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DISCUSSION NOTE

An Evolutionary Account of Guilt?

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Abstract

Grant Ramsey and Michael Deem argue that appreciating the role that empathy plays in posttransgression guilt leads to a more promising account of the emotion's evolutionary origins. But because their proposal fails to adequately distinguish guilt from shame, we cannot say which of the two emotions we are actually getting an evolutionary account of. Moreover, a closer look at the details suggests both that empathy may be more relevant for our understanding of shame's evolutionary origins than guilt's and that guilt is unlikely to be an adaptation.

1. Introduction

Are human emotions evolutionary adaptations? Although the received opinion maintains that at least some are, the plausibility of such claims demands that we have more than just a clever "how possibly" story. On this front, Grant Ramsey and Michael Deem (hereinafter R&D) offer a provocative argument for guilt (Ramsey and Deem 2022). They start by explaining why recent evolutionary accounts of guilt are inadequate: in focusing on the benefits that *anticipatory* guilt may have in forestalling cooperation-undermining norm violations, these accounts fail to explain why experiences of *posttransgression* guilt would have been beneficial. R&D then argue that understanding the role that empathy plays in posttransgression guilt delivers a more complete account of the emotion's evolutionary origins. But although R&D are correct about what a viable evolutionary account of guilt must do, their efforts to meet the standard they set fall short.

To make my case, I begin with an overview of R&D's proposal, highlighting the novel role they take empathy to play in explaining guilt's evolutionary origins (section 2). I then note two problems with their account, both of which focus on their proposal's failure to appreciate the affinities between guilt and shame. First, R&D's account of guilt is too vague. Because their model fails to adequately distinguish guilt from shame, we cannot say which emotion we are getting an evolutionary account of (section 3). But even if we suppose that R&D have succeeded in providing a sufficiently precise model of guilt, a second problem remains: given their observations about the

comparatively late arrival of guilt on the evolutionary scene, there's good reason to think that the general empathetic mechanisms they posit actually worked to facilitate the evolutionary emergence of shame, not guilt (section 4). With these issues raised, I bolster my critique by sketching a novel alternative that takes guilt to be best understood, not as a biological adaptation, but rather as the product of enculturation (section 5). I then conclude by briefly noting some larger lessons that fall out of my arguments (section 6).

2. R&D's proposal

Recent evolutionary accounts of guilt tend to focus on the adaptive benefits of *anticipatory* guilt (Joyce 2006; James 2011). On this picture, guilt's adaptive value lies in sustaining cooperative arrangements in the face of opportunities to defect, and guilt is able to do this because the aversive nature of anticipatory guilt—the guilt that one experiences in advance of a transgression—changes one's decision calculus. Although R&D grant that this picture is good as far as it goes, they argue that it doesn't go far enough.

For starters, it leaves us without an explanation of *posttransgression* expressions of guilt. Not only do these experiences seem unnecessary for a mechanism the function of which is to *forestall* transgressions but they can also do significant *damage* to one's psychological well-being and even to one's fitness (e.g., guilt proneness correlates with psychopathologies like depression and self-loathing). So why would evolution have selected for something like this? But existing accounts also fail to explain how expressions of posttrangression guilt could bring *benefits* to those who express them. As R&D note, "guilt would hardly have been a boon to the individual if the expression of guilt were routinely discounted, ignored, or exploited by the community" (441). Thus doing better requires explaining why community members would have responded positively to individuals who experience posttransgression guilt by, for instance, forgiving them or permitting their social reintegration.

To show how we can do better, R&D move in two steps. First, they develop an account of guilt that provides the foundation from which their evolutionary proposal builds. On R&D's model, guilt is a psychologically painful emotion that's concerned with transgressions of accepted norms. They add that experiences of guilt are both tightly linked with judgments about being responsible for those transgressions and tend to be focused on one's actions (rather than oneself). Motivationally, the anticipation of guilt functions to counter desires to transgress established norms, while experiences of posttransgression guilt tend to bring reparative actions in transgressors (436–37).

