

Purity Evidence List

This list includes four types of empirical evidence about moral purity judgments:

1. Purity/degradation predicts important thoughts and behaviors over and above Care/harm judgments.
2. Purity/degradation judgments can do things that Care/harm judgments cannot.
3. Purity/degradation and Care/harm judgments operate differently at a cognitive level
4. Known groups score differently on measures of purity/sanctity (especially left/right)

1. Purity/degradation predicts important thoughts and behaviors over and above Care/harm judgments:

- Buccafusco, C. J., & Fagundes, D. (2015). The Moral Psychology of Copyright Infringement. *Minnesota Law Review*, 100. [lawsuits predicted by sullied purity, breached loyalty, and a sense of injustice]
- Clifford, S., & Jerit, J. (2013). How words do the work of politics: Moral foundations theory and the debate over stem cell research. *The Journal of Politics*, 75(03), 659-671. [predicting support or opposition to stem cell research in elite editorial communication based on differences in purity rhetoric]
- Crone, D. L., & Laham, S. M. (2015). Multiple moral foundations predict responses to sacrificial dilemmas. *Personality and Individual Differences*, 85, 60-65. [Inconsistent with Moral Dyad Theory, our results did not support the prediction that Harm concerns would be the unequivocally most important predictor of sacrifice endorsement. Consistent with Moral Foundations Theory, however, multiple moral values are predictive of sacrifice judgments: Harm and Purity negatively predict, and Ingroup positively predicts, endorsement of harmful action in service of saving lives, with Harm and Purity explaining similar amounts of unique variance.]
- Dehghani, M., Johnson, K. M., Hoover, J., Sagi, E., Garten, J., Parmar, N. J., Vaisey, S., Iliev, R., & Graham, J. (in press). Purity homophily in social networks. *Journal of Experimental Psychology: General*. [study 1 shows purity out-predicts care and all other moral language in predicting social network distance on Twitter]
- Graham, J., Haidt, J., & Nosek, B. A. (2009). Liberals and conservatives rely on different sets of moral foundations. *Journal of personality and social psychology*, 96(5), 1029. [purity uniquely predicts ideological source of sermons and participants]
- Graham, J., Nosek, B. A., Haidt, J., Iyer, R., Koleva, S., & Ditto, P. H. (2011). Mapping the moral domain. *Journal of Personality and Social Psychology*, 101, 366-385. [several forms of basic discriminant validity evidence]
- Koleva, S., Graham, J., Haidt, J., Iyer, R., & Ditto, P. H. (2012). Tracing the threads: How five moral concerns (especially Purity) help explain culture war attitudes. *Journal of Research*

- in Personality*, 46, 184-194. [unique predictive validity for several culture-war issue positions, including abortion, immigration, gay marriage]
- Rottman, J., Kelemen, D., & Young, L. (2015). Hindering harm and preserving purity: How can moral psychology save the planet? *Philosophy Compass*, 10(2), 134–144. doi:10.1111/phc3.12195 [pdf] [predicting environmental attitudes]
- Rottman, J., Kelemen, D., & Young, L. (2014). Purity matters more than harm in moral judgments of suicide: Response to Gray (2014). *Cognition*, 133(1), 332–334. doi: 10.1016/j.cognition.2014.06.008. [pdf] [purity uniquely predicts moral judgments of suicide, far more than harm]
- Rottman, J., Kelemen, D., & Young, L. (2014). Tainting the soul: Purity concerns predict moral judgments of suicide. *Cognition*, 130(2), 217-226. doi: 10.1016/j.cognition.2013.11.007 [pdf] [purity uniquely predicts moral judgments of suicide]
- Vartanian, L. R., Trewartha, T., & Vanman, E. J. (2015). Disgust predicts prejudice and discrimination toward individuals with obesity. *Journal of Applied Social Psychology*. [disgust predicts prejudice and discrimination toward individuals with obesity]

