This week, the Cognition and Culture blog will be hosting a series of posts discussing György Gergely and Gergely Csibra's theory of Pedagogy, a theory of communication and cultural transmission that ICCI bloggers love to discuss (see these two posts by P. Jacob, and this one by György Gergely). This theory is one of the most exciting things that happened to the study of communication recently – because it is supported by gorgeous experiments, but above all because of its theoretical ambitions.

This week, Pedagogy theorists will reply to our bloggers' critics. Tomorrow, Marion Vorms will question the way the theory explains a famous effect in developmental psychology; on Wednesday, I will ask some questions about the meaning of their "Genericity Bias". György Gergely was kind enough to consider our arguments at great length, in a series of three posts – one on referentiality (Thursday), one on genericity (Friday), and one on the A-not-B task, which will close the week on Saturday. Comments are open on our posts, and we'll reply to György's replies as they appear. Of course, everyone is free to comment, this week and after.

Like many authors who wrote about communication (such as Michael Tomasello or Dan Sperber and Deirdre Wilson), Gergely and Csibra believe in the existence of specifically human cognitive capacities that allow us to communicate. However, they differ from most other theories of communication in one important way.

Pedagogy theorists believe that we are hard-wired to expect communication to be referential and generic. When someone adresses us (with or without words – say, by waving a hand at you and looking you in the eyes), we expect their actions to be about something (that's referentiality), and we expect their actions to teach us something general about what kind of thing the thing they are referring to might be (that's genericity).

Pedagogy theory readily admits that communication need not be referential or generic. Some communicative actions do not have a clear reference. Chances are that the last words you uttered were non-referential communications, like 'Hi there'. Many communicative actions that do have a reference are not teaching you anything generic about that reference. 'Watch out for the car!' does not inform you about the nature of cars in general. It tells you that a particular car is coming towards you.

Is generic knowledge a knowledge of how things are ? Not necessarily. It can also bear on the proper way of doing certain things. Pedagogy may be used to transmit both descriptive and normative information. For the same reason, communication does not need to be about an object in order to be referential. It can refer to an action, it can be about a gesture.

Of course, we are able to understand non-referential, non-generic communication. Yes but, Gergely and Csibra add, this is not what we expect communication to be about. From the earliest age, we expect communication to be generic and referential. Why is that ? They offer two arguments.

The first argument is optional. According to a speculation (a speculation that Gergely and Csibra insist is not central to their theory), communication evolved because it enabled humans to acquire general knowledge from others – 'berries are edible', 'traps of this kind are for taking small animals', 'Stone can be broken by doing this'. As a result, Gergely and Csibra believe that human communication bears the mark of the first function it fulfilled in our history: transmitting generic knowledge.

But you don't need to buy this conjecture in order to buy the theory. Gergely and Csibra's favorite arguments are experimental. Their data, mostly gathered in experiments involving infants, seem to show that, in a communicative context, their subjects pay more attention to generic features of

objects (such as their shape, as opposed to their location). This is what they call the genericity bias.

How does this bias work ? Nobody wants to claim that it prevents us from understanding communicative actions when they are not generic or referential. Does it sometimes lead us to misinterpret communicative actions ? If so, how could it have been adaptive ? Or is the generic interpretation merely the first one that comes to our mind ? Is it, on the contrary, the default interpretation, the one we choose when all other options have been tried and failed ? These are the questions I will ask in my post.

Marion Vorms presents a critique of a Science paper from a team of defenders of Pedagogy theory. In this paper, József Topál and his colleagues show that a famous psychological effect, the A-not-B effect, may be explained, in part, by biases induced by communication. When infants (before 12 months) see a demonstrator hiding an object in a container A, they seek the object where it is, in container A. But if, after several A trials, the object is hidden in a new container, B, infants will keep looking for it in A. Topál et al. claim that they make this mistake in part because of the communicative context: infants believe they have been taught that the object goes in container A. Marion doubts this interpretation.

Have a good Pedagogy week!