



Nomenclature, terminology and language

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Abstract

It is this paper’s intention to provide one perspective on some of the debates, theories and proposals relating to meaning, formalization, rigor (which I argue is not necessarily identical to precision), precision, reference and naming as they relate to nomenclature and terminology. I argue that resorting to formal and machine languages in an attempt to “fix” or “stabilize” the semantics of natural languages is not always a successful or desirable strategy. A careful examination of the practical relationship(s) between reference and semantics, the process of the genesis of meaning, helps one to understand how the logical premises for the pursuit of certain kinds of mechanical formalization strategies are faulty. An attentive use of existing natural languages, in conjunction with parsimonious and concise practices in the areas of nomenclature and terminology, can probably achieve reasonable levels of precision. It also may help avoid excessive proliferation of overlapping, partially redundant, metalanguages, knowledge representations, ontologies, etc., that all attempt to redefine standards for nomenclature and taxonomy, without necessarily confronting the problems (which lie at the foundation of many issues in the philosophy at language) at the root of the alleged “fuzziness” of many concepts generated with the use of natural languages. A relatively short set of practical proposals concludes the essay.

Key words. Nomenclature, terminology, reference, extra-linguistic reference, intra-linguistic reference, natural languages, formal languages, artificial languages, metalanguages, ontologies, temporality and language, demarcation

Introduction

In order to discuss issues in nomenclature and terminology, I will refer to some of the discussions that have been undertaken in the fields of the philosophy of language, linguistics, mathematical logic, and related fields. I am aware that not all or even many biologists may be aware of these discussions and issues, but I believe that is precisely one of the reasons this journal provides such an important (also interdisciplinary) venue.

The reason to resort to these materials is both because I obviously feel they are relevant to the issues the journal has decided to address as part of its mission, but also because I think the comparative/contrastive examination of the issues themselves is often useful for both analytical and explanatory purposes.

I will also try to concentrate on the practical issues that need to be considered and resolved when dealing with alternative proposals for nomenclatural and terminological procedures, and not only with the theoretical positions in biology, philosophy, linguistics, logic, etc., that each procedure intends to defend or stake out. For instance it is one thing to advocate for nomenclatural procedures that bolster cladistic systematics based on arguments from evolutionary theory, genetics, etc., another to have to defend the implications of its use in the everyday practice of biological systematics, the extent to which the “common ancestor” is an ideal construct