## **Abstract**

11th Conceptual Structure, Discourse, and Language Conference, Vancouver, UBC, May 17-20, 2012

Max van Duijn, MPhil, Leiden University Supervisors: Prof. I. Sluiter & Prof. A. Verhagen

## Reading Minds: (Re)Presentation of Multiple-Order Intentionality in Narrative

In daily interaction as well as when dealing with narratives (in the broad sense, including e.g. drama and film), humans are capable of keeping track of complex networks of multiply-embedded mind states (Dunbar 2003; 2008). Experiments investigating this capability have shown that participants make relatively few mistakes in answering questions covering up to four layers of embedding, whereas error rates increase to almost 60% with fifth-order questions (Kinderman et al. 1998). On the basis of such results, it has been argued that the human capability to process multiple-order intentionality (MOI) has a 'natural limit' at around fifth order (Dunbar 2008).

However, the human capability to process MOI cognitively seems to be quite dependent on *how* crucial information about what characters believe, think, intend, etc., is presented. This can be well illustrated by paraphrasing situations from certain novels and plays: analytic formulations of MOI formed in this way very quickly become opaque. In Shakespeare's *Othello*, for example, the audience has to *understand* that Iago *intends* that Cassio *believes* that he (Iago) *intends* that Desdemona *intends* that Othello *considers* Cassio's rehabilitation... (cf. Dunbar 2008). Such a paraphrase is, to say the least, uncomfortably complex. At the same time, it is an empirical fact that a play such as *Othello* has been understood and appreciated for ages, indicating that a normally gifted reader/watcher can follow it without undue cognitive strain.

What this suggests is that some aspects of the exposition of information in *Othello* and comparable narratives must alleviate the cognitive burden of processing MOI. My objectives are to describe these aspects, and to explain how they relate to the (cultural) evolution of linguistic devices that facilitate both communication and cognition (Tomasello 2008), and to the framework of 'dual inheritance' in general (Boyd & Richerson 1985; Tomasello 1999). In line with this, I will argue that the presumed 'natural limit' in the human capability to process MOI is not so much fixed and brain-inherent, but best circumscribed in a more pragmatic fashion.

I integrate concepts and analytical tools developed in cognitive linguistics/ narratology and evolutionary psychology/anthropology (cf. 'consilience', Wilson 1998), and apply them to a corpus of widely understood narratives that involve MOI. Seven aspects of *narrative exposition* turn out to be structurally involved in the presentation of MOI. In my talk I will elaborate on three of these aspects: the narratives (1) make readers/watchers consider events from different points of view (through e.g. focalization); (2) split systematically into short, separate episodes involving only two/three characters; and (3) build on commonly shared schemes and frames. My presentation will include the use of short, illuminating movie clips.

My analysis of how MOI is presented in narratives reveals something about the role of culturally evolved devices in the human ability to keep track of complex networks of embedded mind states. I will finish by suggesting how future research on this topic will benefit from further integration of insights and methods from different academic disciplines.

## References

- Boyd, R. & P.J. Richerson. (1985). Culture and the Evolutionary Process. Chicago: U of Chicago P.
- Dunbar, R.I.M. (2008). 'Mind the Gap or Why Humans Aren't Just Great Apes', *Proceedings of the British Academy* 154: 403-23.
  - -- (2003). 'The Social Brain: Mind, Language, and Society in Evolutionary Perspective', *Annual Review of Anthropology* 32: 163-81.
- Kinderman, P., R.I.M. Dunbar & R.P. Bentall (1998). 'Theory-of-mind deficits and causal attributions', *British Journal of Psychology* 89: 191-204.
- Tomasello, M. (2008). *Origins of Human Communication*. Cambridge MA: MIT Press, [esp. ch. 6]. -- (1999). *The Cultural Origins of Human Cognition*.
- Wilson, E.O. (1998). Consilience: The Unity of Knowlegde. New York: Knopf.