



Reports

Why are some moral beliefs perceived to be more objective than others? ☆

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ABSTRACT

Recent research has investigated whether people think of their moral beliefs as objectively true facts about the world, or as subjective preferences. The present research examines variability in the perceived objectivity of different moral beliefs, with respect both to the content of moral beliefs themselves (what they are about), and to the social representation of those moral beliefs (whether other individuals are thought to hold them). It also examines the possible consequences of perceiving a moral belief as objective. With respect to the content of moral beliefs, we find that beliefs about the moral properties of negatively valenced acts are seen as reliably more objective than beliefs about the moral properties of positively valenced acts. With respect to the social representation of moral beliefs, we find that the degree of perceived consensus regarding a moral belief positively influences its perceived objectivity. The present experiments also demonstrate that holding a moral belief to be objective is associated with a more 'closed' response in the face of disagreement about it, and with more morally pejorative attributions towards a disagreeing other person.

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Introduction

Are moral beliefs objectively true facts about the world, or are they instead merely subjective preferences? While philosophers approach this issue analytically, it has recently been examined experimentally by psychologists and experimental philosophers who have been interested in the extent to which lay individuals treat moral beliefs as objective.

In a pioneering study, Cecilia Wainryb and her colleagues investigated how children reacted to moral disagreement. In one study, 5, 7, and 9 year-old children were presented with a moral disagreement between two characters, and were asked whether in the face of this disagreement only one of them was right, or whether both could be right (Wainryb, Shaw, Langley, Cottam, & Lewis, 2004). Regardless of their age, children made objective judgments regarding moral disagreements, despite becoming increasingly subjectivist with age regarding beliefs about matters of taste, or beliefs about ambiguous facts (see also Kuhn, Cheney, & Weinstock, 2000; Nichols & Folds-Bennett, 2003; Turiel, 1978, 1983).

Building on this research, we recently investigated adults' perceptions of the objectivity of a variety of specific moral beliefs (Goodwin & Darley, 2008). We asked participants (college age students) two questions to assess the degree of objectivity they attributed to a range of moral beliefs – whether or not there could be a correct answer as to whether each belief was true, and whether a person who disagreed with them over the belief was mistaken, or whether instead neither party need be mistaken. Answering “yes” to both questions was treated as a maximally objectivist response. The participants in these studies treated beliefs about moral transgressions as highly objective – almost as objective as beliefs about everyday or scientific facts, and more objective than beliefs about social conventions. Participants who tended to see the authority for their moral beliefs as stemming from a religious source also tended to treat their moral beliefs as more objective.

One limitation of these previous studies is that we focused primarily on moral beliefs about canonical moral transgressions, i.e., transgressions that involve the infliction of direct harm or injustice – for instance, robbing a bank, or cheating on a life-guard exam. As such, it is not possible to generalize our earlier findings about objectivity to moral beliefs as a whole. And indeed, some of our earlier data suggested that there may in fact be considerable variance across different moral issues in terms of their perceived objectivity. The primary purpose of the present studies was accordingly to investigate sources of variance in the perceived objectivity of different moral beliefs.

Does the valence of moral beliefs predict their perceived objectivity?

Our first hypothesis was that moral beliefs about negative immoral actions will, in general, be perceived as more objective than beliefs about

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positive moral actions. This prediction emerges in part from the well-established principle of ‘negativity dominance’. According to this principle, the negative ends of a dimension weigh more heavily, and attract more attention than do the positive ends (see Baumeister, Bratslavsky, Finkenauer, & Vohs, 2001; Rozin & Royzman, 2001). Negativity dominance has been investigated in the moral domain to some extent (see e.g., Janoff-Bulman, Sheikh, & Hepp, 2009; Riskey & Birnbaum, 1974; Rozin & Royzman, 2001), but no existing research has examined whether beliefs about negative, immoral actions are perceived to be more objective than beliefs about positive, moral actions.

Does the perceived consensus pertaining to a moral belief predict its perceived objectivity?

