One Brain–Two Grammars?
International Workshop, March 2018

Parallel diachronic developments in language, the brain, and society: how far can we go?

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According to the standard view in Linguistics, language is located and processed in the left brain. Opposing this one-sided view, several authors have pleaded for a role of the right hemisphere in language representation and processing. In particular, holistic and emotional aspects of language have been claimed to be processed in the right hemisphere, see Van Lancker Sithis (2012, 2015) and McGilchrist (2015). Moreover, McGilchrist (2009) relates developments in the balance between right and left hemisphere to developments in society. The goal of the present paper is to bring together different strands of research, relating (developments in) language, the two hemispheres of the brain, and society. The main question is: Do these strands align or are there non-aligning claims?

According to Bichakjian (2002, 2017), languages have evolved and still evolve from head last to head first, which goes along with a shift from a more holistic to a more analytic way of processing. At the same time, complex words are replaced by analytic, phrasal constituents. He also points out a shift in writing: from holistic hieroglyphs to sequential letters, from right-to-left writing order to left-to-right. These observations align with what McGilchrist (2009) claims for a development in Western society, namely an increase in 'power' of the left hemisphere, with a loss of balance between the right hemisphere (the 'master') and the left one (the 'emissary').

Bichakjian and McGilchrist's claim of a (western) development towards analytic structures and left brain language processing, we would predict that holistic, formulaic language decreases over time. However, van der Horst (2013) argues that over the last centuries the number of fixed expressions in European languages is increasing, rather than decreasing. Do we encounter a new type of holism here, one in which not the richly inflected individual word contains a holistic message but instead the fixed expression? Fixed expressions are built out of analytic words, so in a sense they are holistic structures of a higher order. How should we interpret this development in terms of the division of labor between left and right hemisphere processing? Is the pendulum simply shifting back to the right, or is there reason to postulate a new, higher order of processing? That would mean that we have to do with a real 'drift'. Van Lancker Sidtis (2012, 2015) and Heine et al. (2015) show that the right hemisphere is involved in processing formulaic language. Does this mean that the right hemisphere has found a new task here? Is this task of a higher order than the processing of 'old' holistic words?

McGilchrist (2009) sees parallel developments in brain and society. In a similar vein, van der Horst observes parallels between changes in language and in society. Whereas in the Middle ages *properties* were prominent, and in the Renaissance *functions*, he observes a prominence of *networks* in modern society. He relates these three types with respectively complex words, functional relations between constituents in the sentence and fixed expressions. The ultimate question is, how far can we go in claiming parallels between developments in society, language, and the brain?

References

Bichakjian, Bernard. 2002. *Language in a Darwinian perspective*. Frankfurt a.M.: Peter Lang.

Bichakjian, Bernard. 2017. Language evolution: How language was built and made to evolve. *Language Sciences* 63, 119–129.

Heine, Bernd, Tania Kuteva, Gunther Kaltenböck & Haiping Long. 2015. On some correlations between grammar and brain lateralization. Oxford Handbooks Online.

McGilchrist, Iain. 2009. *The Master and his Emissary. The Divided Brain and the Making of the Western World*. New Haven and London: Yale University Press.

McGilchrist, Iain. 2015. The origins of emotion and language from the perspective of developmental neuropsychology. In: Ulrike Lüdtke (ed.), *Emotion in language*. Amsterdam: Benjamins, 69–97.

Van der Horst, Joop. 2013. *Taal op drift. Lange-termijnontwikkelingen in taal en samenleving*. [Language drift. Long term developments in language and society]. Amsterdam: Meulenhoff.

Van Lancker Sithis, Diana. 2012. Two track mind: Formulaic and novel language support a dual process model. In: Miriam Faust (Ed.) *Advances in the Neural Substrates of Language: Toward a Synthesis of Basic Science and Clinical Research*. London: Blackwell Publishing Ltd., 342–367.

Van Lancker Sithis, Diana. 2015. Formulaic language in an emergentist framework. In: M. MacWhinney & W. O'Grady (eds.), *Handbook of Language Emergence*. Wiley-Blackwell, 578–599.