

## What's in the name? The correlation of the logical and the cognitive in the proper name theory

**Introduction.** It is not uncommon that a proper name (the sound of it, or the simple knowledge of it) can be the only bridge that ties us to the outside world when all other links seem to have been broken. Douville et al. suggest that that recognition of famous names produces a clear and significant bilateral medial temporal lobe (MTL) activation regardless of the time period that name is associated with [2]. The reactive tie of the brain to the person's name is so strong that this tie does not seem to disappear over time, even in the event of a brain injury. Therefore, proper names largely constitute the keystone lying at the foundation of an individual's cognitive system (*his neurolinguistic map of the world*), and this is why they have long enjoyed the attention of philosophers, logicians and linguists the world over.

Hurford [8] calls neuroscience the bridge between the logic and the language and argues that "neural evidence exists for predicate-argument structure as the core of ... primitive (prelinguistic) mental representations." Along these lines, Bickerton [1] asserts that "language served in the first instance merely to label protoconcepts derived from prelinguistic experience." Our goal here is not to prove or refute these considerations, although intuitively they seem to have a point, but to direct our attention to the fact that proper names are linguistically and cognitively unique in the respect that they fuse the linguistic form with the prelinguistic (mental) content

tighter than most other units of the natural language. This link is so tight that it remains even in damaged brain structures.

**The logical-semantic characterization of proper names and related phenomena.** The notion of the name is very broad and comprises quite a number of interrelated phenomena. Below we will outline the most important logical and semantic parameters of proper names that seem to bear on the cognitively-oriented analysis of the person's mental processes.

*Ordinary proper names* (the *least* prototypical "singular terms" [Strawson, 1950]) that do not denote unique objects, potentially referring to many different individuals (*Mary, Helen, Richard*, etc.), places (*St. Petersburg, Russia; St. Petersburg, FL*), etc. These names are used for singularizing reference only in the reference (referential) context (RC) as shown in the following drawing.

The referential context is essentially a set of boundaries that are placed on the referential space of a proper name to help fix its reference with the lowest possible degree of ambiguity. The RC can be limited to one utterance:

(1) I'm seeing Mary, *my girlfriend*, tonight.

On the other hand, it can be spilled over a whole dialogue as in the example to follow:

(2) I'm seeing Mary tonight.

Mary who?

My girlfriend.

Referential context can be classified into:

- *verbal* (purely verbal for the listener and verbal + mental for the speaker) – it has to be verbalized;
- *purely mental* (both for the speaker and for the listener); this kind of referential context does not have to be verbalized.

In the European linguacultural tradition, the RC is essential because proper names are mainly used for singularizing reference. In some other traditions the importance of RC dwindles significantly as individualization loses its position as the primary communicative function of proper names (compare *the ancestral name D-we in the Eton language, one of the languages of Cameroon, where the more namesakes you have, the more respected you are* [14]: people are called by this name; it is often the same throughout the whole line of relatives; given after the *living* family members). Importantly, the content of the RC varies with the speaker and the listener.

*Empty (degenerated [11]) names* do not denote existing objects (e.g. *Pegasus, Zeus, Santa Claus*, etc.). Obviously, one of the primary problems with the names and lexical units that can be equated to names is the problem of their semantic *interpretation*. The most burning issue here is the empty names [7], the names that are traditionally considered to have no bearer and therefore have no referent. Those who claim that the actual reference of names is an essential part of the broader content of the corresponding discourse fragment, hold that failures of reference result in failures of the speaker's contentful thinking. According to this view, empty names are not intelligible [4; see also 7 for an eloquent criticism of this approach]. A contending theory put forward in this sphere, along the lines of which we are going to work, asserts that all names, empty or not, behave semantically in pretty much the same way. They are all taken to refer to something, and their reference can be fixed within the possible-worlds semantics [10]. Hence, empty names are meaningful in virtue of the relevant referential context in which they appear [7: 124] and manifest the complex cognitive processes that precede their utterance by the speaker.

*Logically proper names* are the expressions that refer to something of which we possess direct knowledge [11; 12] (e.g. *this*). These names represent "sense data" [11] and are, therefore, free from error (to be more exact, they are free from *intentional* error) and always have a referent. Ordinary proper names, on the other hand, are abbreviated descriptions that are not always based on sense data and, consequently, cannot be logically proper names.

*Definite descriptions* fix the most prominent – or, in cognitive terms, salient – characteristics of their referent by definitively setting it out of the rest of the environment [12; see also 3 for a detailed criticism of the Russelian description theory] (e.g. *the president of today's conference session*). Proper names and definite descriptions (excluding predicative expressions) can be thought of as constituting the class of proper names [6]. The reference of the definite description associated with a particular proper name determines the reference of this name, whereas proper names contain the descriptive information in an abbreviated way.

