The Slingshot Argument

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1 Motivation

How are facts individuated? One way to pose these questions is to ask what substitutions for A and B make the following schema true:

\[(S) \ [A] = [B] \]

where ‘[A]’ means ‘the fact that A’ or more generally ‘the facts that make it true that A.’

There are two extreme views:

- (S) is true only when A and B are replaced by the same true sentence
- (S) is true no matter what true sentences replace A and B

On the first view, facts are just pale reflections of true sentences. On the second, there is just one Great Fact to which all true sentences correspond.

A plausible theory of facts, it seems, must avoid both these extremes. It must accept some, but not all instances of (S) where A and B are distinct true sentences. For example, plausibly,

1. [Cicero wrote *De Finibus*] = [Tully wrote *De Finibus*],

and

2. [Neale wrote *Descriptions*] = [*Descriptions* was written by Neale].

Moreover, since Neale is the author of *Facing Facts*, it is natural to think that

3. [Neale wrote *Descriptions*] = [The author of *Facing Facts* wrote *Descriptions*].

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On some correspondence theories, there won’t be a unique truthmaker for every true sentence. For example, on some theories there are no conjunctive facts: the proposition that A and B is made true by the fact that A and the fact that B. For such theories, we need to read [A] as denoting the set of facts that jointly make A true. When A is false, this will be the empty set.
After all, isn’t it the same fact, regardless of whether we describe Neale as “Neale” or “the author of Facing Facts”? Generalizing, we might accept the following principle:

**Substitution of Co-denoting Terms inside Brackets** If \(B\) results from \(A\) by substitution of names or definite descriptions that denote the same object, \([A] = [B]\).

It is also natural to suppose that logically or necessarily equivalent sentences are not made true by different facts. So, for example,

4. \([\text{No humans have gills}] = [\text{Nothing with gills is a human}]\).

Generalizing,

**Substitution of Logical Equivalents inside Brackets** If \(A\) and \(B\) are logically equivalent, \([A] = [B]\).

2 The argument

The slingshot argument shows that these seemingly innocuous concessions are already enough to trivialize our theory of facts. Let \(S\) and \(T\) be any true sentences. Then, since \(S\) and ‘Socrates = \(\forall x(x = \text{Socrates} \land S)\)’ are logically equivalent,

5. \([S] = [\text{Socrates} = \forall x(x = \text{Socrates} \land S)]\).

by Substitution of Logical Equivalents inside Brackets.

For parallel reasons,

6. \([T] = [\text{Socrates} = \forall x(x = \text{Socrates} \land T)]\).

But

7. \(\forall x(x = \text{Socrates} \land S) = \forall x(x = \text{Socrates} \land T)\),

since both descriptions denote Socrates. So, by Substitution of Co-denoting Terms inside Brackets and (5),

8. \([S] = [\text{Socrates} = \forall x(x = \text{Socrates} \land T)]\).

Finally, by (6), (8), and the transitivity and symmetry of fact-identity, we get

9. \([S] = [T]\).

Since we can run the argument with any true sentences \(S\) and \(T\), the upshot is that there is only one fact.
3 An alternative version

If you don’t like the (arbitrary) mention of Socrates in the above argument, you might prefer the version used by Quine and Davidson.

By Substitution of Logical Equivalents inside Brackets,

10. \( [S] = \{x : x = x \land S\} = \{x : x = x\} \)
11. \( [T] = \{x : x = x \land T\} = \{x : x = x\} \).

Since \( S \) and \( T \) are both true, the class \( \{x : x = x \land S\} \) is the same as the class \( \{x : x = x \land T\} \). So, by Substitution of Co-denoting Terms inside Brackets,

12. \( [S] = \{x : x = x \land T\} = \{x : x = x\} \).

Finally, by transitivity and symmetry of fact identity,

13. \( [S] = [T] \).

The two versions of the argument are less different than they may appear. We could have used ‘\( \{x : x = x\} \)’ instead of ‘Socrates’ in the first version. Moreover, ‘\( \{x : x = x \land S\} \)’ in the second version is best thought of as a definite description: “the class of things \( x \) such that \( x = x \) and \( S \).” So this version, like the first one, trades on substitution of co-denoting definite descriptions inside brackets.

4 Two theories of definite descriptions

Referential theory (Frege): Definite descriptions are referring terms, like proper names and pronouns. A definite description refers to the unique object (if there is one) that satisfies the description. If there isn’t such an object, the whole sentence lacks a truth value.

Quantificational theory (Russell): Definite descriptions are quantifiers, like ‘every dog’ and ‘a few fleas.’ (See the earlier handout on Definite Descriptions.)

5 The flaw in the argument

Substitution of Co-denoting Terms inside Brackets is plausible on a referential theory of descriptions, but not on a quantificational theory. Quantificational facts are essentially different from facts about particular objects.

Substitution of Logical Equivalents inside Brackets may be plausible on a quantificational theory of descriptions (depending on one’s detailed views about facts and truthmakers). But it is not plausible on a referential theory—at least, not on one that counts \( S \) as logically equivalent to ‘Socrates = \( \exists x(x = \text{ Socrates} \land S) \)’. For on such a theory, the latter fact should just be the fact that Socrates is self-identical.
6 References


- ———, Facing Facts (Oxford: OUP, 2001)