Towards thought as a logical picture of signs

J.J. Sarbo, S. Hoppenbrouwers and J.I. Farkas
University of Nijmegen, The Netherlands
e-mail: janos@cs.kun.nl

Keywords text analysis, C.S. Peirce, semiotic

We consider the problem of how a series of signs can contribute to a single thought. In our approach we make use of Peirce's semiotic and apply his theory to syntactic signs, which are signs from the syntactic point of view. In his classification Peirce introduced nine kinds of signs which can be arranged in a hierarchy. In our recent research ([FS00]) we have pointed out that a class of this hierarchy possesses a logical meaning on the basis of which a formal model of signs can be defined. In this model the interpretant of sign and object (each of which is a sign) emerges via an interaction between neighbouring signs of the hierarchy.

The central statement of this paper is that the above model of signs also applies to syntactic signs which are sentences. Such application can explain how a series of sentences can define a single proposition which is a summary. The basic problem is related to the derivation of the meaning of a sentence relative to the summary as a whole. We illustrate our theory by an extended example which is the definition of a non-trivial concept. We show that the concept as a thought is gradually built up via more simple signs. We argue that these signs are analogous and isomorphic to Peirce's signs, thereby justifying our claim that thought is indeed a logical construct of signs.

References

[DFS99] G.Y. Debrock, J.I. Farkas, and J.J. Sarbo. Syntax from a Peircean perspective. In P. Sandrini, editor, *5th International Congress on Terminology and Knowledge Engineering*, pp. 180–189, Innsbruck, 1999.

[FS00] J.I. Farkas and J.J. Sarbo. A Logical Ontology. In G. Stumme, editor, *Working with Conceptual Structures: Contributions to ICCS2000* pp. 138–151, Darmstadt, 2000. Shaker Verlag.

[Pei31] C.S. Peirce. *Collected Papers of Charles Sanders Peirce.* Harvard University Press, Cambridge, 1931.

[SFG+00] J.J. Sarbo et al. Meaning extraction from a Peircean perspective. *International Journal of Computing Anticipatory Systems*, 6:209–227, 2000.

[Tej88] V. Tejera. *Semiotics from Peirce to Barthes.* E.J. Brill, Leiden, 1988.