Comments on Fabrice Correia, "Four-Dimensionalism and the Modal Problem of Coincidence"

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Fabrice's two arguments

The following are inconsistent:

(1) Permanently coinciding material objects are identical.
(2) Identical objects have the same de re modal properties.
(3) Some permanently coinciding objects (coincident at all times at which they both exist) differ in de re modal properties.

Fabrice argues that four-dimensionalists of type F are committed to (1) and (2) and have to deny (3).[1] The lump and the statue, according to them, coincide permanently and hence are identical (1), so they have the same de re modal properties.

De re modal properties come in families that can be ordered in a Sorites-like way. As any distinction within the series would be arbitrary, four-dimensionalists of type F are committed, with respect to shape and parthood properties, to exactly two of the following claims:

S1/T1 For no other than its actual shape, it is possible that the lump/statue has it.
S2/T2 For every shape, it is possible that the lump/statue has it.
S3/T3 For none of its actual parts, it is possible that the lump/statue lacks it.
S4/T4 For all of its actual parts, it is possible that the lump/statue lacks it.

Four-dimensionalists of type F should choose [S1/T1] / [S3/T3], because it follows from intrinsic essentialism (the view that all intrinsic properties are essential) which is a very beautiful thesis.

Criticism of the first argument

Four-dimensionalists hold that necessarily, each spatio-temporal object has a temporal part at every time at which it exists Sider (2001: 59). This claim has three parts: that short-lived things exist and are part of the thing; that they can be fused together; that the thing is identical to the fusion of its short-lived parts.

It is true that four-dimensionalists typically rely on (1) to motivate the last claim; but they in fact only need an instance of it:

((1′)) If some spatio-temporal thing is coincident with a sum of short-lived things, then it is identical to this sum.

(1') is compatible with a denial of (1) and hence also with five-dimensionalism. They are not forced to identify the lump and the statue.

Criticism of the second argument

It is not plausible to hold that whenever a series of things $a_1, \ldots, a_n$ form a Sorites series from F to $\neg F$, either all or none of them are F. Why should the special case be more plausible than the general one? Some possibilities:

[1] Not all four-dimensionalists are G: five-dimensionalists are not F because they deny (1); Lewis is not F because he denies (2).

1. because the vagueness would be ontological. On some interpretations, this can be ruled out: it would not be vagueness wrt the question how many things exist, because by (2), *all* the candidates are different.
2. because the vagueness would be inscrutable: but this is not a problem for someone accepting robust de re modal properties (2).
3. because the vagueness would be metaphysical: this is the best reason. Again, however, it is not clear how a ban on metaphysical vagueness is compatible with robust de re modal properties (2).

Indeed, a number of alternative positions may be defended:

1. Salmon: every possible entity comes with a definite range of de re possibilities; because metaphysical possibility does not obey S4, no Sorites series can be constructed.
2. Williamson: there is a in-principle unknowable fact of the matter about what different shapes the statue/lump could have.
3. van Fraassen: the sortal "statue" is vague; by "the statue could have lacked a finger", many different propositions are expressed; some are true, some false.[2]

But even if [S1/T1] and [S3/T3] are accepted, intrinsic essentialism does not follow. The argument shows that all properties are essential that are determinates belonging to a family allowing for a Sorites series among its members. Suppose a is F_1, but could not have been F_n, and that F_1 and F_n belong to such a family. The argument shows that a could not have had any other of the Fs than F_1. If it necessarily has some of the Fs, it follows that it has F_1 essentially. The argument is quite general: The property *being a heap of sand*, for example, also gives a such a Sorites series. Call "Sam" a heap of sand consisting of n grains. It could not be a heap of sand and containing 1 grain. So it essentially contains the number of grains it actually contains.

We do not have to assume that the Fs are intrinsic properties. *Being a world-mate of n statues*, e.g., also gives us a Sorites series and is an extrinsic property: the statue is now a world-mate of m statues, but it could not be a world-mate of 0 statues. It is a vague matter how many other statues are necessary for its existence. Hence, it is essentially a world-mate of m statues.

Not all intrinsic properties give rise to such a Sorites series. The property *having positive value* is intrinsic but not essential. No Sorites series is possible such that something has a certain value property, but could not have had some other.

Another way out: referential indeterminacy of kind terms

The following are consistent and explain the data:

(1) The statue and the lump are permanently coincident.
(2) The lump could have, but the statue could not have a radically different shape.
(3) Both the lump and the statue could have a slightly different shape.
(4) (3) is a priori.

In everyone of the possible scenarios of the Sorites series, "that lump", "that statue" and the proper names the reference of which is fixed by descriptions containing these predicates have a slightly different reference. In all these possible situations, "that statue" picks out something that is modally robust to some, perhaps unknown, degree n. This means that every possible object differing from its actual referent only to degree n could also be a referent of the term. Given S4, we still do not have the necessity of (3) – but given that we use (3) in our fixing of the reference of our terms, (3) will at least be a priori.

References

Sider, Theodore. *Four-Dimensionalism: An Ontology of Persistence and Time*. Oxford: Clarendon Press, 2001.

[2] This is not Lewis' view, which relies on denying (1): that there are many coincident statues differing in their modal properties; our uses of "that statue" and of "Goliath" are referentially indeterminate between them.