The Identity of Indiscernibles

1. Numerical vs. Qualitative Identity: The word ‘identity’ is used in a very specific way in philosophy—and it’s a little different than the way that people use it elsewhere.

We often use the word ‘identical’ to simply mean ‘looks the same.’ For instance:

- Ashley and Mary Kate are identical twins.
- Your iphone is identical to mine.
- The look on your two faces is identical right now.

That’s not how WE are going to use the term ‘identical.’ In philosophy, ‘identical’ means ‘is one and the same object’. For instance:

- Mark Twain is identical to Samuel Clemens.
- The capitol city of Virginia is identical to Richmond.
- The inventor of the bifocals is identical to Benjamin Franklin.

Here, when we say identical, we mean, e.g., that Mark Twain is one and the same individual as Samuel Clemens. To differentiate these two uses, philosophers often say that Ashley and Mary Kate (two twins) are QUALITATIVELY identical, while Mark Twain and Samuel Clemens are NUMERICALLY identical.

From here on, when I use the term ‘identical’, I will mean numerically identical.

2. The Identity of Indiscernibles: One of the foundational principles of philosophy is that no two objects can have all of the same properties. So, for any two objects, there must be at least one difference between them. No two individuals are exactly alike. This principle is generally credited to the philosopher, Leibniz. Here is how he defines it:

The Identity of Indiscernibles: “In nature, there cannot be two individual things that differ in number alone. For it certainly must be possible to explain why they are different, and that explanation must derive from some difference they contain.” From Primary Truths (1686). In other words:

If “two” objects are not different in any way, then they must be identical.

For instance, if you provide me with a complete description of Richmond, and then you provide me with a complete description of the capitol of Virginia, and your descriptions do not differ any way, I must conclude that Richmond IS (numerically identical to; one and the same city as) the capitol of Virginia.
[Note that this was the intuition that drove us to think that there could be TWO things present when you look at a statue—the statue AND the lump of clay. For, how can the statue be a distinct object from the clay if they share all and only exactly the same matter, arranged in exactly the same way, and exist in exactly the same place, at the same time? These “two” objects would be seemingly indiscernible, so it may seem absurd to say that there are two things, rather than just one.]

A related (but distinct) principle is the indiscernibility of identicals:

**If “two” objects are identical, then they are not different in any way.**

For instance, if you tell me that Samuel Clemens IS Mark Twain, then I can automatically infer that, if Mark Twain is 6’ tall, then so is Samuel Clemens. If Mark Twain wrote Huckleberry Finn, then so did Samuel Clemens. And so on. If they really are one and the same person, then the “two” of them must share ALL of their properties in common.

This latter principle is uncontroversial. However, the former is very controversial.

Let’s see why.

**3. Max Black’s Balls:** Max Black comes up with a thought experiment where there seem to be two objects that are NOT discernible. Perhaps it will be best to simply give a synopsis of Black’s paper, a conversation between A and B:

A: Two different things could never be *totally* indiscernible.

B: Why not?

A: Because they’d *at least* have one property that nothing else has: that of being self-identical.

B: So, you’re saying object A has the property of *being identical to A*. But, isn’t “A=A” a tautology?

A: Okay, well, if there were two things, A and B, then A would also have the property of *being non-identical to B*, which is a property that B would not have.

B: You’ve already stipulated that A and B are two different things. So, telling me that A is not B tells me nothing new about A.

A: Doh!

B: Do you still think that two things that have all of their properties in common must be identical (i.e., they are not *two* things, but are rather just one thing)?

A: Yeah.
B: Well, when you’re describing how two different things differ in some way, you can’t use “A is different than B” as your reason. That’s circular.

A: Well, you’ve gotta admit, it seems pretty impossible for two different things to have all the same properties. Can’t you just grant me that?

B: Okay, sure. Different things are different. (Yawn)

A: So, you’re accusing me of pre-supposing my conclusion?

B: Well, I’m just saying your conclusion is uninteresting unless you can show that there is a difference between two objects, A and B, that doesn’t involve A=A, B=B, or A≠B. You’ve only told me that A has the property of being identical to A (and this is a property that B does not have), etc. Can’t you refer to any differences between A and B that doesn’t refer to the identities of the objects?

