

Is Normative Thinking Even a Gadget?

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Norm psychology is a special case of nativist evolutionary psychology, a package that includes the ideas (a) that humans face cognitive challenges quite unlike those of other animals, (b) that people's cognitive architecture has been shaped by natural selection in response to these challenges, and (c) that as a consequence, that architecture is modular, with an array of specializations designed to drive successful response to each of these challenges. Because I am on the record as denying that Point c follows from Points a and b (Sterelny, 2012), it is no surprise that I find the critical theme of this article persuasive.

In particular, I am impressed by the deflationary account of intrinsic motivation to conform to norms, explained as a mere associative consequence of early social rewards for norm conformity, and the evidence that pervasive variation in the development of normative cognition is correlated with variation in normative education (broadly understood). Normative cognition is not insensitive to environmental variation in ways innateness hypotheses would predict. This skeptical argument could be developed further. The early emergence of normative guidance (granted that it does emerge early) suggests an innate mechanism to WEIRD (Western, educated, industrialized, rich, and democratic) eyes only because of the learned helplessness of WEIRD children. Forager ethnography shows that young children (from about 4 on) master quite challenging and dangerous skills with appropriate social support (Lew-Levy et al., 2017). Young children can learn a lot and quickly. Early competence can be learned competence. Moreover, the same ethnography shows that many forager cultures invest quite heavily in explicit normative teaching (Lew-Levy et al., 2018) while leaving the acquisition of other challenging competences to informal social support. One would not predict this if minds are specifically adapted to recognize and endorse the norms of one's natal community. That said, Heyes's neutrality about norm content and of their cognitive representation weakens her case. It is hard to know whether the environment is informationally rich enough to support learning norms without

an explicit account of what is learned. The moral grammarians make their case for innateness more plausible by also arguing that moral norms are represented in a very general and abstract form (Hauser, 2006; Mikhail, 2007). Heyes is skeptical, and so am I, but making the case requires more specific commitment to the specifics of the learning challenge. I was also struck by the deflationary account of early norm enforcement: Supposed infant norm enforcement is actually neophobia. Norms are typically respected, so contra-normative behavior is also statistically unusual. But could neophobia be as pervasive in young humans as this analysis requires? The young are neophilic as well. Much humor and play, even with the very young, depends on breaking expectations, such as putting shorts rather than a hat on one's head or walking backward rather than forward. Not all unusual acts and acts recognized as unusual are aversive.

I have one more reservation about the critique. Heyes suggests that agents tend to conflate the typical with the normatively required and that this is an anomaly for norm psychology. This I do not see. Many norms are implicit (as with Heyes's example of eye-contact duration). So, norm detection cannot depend only on explicit commentary. That a particular pattern is typical is quite good evidence of its being a norm, especially given that typical patterns tend to become norms as agents come to both rely on this typicality in their decision-making and use them as cues of social identity. No surprise that a norm-acquisition device would find and respond to typical patterns.

I have a few more serious reservations about the positive project. First, I suspect that if Heyes is right, normative cognition is not even a gadget. A gadget is a domain-specific information-processing machine, but one built by cultural learning rather than natural selection. Literacy and arithmetic are paradigms. A gadget is not just a special-purpose database. I take it that a

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forager herbal is not a gadget. But on her analysis, normative cognition seems like a herbal. Herbals depend initially on implicit, phylogenetically widespread, domain-general processes of pattern recognition and causal reasoning. But with the aid of cultural learning, the herbal gradually becomes a rich, nuanced, and partially explicit repository of information about the local flora. This seems to be the trajectory of normative cognition, too. Normative cognition seems to be cognition about a distinctive domain, not a distinctive way of thinking about that domain (not least because normative judgment requires integrating information about norms with much other information). There are indeed “deontic logics,” formalization of inferences about obligation and prohibition. But as far as I know, these are not even idealized descriptions of actual normative thinking.

Second, Heyes accepts that on the whole, despite obvious exceptions, normative cognition is adaptive, individually and collectively. Without some appeal to gene-culture coevolution biasing take-up of more prosocial norms, I doubt that Heyes has the resources to explain this fact (if indeed it is a fact). The challenge is that a set of formal models seems to suggest that if norms tend to be adaptive for the communities in which they establish, that requires special explanation. Individual-level costs and benefits can result in the stabilization of many social practices, including many that are not collectively beneficial (Henrich, 2004). In particular, punishment for deviations from group-typical behavior can result in the stabilization of almost any norm (Boyd & Richerson, 1992).

Heyes, like others, suggests that selection on cultural variation (presumably, cultural-group selection) explains the general tendency for norms to be beneficial. Despite the fact that she is in good company, I am skeptical. In general, selection is most efficient when (a) the population under selection is large (chance has large effects on small populations), (b) inheritance has a low error rate, (c) generations turn over quickly enough for selection to be iterated, and (d) traits of the unit under selection vary independently of one another. If, for example, the norms of marriageability (what counts as incest) do not vary independently of the norms of property inheritance, selection can act only on the combination of marriage rules and property law, not on either of them separately. I suspect that (especially) explicit norms are

typically aspects of larger ideological complexes that justify them, and hence, that selection acts very inefficiently on individual norms. The fidelity of inheritance is questionable, too (for a skeptical view of long term fidelity in Australian traditional communities, see Hiscock, 2020). In addition, it is far from obvious that populations of competing communities have the size and speed of generational turnover for efficient selection. Most small-scale communities probably only interacted with a few immediate neighbors. If it is true that in general, norms have prosocial effects, my guess is that gene-culture coevolution has induced content biases into the supply of variation, making more prosocial norms more likely to establish within communities. That said, these biases are probably the result of small, ordinary tweaks to ancestral cognition and motivation.

Transparency

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