2. Purity/degradation judgments can do different things Care/harm judgments cannot:

- Day, M. V., Fiske, S. T., Downing, E. L., & Trail, T. E. (2014). Shifting liberal and conservative attitudes using moral foundations theory. *Personality and Social Psychology Bulletin*, 40, 1559-1573. [framing liberal issues in terms of purity increased conservatives' liberal attitudes]
- Dehghani, M., Johnson, K. M., Hoover, J., Sagi, E., Garten, J., Parmar, N. J., Vaisey, S., Iliev, R., & Graham, J. (in press). Purity homophily in social networks. *Journal of Experimental Psychology: General*. [studies 2 and 3 show purity similarity and difference info can cause social distancing, more than other moral info]
- Feinberg, M., & Willer, R. (2013). The moral roots of environmental attitudes. *Psychological Science*, 24, 56-62. [framing environmental issues in terms of purity (vs. harm) increased moderate and conservative support for environmental initiatives up to liberal levels]
- Feinberg, M., & Willer, R. (2015). From Gulf to Bridge When Do Moral Arguments Facilitate Political Influence?. *Personality and Social Psychology Bulletin*, 41(12), 1665-1681. [purity frames reduce polarization on the Affordable Care Act]
- Masicampo, E. J., Barth, M., & Ambady, N. (2014). Group-based discrimination in judgments of moral purity-related behaviors: Experimental and archival evidence. *Journal of Experimental Psychology: General*, 143(6), 2135. <http://dx.doi.org/10.1037/a0037831> [group-based discrimination in moral judgment was specific to the domain of moral purity; purity info can experimentally increase both praise and condemnation of others]
- Wisneski, D. C., & Skitka, L. J. (2016). Moralization through moral shock: Exploring emotional antecedents to moral conviction. *Personality and Social Psychology Bulletin*, 43, 139-150. [studies of the processes of moralization through “moral shock” (e.g., increasing moral convictions about abortion following graphic pictures of aborted

fetuses) showed that such moralization is mediated by disgust and not anger or harm appraisals]

3. Purity/degradation and Care/harm judgments operate differently at a cognitive level:

- Cannon, P. R., Schnall, S., & White, M. (2011). Transgressions and expressions Affective facial muscle activity predicts moral judgments. *Social psychological and personality science*, 2(3), 325-331. [unique facial micro-expressions for purity reactions]
- Chakroff, A., Dungan, J., Koster-Hale, J. Brown, A., Saxe, R., & Young, L. (in press). When minds matter for moral judgment: intent information is neurally encoded for harmful but not impure acts. *Social Cognitive and Affective Neuroscience*. [pdf] [different RTPJ activation for intentional vs. accidental acts in harm judgments, but not in purity judgments]
- Chakroff, A., Dungan, J., Young, L. (2013). Harming ourselves and defiling others: what determines a moral domain? *PLOS ONE*, 8(9), e74434. doi: 10.1371/journal.pone.0074434 [pdf] [purity judgments function to protect the self, harm judgments function to protect others]
- Chakroff, A., Young, L. (2015). Harmful situations, impure people: an attribution asymmetry across moral domains. *Cognition*, 136(2015), 30–37. doi:10.1016/j.cognition.2014.11.034 [pdf] [attribution asymmetry for purity vs. harm judgments, even when controlling for severity and weirdness]
- Cornwell, J. F., & Higgins, E. T. (2013). Morality and its relation to political ideology: The role of promotion and prevention concerns. *Personality and Social Psychology Bulletin*, 39, 1164-1172. [purity and harm judgments respond in opposite ways to manipulations of approach/avoid motivations]
- Eibach, R. P., Libby, L. K., & Ehrlinger, J. (2009). Priming family values: How being a parent affects moral evaluations of harmless but offensive acts. *Journal of Experimental Social Psychology*, 45(5), 1160-1163. [priming parental status increases purity judgments, but not harm judgments]
- Gray, K., & Keeney, J. (2015). Impure, or Just Weird? Scenario Sampling Bias Raises Questions about the Foundation of Morality. *Social Psychology and Personality Science*, 6(8), 859-868. [“as in Study 2, this suggests that severity and weirdness likely do not account for all differences between harm and impurity scenarios”]
- Napier, J. L., & Luguri, J. B. (2013). Moral mind-sets: Abstract thinking increases a preference for “individualizing” over “binding” moral foundations. *Social Psychological and Personality Science*, 4, 754-759. [purity and harm judgments respond in opposite ways to experimental manipulations of abstract/concrete thinking]
- Parkinson, C., Sinnott-Armstrong, W., Koralus, P. E., Mendelovici, A., McGeer, V., & Wheatley, T. (2011). Is morality unified? Evidence that distinct neural systems underlie moral judgments of harm, dishonesty, and disgust. *Journal of Cognitive Neuroscience*, 23(10), 3162-3180. [different neural systems for different kinds of moral judgments]

