Language tempts us to employ locutions which rouse the fighting spirit of those who care about what exists and what doesn’t. (Meyer and Lambert 1968: 15.)

[Linguistics] is entirely obligated to deal with objects (Gegenstände) in word- and sentence-meanings.

(Meinong 1904: 496.)

I. SEMANTIC EXPANSION

Some grammatical sentences of natural languages such as English seem clearly true, e.g., ‘Secretariat is a race horse’; others, clearly false, e.g., ‘Sherlock Holmes’ is the name of a criminal in A Study in Scarlet’. Others, equally grammatical, seem to have no clear truth value; e.g., ‘Pegasus is a flying horse’, ‘Sherlock Holmes was cured of cocaine addiction by Sigmund Freud’, or ‘The present Czar of Russia is a Democrat’.1

From a purely syntactic (i.e., grammatical) point of view, English is not significantly different from non-natural (formal or artificial) languages, such as those underlying systems of logic or such as a regimented fragment of English as in Montague 1970a,b.2

1. The first is arguably true on the basis of Greek mythology and certainly seems more truth-worthy than ‘Pegasus is a mouse’ (where ‘Pegasus’, here, names the same creature). The second is arguably true on the basis of Meyer 1974, yet it seems less truth-worthy than ‘Sherlock Holmes’s best friend was Dr. Watson’, though more so than ‘Sherlock Holmes was arrested for murdering Dr. Watson’.

But there is an important *semantic* difference. For a formal language, one usually only considers semantic interpretations which are *complete*: for each singular referring expression in the language, there corresponds an element of the universe of discourse. More precisely, there is (at least implicitly) a semantic interpretation function, \( i \), whose domain is the union of the syntactic categories of the language, and which is *total* on the subset of its domain consisting of individual constants (perhaps including definite descriptions). E.g., for each name \( n \in \text{Dom}(i) \), there corresponds an element \( i(n) \in \text{Rng}(i) \), where \( \text{Rng}(i) \) is the "domain of interpretation". It is sometimes said that \( i \) is "defined" for all names \( n \in \text{Dom}(i) \) or that \( n \) "exists" (cf. Stahl 1960, Montague 1967).

However, natural languages only have a *partial* interpretation function when given such a set- or model-theoretic semantics whose universe of discourse (or "model") is taken to be the real, physical world. There are names in English (e.g., 'Pegasus') for which the interpretation function is undefined (the *same* interpretation, it should be noted, which assigns the *horse* Secretariat to the *name* 'Secretariat' or to the *description* 'the 1973 triple-crown winner').

To put semantics on a par with syntax for parity of treatment of natural and formal languages, two alternatives suggest themselves. (1) The syntax of a natural language can be changed so that the interpretation function becomes total. This could be accomplished, following Russell and Quine, by paraphrasing away all non-denoting expressions (e.g., improper descriptions, names from fiction), thus enabling those grammatical expressions without clear truth-value to gain one (however arbitrary). Free logics, too, can be viewed as recommendations within the realm of formal languages for such syntactic change.

Despite their elegance and fruitfulness, two lines of criticism of these programs are worth recording. First, the reforms are ad-hoc. According to Russell, a sentence like 'The present Czar of Russia is a Democrat' must be reparsed as 'One and only one thing is presently Czar of Russia, and he is a Democrat' before being semantically interpreted. But this course of devising special syntactic changes for each new semantic problem is somewhat artificial.\(^3\) Moreover, as Dana

3. Cf. Lorentz: "Poincaré has objected . . . that, in order to explain Michelson [and Morley]'s negative result, the introduction of a new hypothesis has been