

This post is part of our 'Pedagogy theory week' series.

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For a very short presentation of pedagogy theory, see the [Monday](#) post. This one is about the genericity bias. You can read György's reply on this topic on [Friday](#). According to Pedagogy theory, we expect communication to teach us something general about a thing or an action : what kind of object, or what kind of action it is. Yet the theory makes room for the fact that not all communicative actions are generic. Communicators know that, and when communication is not generic, they know better than to cling to their expectations of genericity. Still, according to Pedagogy theory, we are biased to treat communication as generic; what does that mean?

In a 2008 study, Yoon, Johnson, and Csibra (2008) have shown that when infants are faced with an adult who points at a toy, they tend to focus on the features of the toy, on what kind of toy it is, and not on its location. This tendency to infer generic representations in communicative contexts contrasts with what Yoon et al. found in the absence of communication. If the adult is merely reaching for the toy, not pointing at it, infants tend to pay attention to the location of the toy, not to its features. According to Pedagogy theory (Csibra and Gergely, 2009), findings like this one are explained by a genericity bias that is specific to communication. Its function is to focus children's attention upon generic messages, by suppressing non-generic interpretations of communicative actions.

"An ostensibly-induced processing bias that suppresses the encoding of transient episodic information (...) can help focusing the limited resources of infant's attention to enduring and kind-relevant object properties."

(Csibra and Gergely, 2009, pg. 5)

What exactly those enduring and kind-relevant properties are is debatable (Is a mountain's location not kind-relevant and enduring? Is a river's course?). But I will not get into that debate here (see [Marion's post](#) for a discussion of genericity in Pedagogy theory). I'll just pretend that we know what genericity is, and ask: what would it imply if (as Pedagogy theory seems to claim) we were biased to interpret communicative actions in a generic way?

First, let us get one option off the table - a non-viable hypothesis that no one, I think, would endorse. Obviously, Pedagogy theory does not claim that we suffer from an absolute genericity bias, that would blind us to the existence of non-generic communication, and would render episodic communication impossible. ('Episodic' is the term Pedagogy theory often uses for communication about events, or non-essential properties of things. The fact that there is a bird on a windowsill, Pedagogy theorists would say, is episodic. The fact that it is a magpie, or that magpies have blue wings, would be generic.) Nobody denies that we understand episodic communication, which means that non-generic interpretations are not always (or even most of the time) suppressed. We don't automatically treat each and every communicative action as generic.

Why a true genericity bias is implausible

Pedagogy theorists may (or may not) want to endorse another option. They might want to say that we are more likely to mistake episodic communication for generic communication than the other way round. Our expectations of genericity would often lure us into thinking that communication is generic while it is not. That is, after all, what the phrase 'genericity bias' seems to imply : "a bias is an inclination to present or hold a partial perspective at the expense of (possibly equally valid) alternatives" says no less an authority than Wikipedia.

Let me explain why I think this option (let us call it the True Bias option) is not much more viable than the first (the claim that we automatically treat all communication as generic).

First, because Pedagogy theory does not provide an account of which communicative contexts would trigger the genericity bias. Since no one claims that we always favor generic interpretation, one has to assume that, some of the time at least, we are able to see through the bias, and understand non-generic actions. Yet if we are truly biased towards genericity, this ability sometimes deserts us. Why, and when, would it do so? I cannot see that Pedagogy theory gives any answer to that question.

Second, because our capacity for pedagogy (and, unless I'm mistaken, that seems to include the genericity bias) is supposed to be adaptive. Communication, as Pedagogy theory sees it, is supposed to help us acquire knowledge from others. Now, if we had a tendency to favor generic interpretations at the expense of equally valid alternatives, would that help us communicate even generic knowledge? I can hardly see how it could do that. Tell a genericity-biased communicator that there is bread on the table today, and he may conclude that bread can reliably be found on the table every day. How could this bias help him acquire useful cultural knowledge? It merely makes him vulnerable to weird errors.