Our second hypothesis was that in judging the objectivity of a moral belief, people may be influenced by whether they think that other people tend to hold that belief – that is, by perceived consensus. Perceived agreement with others has been shown to affect belief in group stereotypes, particularly when the agreement is with an in-group member (Haslam, Oakes, McGarty, Turner, Reynolds, & Eggins, 1996; Puhl, Schwartz, & Brownell, 2005; Sechrist & Stangor, 2001; Stangor, Sechrist, & Jost, 2001; Wittenbrink & Henly, 1996). Perceived consensus also affects individuals’ reactions to contested issues – a study of users of a public waterway showed that individuals’ perceptions of perceived consensus about how the waterway should be used predicted their unwillingness to compromise over the issue (Whitney & Miller, 2002). We hypothesized that consensus is treated as a diagnostic cue of the objectivity of a moral belief, predicting that when high consensus exists, people will tend to regard the belief as more objective than when less consensus exists.

Are objective moral beliefs associated with ‘closed’ responses to moral disagreement?

The present studies also investigate what other beliefs and attitudes are associated with a person’s meta-ethical views, in order to shed light on the possible causes and consequences of such views. Prior research has shown that people are less tolerant of moral disagreement than they are of other kinds of disagreement (e.g., Wainryb et al., 2004; Wainryb, Shaw, Laupa, & Smith, 2001), and that they are less tolerant of moral diversity than other kinds of diversity (Haidt, Rosenberg, & Hom, 2003). Is an individual’s lack of tolerance over a particular moral disagreement also predicted by how objective they perceive the belief or issue to be? Some philosophers (e.g., Snare, 1992) have argued that moral objectivists should be more ‘open’ in the face of moral disagreement. They should be more inclined to listen to the dissenting moral views of others because they believe there is some fact of the matter to resolve – and new information is valuable. However, it seemed more likely to us that the opposite is in fact true – that holding an objective view of a moral belief is associated with a more ‘closed’ response to disagreement, manifested in greater discomfort and more pejorative attributions towards a disagreeing other.

In sum, the present research tests the following three hypotheses: 1. Moral beliefs about negative immoral actions should be perceived as more objective than beliefs about positive moral actions. 2. Perceived consensus should predict, and perhaps causally influence judgments of greater objectivity. 3. Perceiving moral beliefs as objective will be associated with more ‘closed’ responses in the face of moral disagreement.

Study 1

Method

Participants and procedure

Fifty-nine undergraduate students (37 female, 21 male, 1 unreported) participated in the study for course credit. They each

acted as their own controls and responded using paper and pencil to 18 different scenarios, 12 of which concerned moral issues, as shown in Appendix 1.

In the first stage of the study, participants read each scenario and then rated in the following order: the extent to which they agreed with each statement on a 6-point scale (1: strongly disagree, 6: strongly agree), the extent to which they thought there was a correct answer as to whether each statement was true, again on a 6-point scale (1: No correct answer, 6: Definitely a correct answer; this was the first measure of objectivity, with higher numbers indicating greater objectivity), and the percentage of United States citizens that they thought would agree and disagree with each statement (open-ended, this was the measure of perceived consensus). The 18 scenarios were presented in a new random order for each participant.

In the second stage of the study, participants were presented each scenario in turn, and were told that for each statement they had previously answered, it turned out that another person in the study disagreed with them, and that we were interested in their responses to this disagreement. They first indicated the extent to which they thought the disagreeing other person was mistaken, as opposed to neither party being mistaken, again on a 6-point scale (1: Neither of us need be mistaken; 6: Other person is clearly mistaken). This was the second measure of objectivity, and as before, higher numbers were treated as indicating greater objectivity. The two measures of objectivity were well correlated with each other (across the 12 moral items, the correlations ranged between .35 and .72, all $ps < .01$), and so for each item, we averaged these two measures together to form a composite index of objectivity (see Goodwin & Darley, 2008).

