

## Letter

# 'Moral Perception' Reflects Neither Morality Nor Perception

Chaz Firestone<sup>1,\*</sup> and Brian J. Scholl<sup>1,\*</sup>

Recently, Gantman and Van Bavel [1] introduced the notion of 'moral perception' – the claim that 'perception is preferentially attuned to moral content' (p. 631). This bold hypothesis aims to directly link vision science and social psychology, and promises exciting consequences for both fields. We explore here what it would take to demonstrate its existence. We suggest that moral perception does not exist, and that the evidence adduced in its favor fails to support it, in at least three ways.

## That's Not Morality

Much of the work taken to support moral perception is not about morality at all – and a close investigation of the empirical research itself reveals clear demonstrations of this. For example, trait disgust (an emotion associated with dark rather than light colors) correlates with enhanced sensitivity to lighter shades [2], and this was taken as evidence for 'moral perception'. However, the researchers who discovered this phenomenon themselves empirically ruled out such a connection to morality: in follow-up experiments that isolated the particular type of disgust responsible for this effect, sensitivity to lighter shades was enhanced only for subjects high in physical disgust (e.g., towards pathogens) but not for those high in moral disgust (e.g., towards immoral actions) – exactly the opposite of the pattern predicted by an interpretation involving moral perception. Similarly, a fascinating study of binocular rivalry [3] reported that faces associated with negative social behaviors were more readily seen – a result interpreted in the present

context as involving moral content. However, such effects also occurred with mere norm violations that do not invoke morality (e.g., indecent public behavior), while they failed to generalize to other clearly moral actions – leading to an explicit interpretation involving 'social affective learning' rather than morality [3].

## That's Not Perception

Other studies cited in support of moral perception are clearly about morality, but do not reflect visual processing except in a trivial and unexciting sense. For example, it was noted that subjects who learn about a character's bad action will subsequently look more at depictions of bad outcomes, whereas subjects who learn about a character's good action will look more at depictions of good outcomes, apparently because they expect justice ([4]; see also [5]). These interesting findings surely reveal our moral expectations, but vis-à-vis moral perception they merely show that when people expect something, they look for it – and it can hardly be a new or bold claim that people look at what they expect. Importantly, this occurs no matter the content of the expectation: by analogy, if the character in this study's story had gone to the zoo, subjects' expectations might have led them to look more at depictions of animals than at depictions of plants – but clearly this would not amount to an emerging trend of 'zoological perception'!

## Flawed Evidence

The one study highlighted in this context that is clearly about both morality and perception is the recent finding that moral words are easier to see than non-moral words [6]. In that study, subjects better identified briefly flashed words when the words were morally relevant than when they weren't – a finding dubbed 'moral pop-out'. However, this empirical bedrock of 'moral perception' has an alternative explanation: by virtue of being related to morality, the moral words (e.g., crime, guilty, convict) were also related to each

other – whereas the non-moral words (e.g., steel, tired, confuse) were randomly chosen and were therefore entirely unrelated. Thus, the semantically related moral words may simply have primed each other in the manner of classical semantic priming [7], which – far from being revolutionary – simply reflects well-understood spreading activation in memory [8]. Just as 'nurse' is easier to detect when preceded by 'doctor' [7], so-called moral words (e.g., crime) may be easier to detect when presented in the context of other moral words (e.g., guilty) – whereas random nonmoral words (e.g., steel) are no easier to detect when presented in the context of other random words (e.g., tired).

This alternative is easily tested: if the results reflect semantic priming, then morality should play no role, and the effect should obtain with any arbitrary category. Indeed, when the very same methods are employed to contrast random words with words from clearly non-moral categories such as clothing (e.g., blouse, dress, cotton) or transportation (e.g., car, accelerate, route), the very same 'popout' effects occur [9]. Thus, if such experiments are taken to support 'moral popout', then by the same token there must also be exciting new phenomena of 'fashion popout' or 'transportation popout'. Instead, it seems clear that these results simply reflect semantic priming, rather than having anything to do with 'moral perception'.

## Concluding Remarks

We conclude that 'moral perception' is not an emerging empirical trend. To make it more than a fascinating speculation will require supporting evidence that clearly involves visual processing, and that cannot be explained by well-understood cognitive processes (such as semantic priming) that have nothing to do with morality.

<sup>1</sup>Department of Psychology, Yale University, Box 208205, New Haven, CT 06520-8205, USA

\*Correspondence: [chaz.firestone@yale.edu](mailto:chaz.firestone@yale.edu) (C. Firestone) and [brian.scholl@yale.edu](mailto:brian.scholl@yale.edu) (B.J. Scholl).

<http://dx.doi.org/10.1016/j.tics.2015.10.006>

**References**

1. Gantman, A.P. and Van Bavel, J.J. (2015) Moral perception. *Trends Cogn. Sci.* 19, 631–633
2. Sherman, G.D. *et al.* (2012) The faintest speck of dirt: disgust enhances the detection of impurity. *Psychol. Sci.* 23, 1506–1514
3. Anderson, E. *et al.* (2011) The visual impact of gossip. *Science* 332, 1446–1448
4. Callan, M.J. *et al.* (2013) Eye movements to audiovisual scenes reveal expectations of a just world. *J. Exp. Psychol. Gen.* 142, 34–40
5. Baumert, A. *et al.* (2010) Justice sensitivity and the processing of justice-related information. *Eur. J. Pers.* 25, 386–397
6. Gantman, A.P. and Van Bavel, J.J. (2014) The moral pop-out effect: enhanced perceptual awareness of morally relevant stimuli. *Cognition* 132, 22–29
7. Meyer, D.E. and Schvaneveldt, R.W. (1971) Facilitation in recognizing pairs of words: evidence of a dependence between retrieval operations. *J. Exp. Psychol.* 90, 227–234
8. Collins, A.M. and Loftus, E.F. (1975) A spreading-activation theory of semantic processing. *Psychol. Rev.* 82, 407–428
9. Firestone, C. and Scholl, B.J. (2015) Enhanced visual awareness for morality and pajamas? Perception vs. memory in ‘top-down’ effects. *Cognition* 136, 409–416