A: Can I use relational properties?

B: Sure.

A: Well, if two things both had all of the same qualitative properties and all of the same relational properties (i.e., the same relationships to everything in the universe), then there would be no way to test or verify that they were different. And, as we all know, if something isn’t verifiable, it’s meaningless. So, if you think two different things could be utterly indiscernible in this way, your position is meaningless.

B: Hold on. Let’s think about balls for a second.

A: That’s all I ever think about.

B: Okay. Picture two balls. They are qualitatively identical in every way (they have the same shape, size, mass, color, composition, temperature, etc.). Now, picture them in a possible world where the balls are the only things that exist. They are one mile apart. In that case, they will also be relationally identical (e.g., they each have a relational property of being one mile from a ball). If you can picture these balls, then I have proven to you that there can be two utterly indiscernible things that are not identical.

A: Either your thought experiment is meaningless, because for two utterly indiscernible things, we could never verify that there are two things, or else they are not really indiscernible. Because, surely ball A has the property—

B: Ball A? Which one is that?

A: Just pick one of the balls. Whichever one you like, okay?

B: I can’t. They’re indiscernible, and as soon as I give one ball a label, they become discernible. I mean, I can picture someone entering this world and touching one of the balls, or putting a little mark on one of them. But, then, that’s not my thought experiment. My possible world doesn’t have anyone like that in it. In my world, there are only balls.
A: Okay, whatever... Don’t pick one. Still, won’t one of the balls have the property of being “one mile from the other ball” and “no distance from itself”?

B: Yeah, but they both have this property. All their relational properties are the same.

A: But, they’re in different places!

B: Their relational properties are same, and that’s what matters. To appeal to something like “two different balls are different because they are in two different places” only assumes that there are two balls, and so is again uninteresting, like your A≠B assertion earlier.

A: I could pick a point in space two miles from A, and it would not be two miles from B. Their relationship to that point would be different.

B: Remind me, which one is A again?

A: You jerk.

B: No, really. Which one is A?

A: Alright, wise guy. Remind me, how can you say your balls are a mile apart if there is no ruler to measure with in your world?

B: I was wondering when you’d ask. Well, my balls were getting lonely anyway. I’ll just say there is a ruler. No, there are two rulers; one on either side of each ball, so as to preserve symmetry of relational properties. In fact, so long as I maintain perfect radial symmetry (i.e., something like the symmetry of a pizza, and not that of a human being, which is merely bilateral symmetry), so that the sameness of relational properties in each ball is preserved, I can add anything I want to my world.

A: Still, within your world, with all sides of the center of symmetry being identical, one’s observations would be the same whether or not everything had a duplicate. There would be no way to know that there were two of everything; so the fact that everything had a duplicate would be unverifiable, and the assertion that there are two of each thing would be meaningless.

B: In science, it is often impossible to discern one object from another within a pair of objects, and yet we can still know that there are two objects. I can observe the magnetic field between two identical magnetic poles and conclude that there are two poles; or the gravitational effects from a pair of stars and conclude that there are two stars; or the configuration of an atom and conclude that there are two electrons.

A: We could discern one star from another if we were standing in between them. One would be on our left, and the other would be on our right.

B: Of course. When we were picturing two balls, I admitted that it was possible for an observer to enter that world and touch one. But, that is changing the example, for it
introduces an asymmetry into the world that makes the two balls no longer share all of the same relational properties.

A: So, what are you getting at?

B: That two indiscernible things need not be identical. For, even though we could never discern one from the other without introducing some relational property that makes them no longer indiscernible, we could still know whether there are two things and not one.

A: Maybe, but only because your 2-balls world pre-supposed that there were two things.

B: I’m not pre-supposing my conclusion. Thinking about balls was supposed to show that it is logically possible for two indiscernible things to be non-identical. I feel I’ve done my job.

A: I still don’t get it.

**Conclusion:** So, given that B’s hypothetical world is logically possible (i.e., we can conceive of a world where there are TWO objects that have ALL AND ONLY EXACTLY THE SAME PROPERTIES), have we disproved the identity of indiscernibles?