

On the Argument for the Necessity of Identity

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Abstract: We show that the thesis that identity is necessary is equivalent to the thesis that everything is necessarily what it is. Hence the challenges facing either, faces them both.

Keywords: identity, necessity.

The classical argument for the necessity of identity,¹ namely:

T1: $(x)(y) (x=y \supset \Box x=y)$

rests on the necessity of

T2: $(x)(\Box x=x)$.

The only other premise in the argument is the substitutivity of identity which is treated as a logical truth.

We show that T1 implies T2 as well. Hence the challenges facing each are shared by them both. A close look at what both mean makes their equivalence apparent.

T2 may be read, as:

T3: Everything is necessarily what it is.²

The classical argument for the necessity of identity proceeds as follows,³ from premise

a: $(x)(y) [x=y \supset (Fx \supset Fy)]$

to conclusion,

b: $(x)(y)[(x=y \supset ((\Box x=x) \supset (\Box x=y)))]$

by substituting ' $\Box x='$ for ' F ' in a.⁴ The necessity of ' $\Box x=x$ ' follows from the necessity of T2, hence the necessity of:

¹ Wiggins (1965, 41) and Kripke (1971, 136). The argument is generally attributed to Kripke. Wiggins dismissed the argument. See more in note 4.

² Our reading follows what would be Leibniz' reading of ' $(x)(x=x)$ ' as 'Everything is what it is'. Leibniz (1996, 362).

³ See Kripke (1971, 136).

⁴ Wiggins dismissed the argument on the ground that "... it is a mistake to count a thing's identity amongst the predicates true of it". Wiggins (1965, 42).

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T1: $(x)(y) (x=y \supset \Box x=y)$.

We now show that T1 implies T2:

c: i: $(x)(y)(x=y \supset \Box x=y)$	T1
ii: $x=x \supset \Box x=x$	I,
iii: $(x)(x=x \supset \Box x=x)$	ii,
iv: $(x)(x=x) \supset (x)(\Box x=x)$	iii.
v: $(x)(x=x)$	identity
T2: $(x)(\Box x=x)$	iv, v.

We can see that T2 implies T1 informally as well. For If x is y then $x=y$ and if everything is necessarily what it is, then x is necessarily y.⁵ T1 implies T2, for T1 says that, for any x and y, if x is y, then necessarily x is y, so if x is x then necessarily x is x. And for all x, x is x, thus for all x, necessarily $x=x$.

We know that T1 cannot be true if there is an a and b for which the following are true:⁶

S1: It is necessarily true that if $a=b$ then the sentence which states that $a=b$, is true.

and

S2: The sentence which states that $a=b$, is contingent.

Hence if the following two apparently true statements are in fact true:

S1': Necessarily, if Socrates = the teacher of Plato then 'Socrates is the teacher of Plato' is true

and

S2': 'Socrates is the teacher of Plato' is contingent,

⁵ Wiggins' objection is not relevant here. See note 4.

⁶ This follows from Blum (2023). The argument depends crucially on the validity of Tarski's T-schema which may be stated informally: 'A statement is true if and only if what it states is the case'. See Tarski (1944, 54-55). Both Aristotle and Michael Dummett have objection against Tarski's T-schema if taken to be valid for every sentence. Aristotle would reject the T-schema for future tense sentences on the ground that they are neither "... actually true or actually false" (Aristotle, 19a30-40, 48). Dummett contends that sentences whose truth values are unknowable, indeterminate, difficult to establish, or one has no right to say that they are either true or false have no truth value. However, he should have no objection to assigning a truth value to the sentence 'Socrates=the teacher of Plato'. For it doesn't fall into any of those categories. And he writes: "... for most ordinary contexts the account of these words embodied in the laws 'It is true that p if and only if p' and 'It is false that p if and only if not p' is quite sufficient" (162). See (Dummett, 145, 157-62).

then T1 is not true. And thus, neither is T2/ T3.⁷

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