Following this question, for each disagreement we then asked participants an open-ended question which asked them to explain why they thought disagreement might have arisen. This allowed us to check that participants were not assuming that the disagreeing other person had construed the act in question in an entirely different way, i.e., as stemming from different motives. In cases where it appeared that a particular participant was not construing the disagreement as genuine, which occurred 2% of the time, we removed their objectivity data. (This did not affect the main results reported below, however.)

We then asked participants how comfortable they would be to have the disagreeing other person as a room-mate, again on a 6-point scale (1: Extremely uncomfortable, 6: Extremely comfortable).

During this second stage of the procedure, the 18 scenarios were presented in a new random order for each participant, and this order was independent of the order used in the first stage of the procedure.

Materials and predictions

The 12 different moral scenarios came from each of three different categories (see Appendix 1). The first category consisted of six *negative, immoral acts*. The items included both standard, harm or injustice based transgressions (e.g., stealing) as well as more symbolic transgressions (e.g., urinating on a memorial; across all 6 items, objectivity, $\alpha = .82$, ICC absolute agreement, average measures = .80). The second category consisted of three *positive moral acts* (e.g., performing a dangerous rescue; objectivity, $\alpha = .66$, ICC absolute agreement, average measures = .64). The comparison between beliefs in these first two categories allowed an assessment of whether valence affects perceived objectivity. The third category consisted of three *contested value of life issues* (e.g., the permissibility of abortion; objectivity, $\alpha = .86$, ICC absolute agreement, average measures = .85). These items were designed to be representative of moral issues where little consensus is perceived to exist. Six further scenarios described factual issues, matters of social convention, and matters of aesthetic preference (see Appendix 1).

The items within each category were chosen to be prototypical examples of each sort of scenario. However, since our sampling

Table 1
The mean objectivity ratings for the moral items in Study 1.

	Negative acts						Positive acts			Contested value of life issues		
	1. Steal wallet	2. Punch	3. False alibi	4. Urinate on memorial	5. Nazi salute	6. Burn flag	7. Swim rescue	8. Donate income	9. Eco consumerism	10. Abortion	11. Assisted Death	12. Turn off life support
Objectivity	5.43 _a	4.89 _b	4.73 _{b,c}	5.05 _b	4.87 _b	4.51 _c	4.43 _{c,d}	4.10 _{d,e}	3.79 _e	3.28 _f	3.09 _{f,g}	2.88 _g

Note. Cells that do not share the same lettered sub-script are significantly different from each other at the $p < .05$ level.

procedure was informal, it is possible that these items are not truly representative of the categories they instantiate. Caution is therefore needed in interpreting the comparisons between different categories of moral belief.

Results

Moral beliefs vs. non-moral beliefs

Replicating our previous research, factual beliefs were perceived as most objective on the six-point scale (5.23), followed in descending order by moral beliefs (4.25), beliefs about social conventions (3.16), and beliefs about matters of taste (1.60), Trend test, $F(1, 58) = 733.24$, $p < .0001$.

Differences among moral beliefs

Corroborating the first hypothesis, the wrongness of the negative, immoral acts, was perceived to be significantly more objective than the goodness of the positive moral acts, 4.91 vs. 4.11, $t(58) = 6.84$, $p < .001$. However, in general, participants agreed with the beliefs about positive actions just as strongly as they agreed with the beliefs about negative actions, 4.74 vs. 4.76, $t(58) = .15$, $p > .8$,¹ indicating that the valence-based difference in objectivity did not arise from differences in overall strength of agreement. Table 1 reports the objectivity means for all 12 moral items, including all pair-wise comparisons between the items (see also Fig. 1 for the strength of agreement means).

Perceived consensus as a predictor of objectivity

We examined whether participants' estimates of perceived consensus (what percentage of US citizens agree) predicted their objectivity ratings.² Across the 12 moral items, the correlation between perceived consensus and objectivity was indeed very high, $r(10) = .85$, $p < .001$. The correlation between perceived consensus and strength of agreement was similarly high, $r(10) = .82$, $p < .001$. In an across-items regression, regressing perceived objectivity on the perceived consensus and strength of agreement scores, perceived

¹ Because the strength of agreement scale was bipolar (1: *strongly disagree*; 6: *strongly agree*), whereas the objectivity scales were unipolar, we rescaled the strength of agreement scores so that they had the same overall range as the objectivity scores.