With this model in hand, R&D then move to their evolutionary account. They start with an observation gleaned from research on maladaptive guilt: the psychological harm that's associated with guilt tends to be mitigated when guilt-experiencing individuals can make amends to those whom they've transgressed. As R&D see it, the reason this observation holds is that expressions of guilt prompt community members to restore (some of) a transgressor's social standing (443). Thus, to better understand guilt's evolutionary origins, they suggest we first look to explain how expressions of guilt by transgressors managed to bring about these changes in the behaviors of conspecifics.

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Enter empathy. At its core, empathy is a psychological mechanism that not only allows individuals to experience the positive or negative valence of the affective states that they take others to be experiencing but also motivates individuals to act so as to either preserve positively valenced states brought on by empathy or eliminate the negatively valenced ones. Moreover, the negative experiences that empathy brings when one sees another in distress have been shown to be associated with both efforts to alleviate the distress (in oneself or the person in distress) and diminished anger and aggression toward others. Combining all this delivers the payoff. In expressing one's feelings of guilt, one communicates the pain that one is experiencing. Because of this, such an expression would have had some tendency to engage the empathy of community members. These community members would then have also tended to experience negatively valenced affective states and so have been motivated to act in ways that would eliminate the negative affect they were feeling. The result would have been some tendency for community members to restore the social status of those who express posttransgression guilt. An important assumption of R&D's account—one that will be relevant later—is that empathy emerged before guilt in evolutionary time: because empathy came first, it could work to secure guilt's emergence (445).

3. Are we talking about guilt?

The first difficulty with R&D's account concerns their model of guilt: it's too vague to allow us to distinguish guilt from shame. This raises serious questions about what emotion they're providing an evolutionary account of.[1] More specifically, although the initial empirical research on guilt and shame suggested substantial differences between the two emotions (for a review, see Tangney and Dearing 2002), this work is increasingly viewed as unsound. But because R&D's model of guilt mirrors the early findings, it inherits its problems.

Turning to the details, the early work on guilt presents it as being concerned with transgressions of accepted norms, accompanied by beliefs about being responsible for those transgressions, and generating behaviors oriented toward acknowledging or making amends for the harms done. By contrast, shame is understood as being concerned with one's self and one's reputation, accompanied by beliefs about one's diminishment in the eyes of others, and generating generally maladaptive tendencies toward avoidance and violence. As should now be apparent, R&D's model is largely in line with this initial picture of the differences between guilt and shame—and that's the problem. More specifically, although the early empirical work on guilt and shame has been influential, it's now generally viewed as deeply flawed. The vast majority of this early work builds from survey results that use the Test of Self-Conscious Affect (TOSCA) developed by June Tangney (1990). But the TOSCA measure is increasingly seen as employing biased conceptualizations of the two emotions: questions assessing guilt proneness are typically framed in terms of prosocial tendencies (e.g., taking responsibility, making amends), whereas questions assessing shame proneness are generally framed in terms of dysfunctional behaviors (e.g., avoidance, negative self-assessment) (Maibom 2019; Luyten, Fontaine, and Corveleyn 2002). Moreover, when

[1] There's a similarly problematic vagueness in R&D's talk of empathy. Though they clarify that their focus is on *empathetic distress*, the structure of their argument is consistent with the distinct, and more minimal, capacity of *contagious distress* doing the needed work on conspecific motivations.

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non-TOSCA-based studies of the differences between guilt and shame are used, the findings suggest that there's little—if any—difference between the two emotions with regard to (a) perceptions of whether a moral standard was violated, (b) the extent to which the emotions engage thoughts of responsibility, or (c) a focus on one's actions rather than oneself (e.g., Tangney et al. 1996; Keltner & Buswell 1996). Add to this that (d) there is a significant body of work challenging the contention that guilt prompts prosocial motivations but shame dysfunctional ones (e.g., Gausel, Vignoles, and Leach 2016; De Hooge, Breugelmans, and Zeelenberg 2008; Pivetti, Camodeca, and Rapino 2016). In fact, some of this research suggests that shame—not guilt—is the more prosocially oriented emotion (e.g., Allpress et al. 2014; De Hooge et al. 2011).

These findings are particularly important for our purposes. After all, (a)–(d) correspond to the aspects of R&D's guilt model that do the heavy lifting in their explanation of guilt's evolution. So if there is little difference between guilt and shame along these dimensions, then why think they've provided an evolutionary account of *guilt* specifically?

