## The Problem of Temporary Intrinsics (i.e., Change)

**1. The Problem:** Recall the principle called the indiscernibility of identicals:

If "two" objects are numerically identical, then they are not different in any way (i.e., they have all and only exactly the same properties).

Now, compare these two photos (from 1988 and 2015):



If we were to describe these "two" individuals, the lists might look like this:

Individual A	Ind
Brown hair	Yell
200 lbs.	240
Mouth puckered	Мо
Eyes open	Eye
Not wearing a pin	We
<b>n</b> · · · · ·	_

Beige skin

Not running for president

And so on...

## **Individual B**

Yellow hair 240 lbs.

Mouth grinning Eyes squinting

Wearing a US flag pin

Orange skin

Running for president

If I handed you these two lists, you'd know right away that these were surely NOT descriptions of one and the same individual! And yet, we DO believe that the individual on the left is **numerically one and the same** as the individual on the right; namely, they are both Donald Trump.

<u>Question:</u> But, how can these "two" individuals be one and the same individual if they do not have all and only exactly the same properties!? This seems to be in violation of the indiscernibility of identicals.

Actually: Stand up. Yes, you. Go ahead. Stand up.

Now ask: Is the individual who was sitting a moment ago the same individual as the one who is standing now? Seemingly, yes. But, how can that be? The former individual had the property of *being seated*, while the latter individual had the property of *standing*.

This is **the problem of temporary intrinsics**. The intrinsic properties of things seem to change over time (they are temporary), and yet the thing itself is judged to be the same. But, how can this be!?

[One possible solution: Perhaps we don't have simple properties like 'standing' or 'sitting'. Perhaps all such properties are relativized (or "indexed") to TIMES; for instance, 'sitting-atnoon' and 'standing-at-1pm' and so on. Thus, you ALWAYS have these properties. There is really no change in properties to be accounted for!

<u>Problem:</u> But, properties like shape are supposed to be INTRINISIC. This solution makes them instead RELATIONAL. That is, having the shape of being seated is apparently not a property that YOU have. Rather, it is merely a RELATIONSHIP that you have with a time. But then, strictly speaking, each thing, "In itself, considered apart from its relation to other things, it has no shape at all." (Lewis, 204) That seems false. As Lewis goes on to say, "If we know what shape is, we know that it is a property, not a relation." (ibid.)]

## **2. Temporal Parts:** Consider this weird apple:



This apple is red. And it is ALSO green. But, how can that be!? How can something be both red AND green!? The answer is simple: The **left** half is green, the **right** half is red.

So, the apple can have seemingly contradictory properties without issue, because the conflicting properties are had by DIFFERENT (spatial) PARTS! Perhaps the problem of temporary intrinsics can be solved in a similar way, if objects also have TEMPORAL parts.

Consider: The photos above indicated that Trump has brown hair, AND NOT-brown hair. But, how can that be!? Again, the answer is simple: The **earlier** half has brown hair and the **later** half has yellow hair! Simple, right?

The suggestion here is that, in addition to being spread out in SPACE, each of us is ALSO spread out in TIME. Thus, just as we have parts that are located in different PLACES, we also have parts that are located at different TIMES.

This view is called 'perdurantism'. Contrast this with 'endurantism', as follows:

**Perdurantism:** Things have temporal parts. At any given moment in time, there exists only a PART of a thing (a time-slice of it).

**Endurantism:** Things do not have temporal parts. At any given moment in time, WHOLE things exists.

So, on perdurantism, persisting objects are not wholly located at any particular time. Rather, every object is really a sort of **four-dimensional space-time worm!** Like this:



The WHOLE man is depicted in the picture above. The baby (on the left) is merely a (temporal) PART of him.

**Criticisms of Perdurantism:** This view is counter-intuitive for a few reasons.

(1) **Objects are not wholly located at times.** Think about what this means: Just as, when you look only at the red portion of the apple above, you are not looking at the WHOLE apple—but, only a part of it. Similarly, when you look at the yellow-haired Trump, you are not looking at the WHOLE Trump, but only a tiny part of him.