- Ritter, R. S., Preston, J. L., Salomon, E., & Relihan-Johnson, D. (2015). Imagine no religion: Heretical disgust, anger and the symbolic purity of mind. *Cognition and Emotion*. [We conclude that people (especially more religious people) do feel disgust in response to heretical thoughts that is meaningfully distinct from anger as a moral emotion.]
- Rottman, J., & Kelemen, D. (2012). Aliens behaving badly: Children's acquisition of novel purity-based morals. *Cognition*, 124, 356–360. [unique developmental pathway for purity judgments, involving both feelings and normative information in concert]
- Uhlmann, E. L., & Zhu, L. (2013). Acts, persons, and intuitions: Person-centered cues and gut reactions to harmless transgressions. *Social Psychological and Personality Science*, 5, 279-285. [compared to harm judgments, purity judgments involve less condemnation of the act itself but more condemnation of the actor]
- Young, L., Saxe, R. (2011). When ignorance is no excuse: Different roles for intent across moral domains. *Cognition*, 120, 202-214. doi:10.1016/j.cognition.2011.04.005 [pdf] [intent matters less for purity than for harm judgments]

4. Groups and cultures differ in meaningful ways, as predicted by Sanctity:

Moral foundation priorities reflect U.S. Christians' individual differences in religiosity. Johnson, Hook, Davis et al. 2015

--Controlling for conservatism and religious commitment, we found that Fairness was predicted by outreaching faith; Care was positively predicted by outreaching faith and negatively predicted by belief in an authoritarian God; Authority was predicted by literalism; and Purity was predicted by literalism and authoritarian God representations.

Johnson, K. A., Hook, J. N., Davis, D. E., Van Tongeren, D. R., Sandage, S. J., & Crabtree, S. A. (2016). Moral foundation priorities reflect US Christians' individual differences in religiosity. *Personality and Individual Differences*.

Haidt, J. and Hersh, M. A. (2001), Sexual Morality: The Cultures and Emotions of Conservatives and Liberals. *Journal of Applied Social Psychology*, 31: 191–221. doi: 10.1111/j.1559-1816.2001.tb02489.x

Buchtel, E. E., Guan, Y., Peng, Q., Su, Y., Sang, B., Chen, S. X., & Bond, M. H. (2015). Immorality East and West Are Immoral Behaviors Especially Harmful, or Especially Uncivilized? *Personality and Social Psychology Bulletin*, 41(10), 1382-1394.

5. OTHER EMPIRICAL FINDINGS THAT WOULD BE HARD TO EXPLAIN WITHOUT SANCTITY/PURITY

Haidt, J., Bjorklund, F., & Murphy, S. (2000). Moral dumbfounding: When intuition finds no reason. *Unpublished manuscript, University of Virginia*.

Haidt, J., Koller, S. H., & Dias, M. G. (1993). Affect, culture, and morality, or is it wrong to eat your dog?. *Journal of personality and social psychology*, 65(4), 613.

Helzer, E. G., & Pizarro, D. A. (2011). Dirty liberals! Reminders of physical cleanliness influence moral and political attitudes. *Psychological science*, 22(4), 517-522.