**The Cluster Reference Theory.** The differentiation of proper names and descriptions, vague as it sometimes seems, has led to the development of S. Kripke's Hypothesis, otherwise known as the Cluster Reference Theory. This hypothesis states that proper names and descriptions should be differentiated. Proper names are described as "rigid designators" in the sense that they denote (*not refer to*) one and the same object in any of the possible worlds. On the other hand, descriptions are "non-rigid" designators. Probably the most important empirical postulate put forward by Kripke was the idea that the referents (semantic referents) of names and descriptions do *not* have to coincide. Let us suppose that Aristotle (proper name X) is described as the man who was the teacher of Alexander the Great (description Y). Then, if Y=T, then, clearly, X=T; if Y=F, does this mean that X did not exist? [9]. Obviously, the latter assumption is absurd and Kripke's hypothesis is aimed at resolving this dilemma.

The big question that the Cluster Reference Theory had to answer was how do we know the referent to which a proper name applies (i.e. its denotation)? S. Kripke asserts that this can be accomplished in two different ways:

- with the help of the *causal chain of communication* stretching from the first naming (baptizing) of the object by this particular name through all other instances of applying the proper name in question;
- by fixing the reference of a sufficient (large enough) set of definite descriptions pointing as a *cluster* to the referent of the name [9: 58ff.].

**Conclusion.** Let us use the conclusion section of this paper to outline the most important, in our opinion, cognitive implications of the logical-semantic proper name theory.

First and foremost, we hold that proper names initially reflect (and, therefore, can be used to model) *primary mental representations* of a human being. By primary mental representations we understand the frequently pagan or religiously-rooted proto-concepts derived from prelinguistic experience and aimed at optimizing the individual's interaction with the outside environment (e.g. *old Russian first names denoting unpleasant or frightening qualities given to scare the evil spirits away from the bearer; the Slavic name Ivan < Eur. Ioan(n)(Joh<sup>h</sup>n) < Eur. Iohan(n) < Heb. Iohanan (God, have mercy!)*).

The causal chain of communication proposed within the framework of the Cluster Reference Theory reflects the initial mental representation of the bearer by other members of a particular linguistic community (e.g. *the Eton salutation name usually referring to the baby's conditions at birth or during pregnancy and hence quite meaningful and informative* [14]). The descriptions that go with the name or are frequently associated with it verbalize the most salient fragments of the mental representation of the name bearer.

Proper names feature much more prominently in the person's mental space as the brain responds much stronger to the name stimulus than to a stimulus in the form of a description, however definite it would be [2], although some current evidence shows that this may not be completely true and the matter needs further research. Further studies of brain reactions could demonstrate the

degree of salience of the various fragments of the mental representations of the name bearer.

Finally, and this fact seems to be valuable not only for the cognitive analysis of the discourse of grown-ups, but for the study of child discourse as well, the referential uses of empty names are intelligible and should be studied mainly for the sake of obtaining information about the speaker's cognitive resources and processes that such names and shifts of their reference manifest [see, for example, 7: 131].

### *Works Cited*

1. Bickerton, D. "Catastrophic evolution: the case for a single step from protolanguage to full human language". Approaches to the Evolution of Language: Social and Cognitive Bases. J.R. Hurford, M. Studdert-Kennedy, and C. Knight (Eds.). Cambridge: Cambridge University Press, 1998: 34-51.
2. Douville, K., Woodard, J.L., Seidenberg, M., Miller, S.K., Leveroni, C.L., Nielson, K.A., Franczak, M., Antuono, P., Rao, S.M. "Medial temporal lobe activity for recognition of recent and remote famous names: an event related fMRI study". Neuropsychologia 43, 2005: 693-703.
3. Duží, M. 2009. "Strawsonian vs. Russellian Definite Descriptions". Organon F 4 (XVI): 587-614.
4. Evans, G. The Varieties of Reference. Oxford: Oxford University Press, 1982.
5. Formal Philosophy. Selected Papers of Richard Montague. R.H. Thomason (Ed.). New Haven-London: Yale University Press, 1974.
6. Frege, G. Funktion, Begriff, Bedeutung. Göttingen: Vandenhoeck & Ruprecht, 1980.
7. García-Ramírez, E. Proper Names: A Cognitive-Philosophical Study. PhD dissertation. University of Michigan, 2010.
8. Hurford, J. "The Neural Basis of Predicate-Argument Structure". Behavioral and Brain Sciences 23(6), 2003: 203-238.
9. Kripke, S. Naming and Necessity. Cambridge, Mass.: Harvard University Press, 1980.
10. Montague, R. Formal Philosophy. Selected Papers of Richard Montague. Edited and with an introduction by Richmond H. Thomason. New Haven / London: Yale University Press, 1974.
11. Rivas Monroy, U. "Proper Names: One Century of Discussion". Logica Trianguli 3, 1999: 119-138.
12. Russell, B. Logic and Knowledge. Essays 1901-1950. London: Georges Allen and Unwin Ltd., 1956.
13. Strawson, P.F. "On referring". Mind 59, 1950: 320-344.
14. Van de Velde, M. "Proper Names and the So-called Class 1a in Eton". Leuvense Bijdragen 92, 2003: 101-116.