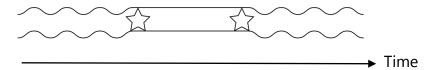
But, that has some counter-intuitive implications. If I asked whether my tomato was ripe, you'd have to reply, "Most of it is green and unripe. However, this temporal PART of it is ripe!" And if you asked me whether I was ENTIRELY in the room with you, I'd have to reply, "No. Only a tiny temporal part of me is here. The rest of me is in Colorado, and Florida, North Carolina, and elsewhere." That's pretty strange, isn't it?

(2) **Change is really just succession of changeless things.** Perdurantism seems to be a denial of change. Temporal parts do not change. All "changes" are really just a series of static things, one after another—it is just that we do not NOTICE the jerkiness of the world (just in the same way that we do not notice the jerkiness of a movie, because the frames are shown in such rapid succession).

Reply to (1) and (2): Think of objects like movies. When you view a film, you are really viewing many static frames per second (usually 24 frames per second). If you only saw one frame (a still picture), you would NOT say that you'd seen the whole movie. For the WHOLE movie is itself just a composite of many frames, one after the other. Now, think of ALL objects that are extended in time as being just like that—only, the individual parts are not still pictures, but are, rather, SLICES IN TIME.

- (3) **Composition is not explained.** If the WHOLE tomato is really just a series of temporal parts, what is the "glue" that holds these temporal parts together? If things are just collections of temporal parts, how do those parts compose a whole? Perdurantism has not offered any explanation of this. [Maybe they stand in certain causal relations?]
- **3. The Statue and the Clay:** Let's return to an earlier puzzle. Consider the statue and the lump of clay. When you look at the statue, how many objects are you looking at? Ted Sider suggests that we should just accept that you are looking at TWO objects—or, rather, the temporal parts of two objects—the statue, and the lump of clay.

How can two objects co-exist in the same place at the same time? Easy. They don't! At least, the WHOLE objects do not co-exist in the same place(s) at the same time(s). The statue and the clay are really both four-dimensional objects, extended in 3 dimensions of space, and 1 dimension of time. Consider this depiction of a statue of a star:



The lump of clay is the ENTIRE space-time worm (from beginning to end), while the statue of the star is just that space-time worm that is star-shaped (just the middle).

If four-dimensionalism is correct, then the 4 seemingly incompatible claims surrounding the puzzle of the statue & the clay are not really incompatible after all. For, even though Creation, Survival, and Existence are all true, this principle (Absurdity) is still not violated:

No two objects can be composed of exactly the same parts, arranged in exactly the same way.

For, the lump of clay has lots of parts that the statue does not; namely, the wavy lines to the left and right (before and after) the star statue. They do not share the same TEMPORAL parts. So, the object that is the statue is really just a PART of the object that is the lump of clay. And this is not so bizarre. Consider: The object that is your hand is just a part of the object that is your body.

Another example: Consider Highway 60, which extends 2,670 miles from Virginia Beach to western Arizona. Richmond Road extends from downtown Williamsburg (where it ends at confusion corner) nearly 18 miles West toward Richmond. For 15 and a half of those miles, it shares its parts with Highway 60. On the drive to Richmond, Highway 60 continues, while Richmond Road just ceases to exist (it becomes Pocahontas Trail). We might stand on some corner where they overlap and ask, "How can there be TWO roads here? I only see one!" But, perhaps this is not so puzzling if we point out that 'Richmond Road' just refers to a tiny PART of 'Highway 60'.

[Problem? Imagine that God creates a statue out of nothing (ex nihilo) and then later annihilate it (i.e., reduce it to nothingness). Now, the statue and the lump of clay share all and only their same spatial AND temporal parts. Uh-oh! (?)]