social value, then individuals who engage in such behaviors might be especially prone to exploitation. The proximate, experiential aspects of such systems comprise our moral sense, which in turn shapes our perceptions of concepts such as "responsibility," "blame," "harm," and (especially pertinent to the target article) "self-control." Such concepts facilitate the mental and physical coordination of groups of people for the express purpose of targeting individuals viewed as holding low value. From this perspective, perceptions of self-control failures are often the outputs of other systems designed for moral condemnation, and feelings of disgust often serve as inputs.

The target article's dismissal of disgust is largely based on findings that (1) priming disgust (e.g., via exposure to a disgust-eliciting odor) does not lead people to generally find actions more morally wrong (Landy & Goodwin, 2015), and (2) disgust expressed toward moral violations shares features with anger expressed toward identical moral violations (e.g., Piazza, Landy, Chakroff, Young, & Wassermann, 2017; cf. Molho, Tybur, Güler, Balliet, & Hofmann, 2017). These observations do not inform the phenomena or accounts described above. They do mirror other recent accounts that, to us, have thrown the disgust baby out with the contaminated bath water in favor of an overly credulous focus on the idea that morality (perhaps exclusively) functions to promote cooperation (e.g., Curry, Mullins, & Whitehouse, 2019) or, relatedly, punish harms (Schein & Gray, 2018). Although cooperation is relevant to morality, good evidence suggests that it cannot explain everything in this area (DeScioli & Kurzban, 2009). A more complete understanding of morality might require a long look into the abyss of the darker side of human nature, with disgust being an important part of this investigation.

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References

- Bittles, A. H., & Neel, J. V. (1994). The costs of human inbreeding and their implications for variations at the DNA level. *Nature Genetics*, 8, 117–121.
- Curry, O. S., Mullins, D. A., & Whitehouse, H. (2019). Is it good to cooperate? Testing the theory of morality-as-cooperation in 60 societies. *Current Anthropology*, 60(1), 47–69.
- DeScioli, P., & Kurzban, R. (2009). Mysteries of morality. Cognition, 112(2), 281–299.
 DeScioli, P., & Kurzban, R. (2013). A solution to the mysteries of morality. Psychological Bulletin, 139, 477–496.
- Fessler, D. M., & Navarrete, C. D. (2004). Third-party attitudes toward sibling incest: Evidence for Westermarck's hypotheses. Evolution and Human Behavior, 25(5), 277–294.
- Haidt, J. (2001). The emotional dog and its rational tail: A social intuitionist approach to moral judgment. Psychological Review, 108(4), 814–834.
- Kurzban, R., & Leary, M. R. (2001). Evolutionary origins of stigmatization: The functions of social exclusion. *Psychological Bulletin*, 123, 187–208.
- Landy, J. F., & Goodwin, G. P. (2015). Does incidental disgust amplify moral judgment? A meta-analytic review of experimental evidence. *Perspectives on Psychological Science*, 10(4), 518–536.
- Lieberman, D., & Patrick, C. (2018). Objection: Disgust, morality, and the law. Oxford University Press.
- Lieberman, D., & Smith, A. (2012). It's all relative: Sexual aversions and moral judgments regarding sex among siblings. Current Directions in Psychological Science, 21(4), 243–247.
- Lieberman, D., Tooby, J., & Cosmides, L. (2003). Does morality have a biological basis?
 An empirical test of the factors governing moral sentiments relating to incest.

