1 Identity of Indiscernibles

The uncontroversial *Indiscernibility of Identicals*: If *a* is identical to *b*, then for every property of P, *a* has P if and only if *b* has P.

- Superman and Clark Kent?
- Water and H2O?

The controversial *Identity of Indiscernibles* (II): If for every property P, *a* has P if and only if *b* has P, then *a* is identical to *b*. (This is also known as "Leibniz's Law.")

- Qualitative identity involves having all and only the same qualitative properties and relations to other things. Let's call this qualitative similarity (or exact similarity).
- Numerical identity involves being one and the same thing.

It's not too crazy to think that this is at least contingently true. But we're concerned with whether II has the force of necessity. Motivations for believing II:

- Principle of Sufficient Reason (Leibniz)
- Positivism
- Definition or analysis of numerical identity

We may argue for II by arguing for its logically equivalent contrapositive: if *a* is not identical to *b*, then for some property Q, *a* has Q and *b* lacks it.

- This is what *A* argues for in the Max Black dialogue at the top of p.97:
    - "If two things, *a* and *b*, are given, the first has the property of being identical with *a*. Now *b* cannot have this property, for else *b* would be *a*, and we should have only one thing, not two as assumed. Hence *a* has at least one property, which *b* does not have, that is to say the property of being identical with *a*."

The task, therefore, is to argue that if there are two numerically distinct things, then they must differ with respect to at least one property (or "relational property"):

- Contenders for the distinguishing property that *a* has:
    - The property of being identical to *a*
    - The property of being distinct from *b*
- Replies: These are uninteresting properties, if they are properties at all.
    - And if we're trying to give an account of numerical identity, it's unhelpful.
    - This is the tip of the iceberg of a related debate: for any object, is there a non-qualitative property that it and only it has, its *haecceity*?
- Argument from unverifiability: If the denial of II is true, then we won't ever be able to tell of any object whether there's just one there, or two, or more.
    - Positivist principle: A statement is meaningful if and only if it's in principle verifiable.

- *B*'s reply: Here's a case where the denial of II is true and meaningful. Consider a world with two qualitatively indiscernible spheres…

Consider a world with two qualitatively indiscernible spheres… How can we tell these two spheres apart?

- Name one 'a'
- One will stand in the relation of being zero distance from itself
- One will be in a different place from the other

Other purported counterexamples:

- Mirror universe worlds
- Radial symmetry worlds
- Eternal recurrence worlds

2 Bundle Theory and Distinct Indiscernibles

Last time, we looked at *trope theory*, which says that the properties that particulars have are not universal, but are abstract particulars – bits, as it were, of the object itself. Let *bundle theory* be the view that objects are nothing more than "bundles" of *immanent* universals – that is, universals that are wholly located where they are instantiated.

- Our traditional picture of universals says that universals are properties that are "shareable," and hence can be instantiated by multiple objects.
- We either have to think that universals are outside of spacetime (in a "Platonic heaven") or are located where they are instantiated.
    - Armstrong takes the second view. (So does the bundle theorist.)

Bundle theory has a special solution to Max Black's two-sphere counterexample world to II.

- Trope theorists can, on the face of it, say there are two spheres with distinct (though exactly similar) tropes.
- Bundle theorists say that the blackness of one sphere is identical to the blackness of the other.
    - This would be a problem for II if we said that there are two objects in Max Black's world, but they have all and only the same properties.
    - But since objects are nothing but bundles of universals, there really aren't two objects there! It's just one object, multiply located.

Recall that one thing universals were supposed to explain was the causal powers of objects.

- The bundle theorist says that the causal powers of universals is relative to locations or parts of objects.
- How about indeterminacy?