Abstract:

One of the species-unique characteristics of human cultures is that they create, maintain, transmit and retain across generations many cultural forms, skills, and knowledge whose relevant aspects are often cognitively opaque to their users and learners. I’ll first characterize the concept of cognitive opacity, outline the nature of the learnability problem it represents for mechanisms of cultural learning, and speculate about its evolutionary origins. It will be argued that during hominid evolution a new type of social learning system has been selected that is specialized to ensure efficient intergenerational transfer of cognitively opaque cultural contents from knowledgeable to naïve conspecifics. The design structure of this cue-driven social-cognitive adaptation of mutual design, that we call natural pedagogy (Csibra & Gergely, 2006; Gergely & Csibra, 2006), will then be described. Pedagogical knowledge transfer is triggered by specific ostensive and referential cues to which infants show special and early sensitivity and involves the selective communicative manifestation of relevant and generalizable cultural knowledge about referent kinds ‘for’ the infant to fast-learn. I shall then critically contrast pedagogy theory with currently dominant alternative approaches to human cultural learning that are based on simulation and identification processes by comparing how these respective models can account for recent evidence on early relevance-guided selective imitative learning on the one hand, and on young infants’ interpretation of others’ referential emotion expressions in ostensive versus incidental observation contexts on the other. It will be argued that many early emerging social cognitive competences involving ostensive communicative triadic interactions (such as imitative learning, social referencing, or proto-interrogative pointing) are better accounted for in terms of the primarily epistemic functional perspective of pedagogy theory than in terms of human-specific primary social motives to identify with and imitate other humans, and ‘share’ one’s mental states with others, as hypothesized by the alternative simulation-based approaches. Finally, the implications of pedagogy theory for re-conceptualizing the nature of the early development of understanding others as having separate minds with different knowledge contents will be briefly explored.