entails identity.

This seems to be an argument against (realist) bundle theory that cannot be escaped by appealing to properties like A and B, which are patently impure.

But, it is impossible for two different concrete objects to occupy the same region of space at a given time. So, no two concrete objects will agree with respect to those properties that specify their spatiotemporal location either.

In a rebuttal on behalf of the substratum theorist, Loux says:

...these properties are one and all impure. [the substratum theorist] will argue that since space and time represent relational structures, the properties that specify the spatiotemporal position of concrete objects are always properties like being 2 miles north of the Eiffel Tower – properties that already presuppose or involve concrete particulars and so cannot number among the items the bundle theorist construes as constituents of concrete objects.

This seems to depend on whether space-time itself is taken to be a substance as opposed to a bundle of relations. Newton vs Leibniz! [See Hacking.] Turn the tables: Why does the substratum theorist think there are two spheres here?
**Concrete Particulars X: Another Way Out? (Zimmerman/Hawthorne)**

- Zimmerman (and Hawthorne) formulate another possible response to the (II)-objection on behalf of the realist bundle theorist. They suggest that the realist embrace horn #1 of the age-old Parmenidean Dilemma (Lecture 6).
- Recall, this horn assumes that universals are *entirely* located where *each* of their exemplifiers are located. *E.g.* Redness is *entirely within* each red sphere. On this account, universals are “immanent” and “separate from themselves”.
- NOTE: We are *not* talking about tropes here! We are talking about single universals (e.g., Courage) being located in *two different places at one time*.
- Nobody thinks that particulars are capable of this, but, as David Lewis says, this intuition was clearly “made for particulars,” and there may be no reason to suppose that this should also apply to universals. How does this help?
- If universals can be *(entirely)* in two places at once, then the fact that the spheres are spatially separated is not decisive in determining whether they are *one and the same* — could be one bundle of universals, separated from itself.

**Concrete Particulars XI: An Argument for Substratum Theory**

- Many people view the above argument [from not (II*) and (PCI) to not (BT*)] as a refutation of the metaphysical realist version of bundle theory [(BT*)].
- Thinking more deeply bout these conditions leads, according to Loux, to a persuasive positive argument in favor of substratum theory.
- If (II*) is false, then there will be distinct particulars which (nonetheless) share all pure properties. For instance, think about our spheres *a* and *b*.
- If this is a counterexample, then *a* and *b* will share all pure properties. And, their *impure* properties are not useful for determining their constituents … … since our aim is to identify the constituents out of which concrete particulars are composed, the items we appeal to … cannot already presuppose the complex entities that are concrete particulars, and impure properties all do. No … impure … properties can explain the [nonidentity] of [*a* and *b*].
- But, since (PCI) is true, and *a* ≠ *b*, there must be some constituent they do not share, which is not determined by any attributes *a* or *b* has — bare substrata!

**Concrete Particulars XII: Problems for Substratum Theory 1**

- We already hinted at one objection to substratum theory: the epistemology of bare substrata. How can we be acquainted with or know about bare substrata?
- Interestingly, many bare substratum theorists (*e.g.*, Locke, Bergmann) have been self-identifying empiricists! They have various replies to this worry:
  - To be acquainted with numerically diverse, yet qualitatively indiscernible objects is *eo ipso* to be acquainted with bare substrata.
  - Being confronted with a pair of objects related as Black’s two red balls, *a* and *b*, are, we are in a perceptual context where the principles of numerical diversity in them make themselves apparent to us (how?).
  - Since the attribute and subject are correlative concepts, it is impossible to be acquainted with an attribute without being acquainted with its subject.
  - If attributes can be the objects of empirical awareness, so can the substrata that literally possess them (since they are the true *subjects*).
  - This sounds *question-begging* and *disingenuous*. The bare substratum was not motivated on epistemic, but conceptual grounds. *That* should be their reply.

**Concrete Particulars XIII: Problems for Substratum Theory 2**

- Is the substratum theory even *coherent*? It *seems* to be saying: things that possess attributes are bare. But to be bare is to possess no attribute. So, are we to infer that things which possess attributes possess no attributes?
- There is an ambiguity in “possess”. To be fair, what the substratum theory is saying is that bare substrata (hence, particulars) do not possess any of their attributes *necessarily* — *All* particulars have *all* their attributes *contingently*.
- In other words, the view is that none of the attributes of a substratum are *essential* to the substratum. None are *constitutive* of it (or of its identity).
- Note: This makes it clear that bundle theory (on Loux’s reconstruction) and substratum theory are diametrically opposed on the question “Which attributes do particulars have necessarily?” Loux’s BT: *all*; ST: *none*.
- We have already seen that it’s pretty crazy to claim that particulars have *all* their attributes necessarily. It’s also pretty weird (naïvely) to say they have *none* of their attributes necessarily. At this point, Loux rightfully speculates:
Aristotle’s theory of matter and substance is subtle (it’s also controversial as to E.g., Socrates is an
First, I’ll try to present a picture of Aristotle’s conception of substance. Then,

There seem to be properties that are essential to some things but not
It seems we’re faced with a choice between extremes. We can choose a theory
Perhaps we can try our “non-rigidity trick” here. What if we say that “Socrates” denotes “the set of compresent attributes that we call ‘Socrates’”.
Surely, this is not rigid. So, it does allow Socrates to have (at least) some of his attributes contingently. But, does this lead to a satisfying explanation of the contingency of his properties? Why is Socrates contingently courageous?

