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Neither Human Normativity nor Human Groupness Are in Humanity's Genes: A Commentary on Cecilia Heyes's "Rethinking Norm Psychology"

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Heyes presents a compelling account of how cultural evolutionary processes shape and create "rules," or norms, of social behavior. She suggested that normativity depends on implicit, genetically inherited, domain-general processes and explicit, culturally inherited, domain-specific processes. Her approach challenges the nativist point of view and provides supporting evidence that shows how social interactions are responsible for creating mental processes that assist in understanding and behaving according to rules or norms. We agree. In our commentary, we suggest that it is not only that mental processes for grasping norms are recreated in each generation but also that social interactions shape the kinds of social groups that are recognized (for a more extensive discussion, see Kish Bar-On & Lamm, 2023). We highlight evidence showing that accounts of norm psychology thus require a richer notion of human groups.

In her analysis of the characterization of norms and norm psychology in the literature, Heyes mentioned definitions of norms from several disciplines (e.g., Chudek & Henrich, 2011; Göckeritz et al., 2014; House, 2018) and critically prodded the relation between norms and rules. However, another concept reoccurs in almost every definition of norms, including the one she developed: the concept of human groups. A detailed picture of normative behavior must address the question of what human groups are, how they evolved, and how this affects normativity.

According to Heyes, groups play a significant role in norm enforcement, compliance, and commentary. Within a group context, individuals learn which norms they should follow and which behaviors they should avoid and develop the ability to partake in commentary concerning what is appropriate, allowed, required, and forbidden in their groups. However, the types of evidence Heyes exploited in her discussion about the relation between implicit and explicit normativity are largely (although not entirely) based on experiments of economic games that, for the (justified) sake of simplicity, address groups as small, homogeneous, and stable. These types of evidence build on the hypothesis that small and noninteracting groups are appropriate models and represent the origins of human groups and norm psychology. However, this ignores a different evolutionary perspective supported by significant evidence, according to which human groups transitioned from closed social bands to open bands nested in a multilevel social community much earlier than was commonly thought—about 800,000 years ago (Layton & O'Hara, 2010; Sterelny, 2021; Stiner, 2002). The latter perspective, advocated by Kim Sterelny and others, urges researchers to reconsider work that takes groups to be simple and small and to consider the possibility that some economic experiments and other experimental and observational studies based their assumptions and results on an artifact, not on the natural phenomenon of groups.

From the Pleistocene to the early Holocene, Sterelny's (2021, pp. 57, 70–74) narrative demonstrates how Hominins exchanged the hierarchical social groups of their ancestors for more egalitarian bands, progressing from mutualistic cooperation centered around foraging and hunting to a more demanding framework of indirect reciprocation. Previous discussions have shown that social groups across species rapidly self-organize into hierarchies in which members vary in their level of power, influence, skill, or dominance (Gould, 2002;

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Henrich & Gil-White, 2001; Magee & Galinsky, 2008; Mesoudi & Jiménez, 2019). Group hierarchies are dynamic and relational, which makes status-related cognitions and behaviors critical for individual adaptation and group functioning (Koski et al., 2015). Evidence from neuroimaging identified specific neuropsychological mechanisms that modify behavior according to acquired knowledge of the social hierarchy (Li et al. 2021; Watanabe & Yamamoto, 2015). These and other data on different neural systems involved with different kinds of norms (i.e., those directly related to social status and those that are not) should be integrated with the cognitive-gadget account (J. Blair et al., 2006; R. J. R. Blair et al., 2016). Norms draw on and set up hierarchical social order (Towns, 2012), and belonging to multiple groups affects the way individuals perceive norms and adjust their behavior (Charness et al., 2007; Goette et al., 2006). This body of evidence shows that the complexity of human groups, with or without social hierarchies, affects, at least to some extent, the cognitive processes responsible for normative behavior. We are not claiming that small and simple groups cannot be useful case studies in norm psychology or that complex human groups necessarily undermine the theory Heyes developed. However, we contend that heterogeneous, hierarchical, and complex human groups are not only relevant to norm psychology but also shape people's norm psychology and that a comprehensive psychological model should take account evidence connecting group complexity, norms, and social hierarchy.

Considering the complexity of human societies alongside Heyes's cognitive-gadgets model of norm psychology leads us to ask whether the mechanisms of social-identity theory (broadly construed) are innate or hinge on domain-general mechanisms and cultural inheritance. Individuals belong to multiple, sometimes overlapping groups and constantly move from one group to another by joining or forming new groups or changing the salient group among groups they already belong to. As a result, people often adjust their social identity, group identity, and the norms they follow to adapt to the new social circumstances (Cancian, 1975; Turner & Reynolds, 2012). According to the social-identity approach, individuals have rich social identities that derive from their knowledge of belonging to multiple social groups and the emotional significance of group membership (Tajfel, 1981, p. 255). Three cognitive processes are central to developing social identity: social categorization, social comparison, and social identification. Research on social categorization suggests that the tendency to represent and reason about social categories is arguably a core component of human psychology and that the cognitive processes supporting it are early emerging and flexibly adaptive (Macrae & Bodenhausen, 2000; Rhodes & Baron, 2019). Related evidence suggests that there are cross-cultural differences in social-categorization processes, which appear to be driven by familiarity-based mechanisms, and thus are highly dependent on structural factors, such as cues to competition and cooperation, in the social environment (Ferera et al., 2018; Kelly et al., 2007). These and other studies on cross-cultural differences (Zhang et al., 2021) are significant sources of evidence supporting the possibility that social identity might be, to some extent, supported by cognitive gadgets.

The questions are thus whether there are appropriate domain-general mechanisms and rich enough stimuli to support the development of social identity and group boundaries with all their complexities and their relation to underlying normativity. We think that the evidence would support Heyes's contention, but we argue that this aspect has to be considered in any approach to norm psychology and is thus also critical for Heyes's cognitive-gadget account. Moreover, should she accept this friendly amendment, we think it would further her general claim: The complexity of human groups militates against simple nativist accounts and ultimately may provide the best evidence in favor of developmental approaches such as the cognitive-gadgets approach.

Transparency

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