But this isn't the only place where the vagueness in R&D's model of guilt brings trouble. To see this, consider the legal findings that they present to highlight guilt's benefits. This research examines how mock juries are affected by remorseful behavior by the accused. It finds that though *expressions of remorse* are generally seen as signaling culpability, they also tend to bring less severe sentences—a result that R&D take to show that "*expressions of guilt* can benefit individuals in certain contexts, despite incurring some cost" (437, emphasis added). But notice that this reasoning presumes that we're warranted in taking talk of "expressions of remorse" as (largely) synonymous with talk of "expressions of guilt." Although R&D think this is plausible, a closer look at the research suggests that their confidence is misplaced.

In the studies that R&D cite, the "remorse" manipulation involves having mock jury members read a (fake) court transcript in which the accused individual is described as expressing remorse in various ways. In particular, the accused is said to (i) say things like "I feel remorse for what I did," (ii) apologize for what they did, or (iii) behave in a particular way—for example, having "downcast eyes and a trembling voice" or "crying" and "sobbing" (Bornstein, Rung, and Miller 2002; Jehle, Miller, and Kemmelmeier 2009; Gold and Weiner 2000). But as should now be apparent, it's far from clear what emotion these "remorse behaviors" are signs of. At best, (i)–(iii) are ambiguous between expressions of guilt and expressions of shame. But in cases like (iii)—where the emphasis is on *expressive* behavior—they seem most plausibly understood as manifestation of shame, not guilt—for as R&D repeatedly note, only shame comes with a distinctive bodily or facial expression (438, 448).

To further draw out why the looseness in R&D's account of guilt matters, consider what might seem like a friendly amendment to their proposal. If shame, guilt, and remorse don't differ in significant ways (as the preceding discussion suggests), then perhaps it was not guilt per se but rather some shame–guilt–remorse bundle that evolution (initially) selected for.[2] The overall proposal from R&D could then be

[2] Here it's worth emphasizing that the non-TOSCA-based work on guilt and shame discussed earlier does *not* suggest that the two emotions are indistinguishable at a functional, developmental, or phenomenological level; rather, this research shows that there's much more overlap in the profiles of guilt and shame than flawed, TOSCA-based models suggest.

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adjusted to fit this revised evolutionary thesis and so still provide us with an account of the evolutionary emergence of guilt (or a guilt-like response). But this suggestion is problematic in two ways. First, it seems to fall afoul of R&D's methodological commitments. They maintain that to avoid being a mere just-so story, a viable evolutionary account must avoid appeals to "undifferentiated" affective responses and instead provide "a conceptually clear and empirically informed picture" of the emotion in question (439, 436). Second—and more importantly—the suggested amendment leaves too much unexplained. In particular, it says nothing about how the distinct emotions of guilt and shame ultimately emerged, much less anything that could explain why guilt is best understood as a *biological* adaptation. In fact, as we will see in section 5, there's good reason for skepticism about such evolutionary claims.

4. Are empathetic mechanisms acting on guilt?

Setting aside the foregoing concerns, suppose we have functional characterizations that distinguish guilt from shame. We should now ask whether the empathetic mechanisms that R&D posit to explain guilt's evolutionary origins are best understood as operating on guilt rather than shame. Again, there's reason to worry. The case for this skepticism builds from two claims.

(1) We have good evidence that shame is an evolutionary adaptation: an emotion that began as a way of forestalling physical aggression in dominance hierarchies and was subsequently co-opted to serve the more complex function of protecting one's status as a cooperative partner in the wake of serious norm violations (Maibom 2010; Fessler 2004; Keltner and Buswell 1996). More specifically, submission responses tend to forestall aggression by dominants both because they blunt the aggressive motivations of the subordinate animal and because they signal that the subordinate will refrain from whatever behavior prompted the dominant's ire. But as our ancestors transitioned from dominance-based living to norm-governed social life, a new cooperative challenge emerged: how to sustain cooperation in the wake of serious norm violations. Shame—understood as a co-opted and augmented form of the earlier submission response—seems well equipped to address this challenge. As Heidi Maibom (2010, 587–88) explains,

> the person who is ashamed shows to others—through the shame display—not just a recognition that they have failed to live up to public expectations, but also that they have an adverse emotional reaction to it . . . . Her shame indicates she can be counted on to live a life with others within the constraints set by the community.