Hint: Is this because we might have used the name “Socrates” differently?

Concrete Particulars XIV: Remarks on Trope Bundle Theory

• The (II) argument is irrelevant to the trope version of bundle theory. No two things can share a trope. And, even if two tropes are similar, they are nonetheless distinct. So, there are no trope counterexamples to (II)!
• On Loux’s reconstruction of trope bundle theory, bundles (which are just sets) have their members necessarily (sound familiar?). It follows that all particulars have all their attributes necessarily. But, this seems absurd.
• It seems that “Socrates is courageous” is contingent, not necessary. But, a trope bundle theorist (on Loux’s rendition) cannot say (or account for) this.
• Perhaps we can try our “non-rigidity trick” here. What if we say that “Socrates” denotes “the set of compresent attributes that we call ‘Socrates’”.

Conceivable Particulars XV: Aristotelian Substance 1

• Aristotle’s theory of matter and substance is subtle (it’s also controversial as to what the theory is – this is covered in John MacFarlane’s 25A class). We’ll try to keep this as simple as possible. See my handout for a more detailed picture.
• First, I’ll try to present a picture of Aristotle’s conception of substance. Then, I’ll mention some problems with this picture (without too much detail).
• Generally, Aristotle held concrete particulars to be organic wholes, without metaphysical constituents (this aspect is like Austere Nominalism). These wholes are organized (teleologically) into kinds, which tell us what things are.
• E.g., Socrates is an animal. Socrates has some properties essentially (e.g., Humanhood), and others contingently (e.g., Courage). Socrates essentially (and proximally) belongs to the kind Human (infimum) – that’s what he is.
• There is a hierarchy of kinds, to which things belong essentially. Kinds at the bottom (infima) of the hierarchy are the most determinative of what things are.

Concrete Particulars XVI: Aristotelian Substance 2

• We are told, for example, that bare substrata have no attributes essentially; but what of this feature of bare substrata? Is it one that is merely contingently true of bare substrata? Likewise, bare substrata are said to be the literal bearers of attributes. Is this a merely contingent feature of bare substrata? Is it possible that things could be otherwise, so that not they, but some other entities played this role? Again, bare substrata are said to be the principles of numerical diversity. Might they have failed to diversify objects?...

• There seem to be properties that are essential to everything. E.g., the property of being self-identical, the property of being red or not red, or colored if red.
• There also seem to be properties that are essential to some things but not others. E.g., the property of not being identical to the number 7, the property of being red or non-red, or (perhaps) the property of being a human being.
• So, it seems, if there are substrata, they will have some attributes necessarily. But, if that is so, then we seem to be off on a regress. The substratum theorist now needs a new (finer-grained) substratum to serve as the literal bearer of these (essential) attributes. But, they will have some essential features ...

• It seems we’re faced with a choice between extremes. We can choose a theory which says that all attributes of all particulars are contingent (substratum), or we can choose a theory which says that all attributes of all particulars are necessary (standard bundle). This seems to leave us with only two options:
  – Go for Austere Nominalism, and deny that particulars are complexes.
  – Or, go for a (non-rigid?) trope bundle theory (avoids (II)-argument).
• But, of course, this is a false dichotomy, since “All X’s are Y’s” and “No X’s are Y’s” do not exhaust the logically possible cases. A common-sensical view might be that some attributes of particulars are necessary and some are not.
• Loux recommends an Aristotelian account, which is like Austere nominalism in denying that particulars are complexes, but also employs a realism about universals in a way that makes some attributes necessary and some contingent.

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4Loux’s second horn: a theory accepting (II), rather than a theory making all attributes necessary. Puzzle: why doesn’t Loux state the dilemma in the obvious way here? Why retreat to (II)? Study Q.
Loux’s Aristotelian view of substance (concrete particular)

- Substratum: Subject must exist
- Aristotle: the subject of attribution is just
  - How
  - Aristotle: Subject exists independently of its

Points of Agreement: the attributes associated with a particular require a subject, and the Identity of Indiscernibles princ. (II) is false (anachronistic?).

- Loux’s Aristotelian view of substance (concrete particular) vs bundle theory.
  - The bundle theorist (on Loux’s reconstruction) treats all attributes as essential or necessary. This is “superessentially”, as Loux calls it.
  - Can this be avoided? [Study question at end of my “rigidity” handout.]
  - Aristotle takes some universals (kinds) to be exemplified (belonged to) necessarily, and others (qualities, etc.) to be exemplified accidentally.
  - Bundle theory restricts the constitutive attributes to properties (no kinds).
  - Can’t the realist bundle theorist include kinds? If not, why not? S.Q.
  - Aristotle’s distinction between kinds and properties is crucial for his view.
  - Aristotle’s kinds demarcate what concrete particulars are. This is why they are essential to particulars, and properties are not. Kinds ≠ sets!

- Point of agreement: the “being” of a particular is grounded in the attributes it has (for Aristotle, the kinds to which it belongs: the answer to “What is it?”).