'Default genericity'

One may want to consider another option, sometimes called 'Default genericity' (an idea coming from linguistic research on generics). According to this view, we prefer generic interpretations to non-generic ones only when we a communicative action can receive several interpretations, all equally likely, one of them being generic and the others not. (Dear reader - wise, specialized reader who are versed in such matters: you may have noticed how readily I resort to glib simplification. Please bear with me. This is just a blog post.).

This bias would be weaker, but still, it would be a bias. Even between mother and child, generic communication is not the most frequent type of communication (see, for example, the data described by Susan Gelman in her 2005 book, *The essential child*). In other settings, it is probably even less prevalent: the main bulk of information exchanged in human communication is not generic. If we mistook even a tiny proportion of it for generic information, efficient communication between humans would suffer. How this bias would help us acquire generic information is far from obvious; its drawbacks, on the other hand, are evident.

Does Pedagogy theory need a bias?

Fortunately, Pedagogy theory does not need to be committed to those claims. Let us consider again Csibra and Gergely's characterisation of the genericity bias, the one I quoted a few lines ago.

"An ostensibly-induced processing bias that suppresses the encoding of transient episodic information (...) can help focusing the limited resources of infant's attention to enduring and kind-relevant object properties."

(Csibra and Gergely, 2009, pg. 5)

I'm very bad at interpreting other people's writings, and I'm egregiously bad when it comes to Gergely and Csibra's theory. Please feel free to correct me. But to me, all these few lines seem to say is: when communication is used to convey generic information (but not otherwise), infants understand it. As a result, they focus their attention on what communication is about. In some instances, it is about generic information. I can't see any reason to think that, in other contexts, the same mechanism would not focus the infant's attention on non-generic information.

This seems to follow from most current theories of communication (mostly, those I have in mind are Gricean theories of communication such as relevance theory, but you do not have to buy them in order to buy what follows). When we interpret a communicative action (a sentence or a gesture), our attention is focused to the most plausible range of interpretations. Typically, we do not consider all the possible interpretations of a communicative action, or even a fraction of them, before choosing one: most of the time, the first interpretation that springs to our mind is the most relevant one. Alternatives are not even considered (although they might be, if needed). Otherwise, come to think of it, we would be swamped by an unmanageable plenty of alternatives. (This guy is pointing at a door, but might he not be intending to convey some allusion to the financial crisis?)

How is this allocation of attention arrived at? Various theories of communication have proposed various hypotheses. But few people, I think, would doubt that our search for interpretations is not random.

Thus, when a communicative action warrants a generic interpretation, we typically look for a generic interpretation, without even considering non-generic alternatives. Gergely and Csibra are absolutely right to state that, in these cases, communication strongly orients the allocation of attentional resources towards generic representations. But can we call this a bias?

Well, we can if we are willing to sacrifice semantics to scientific diplomacy. When communication is generic, we are genericity-biased. When it is episodic, we are episodicity-biased. If you read a sentence about dogs, your interpretation of it is dog-biased ; if the sentence is about cats, you become cat-biased. You prefer the plausible, the most relevant interpretation.

This post, you might remark, leaves out the most important problem. Just saying that we pay attention to generic interpretations when they are most plausible cuts little ice, if we don't specify the conditions that make generic interpretations more plausible than others. What are the communicative contexts that favor generic interpretations? This question badly needs an answer; but the idea of a genericity bias does not provide us with that answer.

I quote from Csibra and Gergely's latest paper on Pedagogy theory
Gergely Csibra and György Gergely. Natural pedagogy. Trends in Cognitive Sciences, 13:148-153, 2009.

[\(link\)](#)

Yoon et al.'s study on the genericity bias

Jennifer M. Yoon, Mark H. Johnson, and Gergely Csibra. Communication-induced memory biases in preverbal infants. Proceedings of the National Academy of Sciences, 105(36):13690-13695, 2008.

[\(link\)](#)

Susan Gelman's 2005 book

The essential child : the origins of essentialism in everyday thought. Oxford University Press, Cambridge, MA, 2005.

[\(link\)](#)