--Disgust Sensitivity and the Neurophysiology of Left-Right Political Orientations; smith, oxley, hibbing. people physiologically reactive to dg images are indeed more cons.

Smith, K. B., Oxley, D., Hibbing, M. V., Alford, J. R., & Hibbing, J. R. (2011). Disgust sensitivity and the neurophysiology of left-right political orientations. *PLoS One*, 6(10), e25552.

--Terrizzi et al 2013 metaanalysis of behavioral immune system predicting conservatism

Terrizzi, J. A., Shook, N. J., & McDaniel, M. A. (2013). The behavioral immune system and social conservatism: A meta-analysis. *Evolution and Human Behavior*, 34(2), 99-108.

Royzman, E. B., Leeman, R. F., & Baron, J. (2009). Unsentimental ethics: Towards a content-specific account of the moral-conventional distinction. *Cognition*, 112(1), 159-174.

Russell, P. S., & Giner-Sorolla, R. (2011). Moral anger, but not moral disgust, responds to intentionality. *Emotion*, 11(2), 233.

Russell, P. S., & Giner-Sorolla, R. (2011). Moral anger is more flexible than moral disgust. *Social Psychological and Personality Science*, 2(4), 360-364.

Russell, P. S., Piazza, J., & Giner-Sorolla, R. (2013). CAD revisited effects of the word moral on the moral relevance of disgust (and other emotions). *Social Psychological and Personality Science*, 4(1), 62-68.

Salerno, J. M., & Peter-Hagene, L. C. (2013). The interactive effect of anger and disgust on moral outrage and judgments. *Psychological science*, 24(10), 2069-78.

Borg, J. S., Lieberman, D., & Kiehl, K. A. (2008). Infection, incest, and iniquity: Investigating the neural correlates of disgust and morality. *Journal of cognitive neuroscience*, 20(9), 1529-1546.

Schnall, S., Benton, J., & Harvey, S. (2008). With a clean conscience cleanliness reduces the severity of moral judgments. *Psychological science*, 19(12), 1219-1222.

Schnall, S., Haidt, J., Clore, G. L., & Jordan, A. H. (2008). Disgust as embodied moral judgment. *Personality and social psychology bulletin*, 34(8), 1096-1109.

Seidel, A., & Prinz, J. (2013). Sound morality: Irritating and icky noises amplify judgments in divergent moral domains. *Cognition*, 127(1), 1-5.

Wheatley, T., & Haidt, J. (2005). Hypnotic disgust makes moral judgments more severe. *Psychological science*, 16(10), 780-784.

Scott, Inbar, & Rozin (in press) Evidence for Absolute Moral Opposition to Genetically Modified Food in the United States. IN PRESS at Perspectives on Psychological Science. 70% of GM opponents (46% of the entire sample) were “absolutely” opposed—that is, they agreed that GM should be prohibited no matter the risks and benefits. “Absolutist” opponents were more disgust sensitive in general and more disgusted by the consumption of genetically modified food than non-absolutist opponents or supporters. Furthermore, disgust predicted support for legal restrictions on genetically modified foods, even after controlling for explicit risk-benefit assessments.

Eskine, K. J., Kacinik, N. A., & Prinz, J. J. (2011). A bad taste in the mouth gustatory disgust influences moral judgment. *Psychological Science*, 22(3), 295-299.

Gutierrez, R., & Giner-Sorolla, R. (2007). Anger, disgust, and presumption of harm as reactions to taboo-breaking behaviors. *Emotion*, 7(4), 853.

Horberg, E. J., Oveis, C., Keltner, D., & Cohen, A. B. (2009). Disgust and the moralization of purity. *Journal of personality and social psychology*, 97(6), 963.

Hutcherson, C. A., & Gross, J. J. (2011). The moral emotions: A social–functionalist account of anger, disgust, and contempt. *Journal of personality and social psychology*, 100(4), 719.

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