Of course, this explanation only goes so far. As R&D help us see, there's still the issue of explaining why shame displays lead community members to reintegrate the norm violator in cooperative endeavors (more on this shortly).[3]

(2) We also have good evidence that, evolutionarily speaking, shame arrived on the scene after empathy but before guilt. As R&D point out, empathy is a basic capacity

[3] Although evolutionary accounts of shame say a lot in defense of the co-option claim they posit, this work has yet to explicitly address questions of the sort that R&D raise: how did shame expressions change conspecific motivations?

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that appears to have emerged early on in evolutionary history. Other work suggests that shame builds from mindreading capacities that are cognitively more sophisticated than what's thought to underlie empathy (Fessler 2004; Maibom 2010). This combination then implies that empathy preceded shame. The claim that shame preceded guilt finds support in various lines of research. For instance, and as R&D note elsewhere (Deem and Ramsey 2016, 573–74), work on child development indicates that the ability to experience and recognize guilt emerges in children well after they are able to experience and recognize other emotions, *including shame*. R&D follow others in taking findings like these to suggest that guilt is more cognitively complex than shame and so arrived later on the "evolutionary" scene.

But given (1) and (2), it seems that the empathetic mechanisms that R&D posit to explain how expressions of posttransgression guilt could alter the motivations of others would have worked *just as well for shame*. That is, to explain how posttransgression shame helped bring about the social reintegration of transgressors, we just need to draw on the empathy-based proposal that R&D provide to explain how this change in motivations worked in the case of guilt. But now we have a problem. If evolution had already used empathetic mechanisms to select for a complex, dysphoric affective tool to help preserve cooperation posttransgression, that is, shame, then why would it have then subsequently selected for a different complex, dysphoric affective tool—guilt—to do (largely) the same work?[4]

Without an answer to this question, we don't have a plausible evolutionary argument for guilt. Moreover, the most obvious ways to fill this gap fall short. For instance, one might note that many evolved traits, especially signaling traits, are the result of evolutionary "piling on" in which further elaborations bring beneficial redundancy, flexibility, and multimodal robustness. One could then suggest, in response to the preceding discussion, that guilt is plausibly understood as the upshot of a similar piling on to the capacities already provided by shame. But there's a problem here: the key assumption in this suggestion—namely, that guilt must be understood as a *biological adaptation* to do this piling-on work—is not only undefended but, as we will see later, questionable. So we don't get anything that helps R&D.

5. What of guilt's origins?

The discussion so far suggests that whereas shame is plausibly understood as an evolutionary adaptation, guilt is not. What, then, might a nonevolutionary account of guilt's emergence look like? The starting place is straightforward. Shame wasn't enough. Whatever adaptive challenges brought about shame, further problems remained that guilt—nonevolutionarily understood—was well equipped to solve. Fleshing this out, we can elaborate on the preceding idea that shame's evolution was driven by the need to sustain cooperation in the face of serious norm violations. On this front, work in anthropology suggests that bullying and psychopathic community members posed a decidedly pernicious threat: because such norm violators are

[4] Adding to the concern here, notice that the evolutionary account of shame sketched in the text takes shame tendencies to have emerged from a *preexisting* appeasement response, thus adhering to the idea that evolution is a conservative process that makes use of capacities that already exist. In R&D's account, by contrast, we're not given any story (beyond an implicit appeal to random variation) to explain what guilt tendencies might have emerged from.

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unfazed by the standard social sanctions that return ordinary transgressors to the fold, their free riding can quickly undermine cooperative structures. In fact, this threat was so significant that those with bullying and psychopathic tendencies were likely to be killed if they didn't express an intention to reform their ways (Fessler 2007; Boehm 2012). In this context, posttransgression shame is thought to have been important because it provided the needed signal: when ashamed, one shows that one (now) accepts the prevailing community norms.

