

What Are Singular Terms, and Why Are There Any?

1] According to a broadly Kantian approach, the title question is one way to ask the question:
What are objects (particulars) and why are there any?

2] First we should ask:
What are sentences, and why are there any?

3] Sentences are expressions whose free-standing use has the default significance of performing one of the fundamental speech acts, paradigmatically asserting.

4] Then we should ask:
What are subsentential expressions, and why are there any?

5] Unless the occurrence of subsentential expressions is discerned, it is not possible to project proprieties governing the use of novel sentences.

6] One of Frege's lessons is that to discern significant occurrences of subsentential expressions is to treat sentences as substitutional variants of one another.

7] There are three sorts of syntactic substitution-structural roles (SSRs):

- a) Expressions that are substituted *in*,
- b) Expressions that are substituted *for*, and
- c) Expressions that are substitutional *frames* or remainders.

8] a) "Kant admired Rousseau," is substituted *in* to yield a substitutional variant such as:
 "Rousseau admired Rousseau."
 b) 'Kant' is substituted *for*.
 c) The substitutional frame or remainder is what is common to substitutional variants--
 schematically: "α admired Rousseau."

9] Singular terms play the *SSR* of being substituted *for* (as well as *in*).

10] Predicates play the *SSR* of substitutional *frames* or remainders.

11] Substitution inferences are those in which the conclusion is a substitutional variant of one of the premises.

12] The semantic significance of the occurrence of a subsentential expression in a sentence consists in the materially correct substitution inferences involving that expression that the sentence in question appears in as premise or conclusion.

13] There are two different patterns of semantic substitution-inferential significance (*SIS*):
 symmetric and asymmetric.

14] Substitution for singular terms is always governed by the symmetric pattern. Thus if the substitution inference from

- a) Benjamin Franklin invented bifocals, to
- b) The first Postmaster General of the United States invented bifocals,

is a good one, then so is the converse inference from (b) to (a).

15] Substitution for predicates can be asymmetric. Thus the material goodness of the substitution inference from

- a) Thera walks, to
- b) Thera moves,

does not ensure the material goodness of the converse inference.

16] Conceived substitutionally, then, singular terms and predicates are characterized by the coincidence of a particular kind of syntactic *SSR* and semantic *SIS*:

- a) Singular terms are substituted *for*, and the substitution-inferential significance of their occurrence is always *symmetric*.
- b) Predicates are substitutional *frames*, and the substitution-inferential significance of their occurrence *can be asymmetric*.

17] This is the substitutional answer to the question: *What are singular terms (and predicates)?*
 To ask why there are any is to ask:
Why do the syntactic and semantic substitutional roles line up as they do?

18/ This way of putting the question provides a map of the alternatives:

- i) Substituted *for* is *symmetric* and substitutional *frame* is *symmetric*.
- ii) Substituted *for* is *asymmetric* and substitutional *frame* is *symmetric*.
- iii) Substituted *for* is *asymmetric* and substitutional *frame* is *asymmetric*.
- iv) Substituted *for* is *symmetric* and substitutional *frame* is *asymmetric*.

19/ The one actually instantiated by singular terms and predicates respectively is (iv). The question then is: what's wrong with the others?

20/ At the level of sentences, many of the substitution inferences that are to be codified and projected by discerning significant occurrences of subsentential expressions are themselves asymmetric (irreversible). No such weakening inferences could be generated if all subsentential components are restricted to symmetric significance, so (i) is ruled out.

21/ The remaining options, (ii) and (iii) are like each other, and unlike (iv) in assigning *asymmetric SIS* to expression-kinds that play the syntactic *SSR* of being substituted *for*. What is wrong with this combination?

22/ Consider the generalizations that permit the material substitutional contents associated with subsentential expressions to determine the proprieties of substitution inference that govern novel combinations of those expressions. Taking it that

- a) Benjamin Franklin is (=) the first Postmaster General of the United States
commits one to the propriety of all inferences of the form
- b) $P(\text{Benjamin Franklin}) \vdash P(\text{the first Postmaster General of the United States})$,
where the term 'a' has primary semantic occurrence in 'Pa'. *Identity claims* make explicit these symmetric substitution licenses.

23/ Similarly, for predicates, taking it that

- a) Anything that walks moves,
commits one to the propriety of all inferences of the form
- b) $\text{Walks}(a) \vdash \text{Moves}(a)$.

When these content-constitutive, potentially asymmetric substitutional commitments regarding predicates are made explicit, they take the form of *quantified conditionals*.

24/ The pattern corresponding to the hypothetical *asymmetric* significance of substituted *fors* would replace identity claims with inequalities:

- a) $t > t'$
means that
- b) $P(t) \vdash P(t')$, but perhaps not $P(t') \vdash P(t)$, for every frame P .

25/ A predicate Q is an *inferential inverse* of a predicate P if for all t, t' :

- a) $P(t) \vdash P(t')$ and not $P(t') \vdash P(t)$ entails
- b) $Q(t') \vdash Q(t)$ and not $Q(t) \vdash Q(t')$.

26/ So to answer the question in [21], it suffices to show: If every sentential substitutional frame has an inverse, then the pattern of [24] cannot obtain, i.e. in that case there can be no *asymmetrically significant substituted fors*.

27/ In any language containing the expressive resources of elementary sentential logic, every predicate has an inferential inverse.

28/ For conditional and negating locutions are inferentially inverting--inferentially weakening the antecedent of a conditional inferentially strengthens the conditional.
Thus if condition [25a] holds, condition [25b] can be shown to hold:
--Just let $Q\alpha$ be defined as $P\alpha \rightarrow r$ [or one could equally let $Q\alpha$ be defined as $\sim P(\alpha)$].
--Then if [25a] holds, then

$P(t') \rightarrow S(t') \vdash P(t) \rightarrow S(t) \text{ and } \neg P(t) \rightarrow S(t) \vdash P(t') \rightarrow S(t')$.

29/ The conditional and negation locutions are inferentially inverting precisely because they play the indispensable expressive role of making inferential relations explicit as the contents of sentences.

30/ So any semantically autonomous language with those basic sentential logical expressive resources will display singular terms and predicates if it displays any subsentential structure at all.