- Proceedings of the Royal Society of London, Series B: Biological Sciences, 270(1517), 819–826.
- Lieberman, D., Tooby, J., & Cosmides, L. (2007). The architecture of human kin detection. Nature, 445(7129), 727–731.
- Molho, C., Tybur, J. M., Güler, E., Balliet, D., & Hofmann, W. (2017). Disgust and anger relate to different aggressive responses to moral violations. *Psychological Science*, 28(5), 609–619.
- Piazza, J., Landy, J. F., Chakroff, A., Young, L., & Wassermann, E. (2017). What disgust does and does not do for moral cognition. In N. Strohminger & V. Kumar (Eds.), *The* moral psychology of disgust (pp. 53–82). Rowman & Littlefield.
- Schein, C., & Gray, K. (2018). The theory of dyadic morality: Reinventing moral judgment by redefining harm. Personality and Social Psychology Review, 22(1), 32–70.
- Tooby, J., & Cosmides, L. (2010). Groups in mind: The coalitional roots of war and morality. In H. Hogh-Olesen (Ed.), Human morality and sociality: Evolutionary and comparative perspectives (pp. 191–234). Palgrave Macmillan.
- Tybur, J. M., Lieberman, D., & Griskevicius, V. (2009). Microbes, mating, and morality: Individual differences in three functional domains of disgust. *Journal of Personality and Social Psychology*, 97(1), 103–122.
- Tybur, J. M., Lieberman, D., Kurzban, R., & DeScioli, P. (2013). Disgust: Evolved function and structure. Psychological Review, 120(1), 65–84.
- Westermarck, E. A. (1891/1921). The history of human marriage (5th ed., Vol. 2). Macmillan.
- Wrangham, R. W. (1999). Evolution of coalitionary killing. *American Journal of Physical Anthropology*, 110(Suppl 29), 1–30.

Puritanical morality and the scaffolded evolution of self-control

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Abstract

There is a puzzle in reconciling the widespread presence of puritanical norms condemning harmless pleasures with the theory that morality evolved to reap the benefits of cooperation. Here, we draw on the work of several philosophers to support the argument by Fitouchi et al. that these norms evolved to facilitate and scaffold self-control for the sake of cooperation.

Fitouchi et al. have provided us with an elegant solution to the apparent paradox of puritanical morality – that is, if morality evolved to aid/ensure cooperation, why do so many societies moralize the pursuit of seemingly harmless pleasures? Although this may seem like a serious problem for evolutionary accounts of morality centered on cooperation, the authors instead argue that it can be captured perfectly well within such a framework once we move away from a focus on the short-term and consider the payoffs of long-term cooperative endeavors. Because acting on immediate impulses or desires can undermine cooperative relationships through acts such as cheating or lying, long-term utility maximizers – perhaps counterintuitively – require an investment into self-control and discipline that may undermine moment-to-moment pleasure maximization.

Our goal in this commentary will be to further advance their proposal by drawing on the work of philosophers who have written on the evolution of cooperation and moral norms, but that have surprisingly not been mentioned in Fitouchi et al. There is a long and thriving tradition of philosophers working on these issues, including Mackie (1978), Joyce (2007), and Sterelny (2012). Although it may be easy to artificially create a gap between the target article and this literature, through their being situated within different academic departments, this would be a mistake. There is no real difference in content, with much recent work in this type of philosophy of biology being imperceptibly close to the naturalistic kind of work undertaken in the target article (see also Veit, 2019). With this in mind, we believe that the proposal of Fitouchi et al. can be strengthened by drawing on Sterelny's (2012) evolved apprentice framework, which emphasizes the role of cultural feedback loops in which learning, cooperative foraging, and the scaffolding of the environment come together and mutually sustain each other.

As emphasized in Veit and Spurrett (2021), with the emergence of an economy involving sharing, trade, and cooperative foraging with division of labor, there is an immediate rationale for the investment into self-control and delayed gratification. However, these capacities have to be trained, a process that costs both time and energy with rewards being reaped only in the more distant future – a particular challenge for adolescents most in need of their development. And it is precisely here that we argue puritanical norms have played an important role in scaffolding the development of self-control capacities. Indeed, it will help us to make sense of what Fitouchi et al. describe as a "strong valorization of temperance and self-discipline" (target article, sect. 1, para. 4). Inculcation of these traits during critical developmental periods may form an important part of future cooperative success.