But even if the emergence of shame helped address this issue, the problem of dealing with occasional, nonpsychopathic transgressors remained. This is where guilt may have earned its keep. Developing this a bit, suppose that gossip and excoriation were effective ways for those in small-scale societies to preserve cooperative arrangements in the face of occasional norm violations. Suppose as well that as our ancestors transitioned from living in small-scale communities to living in large-scale civilizations, the effectiveness of these tools waned: during this transitional period, social life (and the norms that governed it) was likely to have been strained—more uncertainty about what was forbidden, less clarity on what the sanctions for norm violations were, weakening of traditional mechanisms of norm enforcement, and so on. But despite this turmoil, civilization emerged (Kitcher 2011; Kurth 2016). So now there's a puzzle. How did our ancestors manage to secure sufficient norm adherence given the chaos? Guilt suggests an answer. As we've seen, guilt both motivates reparative efforts in the wake of a transgression and is accompanied by a tendency for community members to (partially) reintegrate guilt-expressing individuals into cooperative engagements. Though this combination of behaviors could explain our puzzle, R&D's question remains: why would guilt expressions have brought a tendency toward reintegration among community members?

The answer is that such a tendency *already existed*. Given the foregoing account of shame's evolutionary origins, we can take the tendency to reintegrate those who make amends to already be up and going. Moreover, as we've seen from the discussion of remorseful behavior, reparative efforts of this sort offer only *partial information* about what the underlying emotion is. But given this opacity, expressions of guilt could have taken advantage of the preexisting tendency to reintegrate those who seek to make amends. Thus we have an account of how those who express posttransgression guilt could have secured the benefits of reintegration.[5]

But—crucially—nothing so far suggests that guilt must be a *biological adaptation* to do all this. In fact, there are reasons that tell against that contention. First, guilt appears to lack features that are standardly taken as evidence that an emotion is an evolutionary adaptation (Griffiths 1997; Kurth 2018). As we've noted, guilt does not come with a distinctive facial or bodily expression. Additionally, there's little evidence for emotional precursors of guilt in other primates—nothing that would be on par with, for instance, the affinities that we see between human shame and primate submission (Maibom 2010) or human fear and primate responses to dangers (Kurth 2018). Second, building on work in child development, some researchers maintain that guilt is best understood as a product of enculturation—for example, guilt might be a learned modification of our (innate) emotional response to the

[5] Recent game-theoretic modeling suggests that guilty apologies of this sort can lead to Nash equilibrium under assumptions consistent with the discussion here (e.g., Rosenstock and O'Connor 2018).

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distress of others, one that helps individuals signal their awareness of the harms they've caused (Hoffman 1982; see also Prinz 2004; Griffiths 1997; Fessler 2007). So understood, guilt emerges as a technology that was developed to help some, large-scale, groups address the problems that biologically honed responses like shame were un(der)equipped to deal with. Moreover, this suggestion gains independent support from research in anthropology indicating that, unlike shame, some small-scale cultures lack a word for guilt (Breugelmans and Poortinga 2006; Fessler 2004)—presumably because in these small, homogenous groups, individuals have less need for technologies that could supplement shame. Finally, brain imaging research is helping us map out similarities and differences in the neurocorrelates of guilt and shame, and some of this work points to cultural variations in the patterns of activation associated with guilt and shame (Michl et al. 2014; Takahashi et al. 2004). On the basis of the details of these findings, Michl and colleagues (2014) suggest that the cultural differences may be best explained by differences in the underlying emotions: shame is a biophysiological response, but guilt is a learned one. Although more is needed to develop this picture, the combination of these considerations tells against understanding shame as a biological adaptation.[6]

6. Conclusion: Some larger lessons

Though the core argument here aims to temper enthusiasm for R&D's claim that guilt is an evolutionary adaptation, its lessons have further significance. First, other influential evolutionary accounts of guilt share R&D's failure to appreciate the overlaps in the functional profiles of guilt and shame (e.g., Frank 1988; Joyce 2006; James 2011), so they, too, are vulnerable to the arguments of sections 3 and 4. Second, in debates about the evolutionary credentials of guilt and shame, (nearly) everyone takes these two emotions to be on par: if one is (not) an adaptation, then so (neither) is the other. The alternative developed in sections 3–5 challenges this consensus, suggesting a more complex relationship between guilt and shame. The overall result, then, is a better understanding of the nature of these emotions and how we should study them.

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[6] I develop the argument of this paragraph further in Kurth (n.d.).

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