What do human infants expect when adults communicate to them?

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While social learning and communication are both widespread in non-human animals, social learning by communication is probably human specific. Humans can and do transmit generic knowledge to each other about animal and artefact kinds, conventional behaviours to be used in specific situations, arbitrary referential symbols, cognitively opaque skills, and know-how embedded in means-end actions. These kinds of cultural contents can be transmitted by either linguistic communication or nonverbal demonstrations, and such types of knowledge transmission contribute to the stability of cultural forms across generations.

In a series of studies, we have shown that human infants are prepared to be at the receptive side of such communicative knowledge transfer, which, together with adults' inclination to pass on their knowledge to the next generation, constitute a system of 'natural pedagogy' [1] in humans. This talk will provide an overview of recent counterintuitive findings that suggest that human infants process the same information differently when it is presented to them by ostensive communication or outside a communicative context. When toddlers observe an individual expressing emotional attitudes towards objects, they attribute the corresponding preferences to her, but not to others. However, when these attitude expressions are performed for them, they generalize the corresponding preferences to other people [2]. Even younger infants tend to encode kind-relevant properties, like shape and colour, of objects at the expense of ignoring their episodic properties, like their location and numerosity, when the objects deictically referred by a communicator [3]. We have also found that infants represent artefacts in terms of their demonstrated function, but only if this demonstration occurs in a communicative context [4]. Infants also more likely to categorize objects on the basis of communicated, as opposed to simply observed, information.

These results suggest that communicative contexts make infants search for potentially generalizable semantic information, as if they expected to learn something. These perceptual and cognitive biases allow human infants to pay special attention to, and learn from, potential teachers, and assist the acquisition of cultural knowledge in a uniquely human way: by communication.

References