Moreover, the moralization of both hedonism (Saroglou & Craninx, 2021) and the lack of self-control (Mooijman et al., 2018) have what are perhaps surprising connections with arguments made by prominent utilitarian philosophers. For example, De Lazari-Radek and Singer (2010) argue that morality is at least partially a social institution and requires children to be taught within it in order for them to endorse it. Further, they argue that because children need rules that they can readily apply and understand, it may be easier to teach them simple rules that must be obeyed in a deontological fashion, even if their ultimate purpose is to ensure cooperation and enhance aggregate wellbeing. If these rules are not questioned in later stages - a questioning that some societies may very well also condemn - we could readily see how a society could become increasingly puritanical. Although we may conceivably tell children that it is in their own self-interest to follow moral rules, such a motivation is unlikely to conquer the pursuit of short-term interests and ensure sufficient self-discipline to reap the benefits of long-term cooperation. Evolution and moral education may then have converged alike on a seemingly paradoxical solution to ensure that hedonistic impulses can be controlled in the pursuit of greater long-term benefits.

Indeed, we suggest that there could be an evolutionary-developmental feedback loop in which improved ecological conditions for learning (i.e., the teaching of social norms) can lead to natural selection for better learning in this sphere, which in turn will lead to more effective teaching. Puritanical norms, rather than seen as a strange evolutionary latecomer in the natural history of morality, may instead have old evolutionary roots that constitute a scaffold upon which to create some of the preconditions for cooperative foraging and exchange: that is, self-control and the ability to delay gratification. Indeed, the enforcement of puritanical values during the early life-history stages of humans may have

been of utmost importance as a cultural scaffold to develop the skills of self-control and resolve by leading to a feedback loop in which humans develop better self-control and in turn enforce even more austere norms.

We believe that there is great promise in the proposal made by Fitouchi et al. and that we have offered some additional reasons here for why it may be fruitful to pursue this path. To finish, we suggest some of the empirical upshots of this expanded proposal. First, developing better methods for assessing and ranking the degree of "puritanicality" of different groups or societies would then allow for testing of hypotheses regarding the circumstances associated with higher levels of puritanical moralization. In particular, we suggest that they could be used to look for relationships with results in tests for delayed gratification and stability of cooperative endeavors. Additionally, in line with the intriguing suggestion raised by the authors in the end of the paper, investigating the relationship between puritanical norms and the size and average social connectedness of members of a social group could tell us whether this type of morality arose in part to deal with the complexities arising from larger societies and the difficulties of maintaining trust without personal knowledge of individuals. If the tests we describe were to show the predicted correlations, it would further strengthen the evolutionary proposal put forth.

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References

De Lazari-Radek, K., & Singer, P. (2010). Secrecy in consequentialism: A defence of esoteric morality. *Ratio*, 23(1), 34–58.

Joyce, R. (2007). The evolution of morality. MIT Press.

Mackie, J. (1978). The law of the jungle: Moral alternatives and principles of evolution. Philosophy (London, England), 53(206), 455–464.

Mooijman, M., Meindl, P., Oyserman, D., Monterosso, J., Dehghani, M., Doris, J. M., & Graham, J. (2018). Resisting temptation for the good of the group: Binding moral values and the moralization of self-control. *Journal of Personality and Social Psychology*, 115(3), 585–599.

Saroglou, V., & Craninx, M. (2021). Religious moral righteousness over care: A review and a meta-analysis. Current Opinion in Psychology, 40, 79–85. http://dx.doi.org/10.1016/j. copsyc.2020.09.002

Sterelny, K. (2012). The evolved apprentice. MIT Press.

Veit, W. (2019). Modeling morality. In L. Magnani, A. Nepomuceno, F. Salguero, C. Barés, & M. Fontane (Eds.), Model-based reasoning in science and technology (pp. 83–102). Springer.

Veit, W., & Spurrett, D. (2021). Evolving resolve. Behavioral and Brain Sciences, 44, E56.

The many faces of moralized selfcontrol: Puritanical morality is not reducible to cooperation concerns

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