² The raw perceived consensus scores were estimates of the percentage of U.S. citizens who agreed with each statement. However, we were chiefly interested in participants' estimates of the relative consensus of the majority opinion, regardless of which opinion the majority held. Accordingly, in cases where participants' thought the majority of people disagreed with the presented statement, we recoded these responses so that the participant's consensus percentage reflected their belief about the size of the *majority opinion* for each statement, whether this was agreement or disagreement. To aid the interpretability of the results, the analyses reported here exclude participants' responses when they did not think they themselves were in the majority opinion (resulting in the exclusion of 8% of the total responses). The general pattern of results is very similar when these responses are included, however.

consensus marginally predicted unique variance in objectivity, over and above strength of agreement, $B = .035$, $\beta = .56$, $p < .09$.

Objectivity as a predictor of discomfort

We next assessed whether objectivity predicted discomfort with a disagreeing other person, over and above strength of agreement. Focusing only on the moral items, objectivity correlated with discomfort with a disagreeing other person, $r(10) = .90$, $p < .001$. The correlation between discomfort and strength of agreement, was somewhat lower, $r(10) = .76$, $p < .001$, though not reliably so, William's $t(9) = 1.57$, $p > .15$. In an across items regression analysis with both predictors entered, objectivity reliably predicted unique variance in discomfort over and above strength of agreement scores, $B = .88$, $\beta = .84$, $p < .01$, whereas the reverse was not true (strength of agreement, $B = .07$, $\beta = .07$, $p > .07$). Within-items correlational analyses tended to reveal the greater predictive strength of the objectivism variable. Objectivity scores reliably predicted discomfort with another person for each of the 12 moral issues we investigated, with the correlations ranging from .31 to .63, all $ps < .01$. The average correlation between objectivity and discomfort ($M = .43$) was reliably higher across items than the average correlation between strength of agreement and discomfort ($M = .34$), paired-samples $t(11) = 3.42$, $p < .01$.

Discussion

Study 1 showed that there is systematic variation across different sorts of moral belief in terms of how objective they are perceived to be. Beliefs about moral transgressions were perceived to be more objective than beliefs about positive moral acts. Study 1 also demonstrated reliable correlations between perceived consensus and perceived objectivity, suggesting that perceived consensus may be an important input to perceptions of objectivity. Correlational data

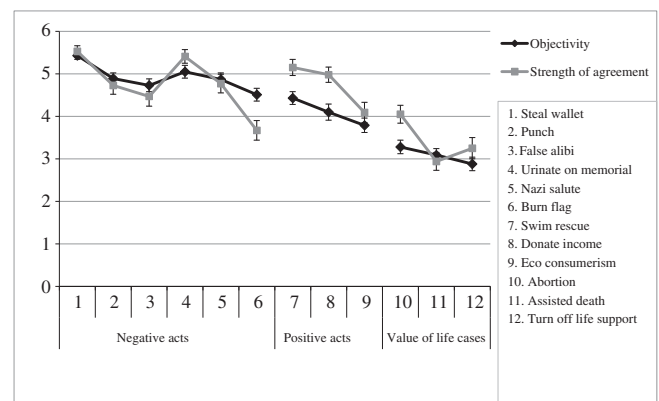


Fig. 1. The mean objectivity and strength of agreement ratings for each of the 12 different moral items in Study 1.

further showed that perceptions of the objectivity of a particular moral belief strongly predict discomfort with a person who disagrees with that belief.

Follow up studies

Before proceeding to Study 2, we thought it useful to briefly describe the results of two follow-up studies that address potential caveats with the results in Study 1. One caveat is that the perceived consensus measure in Study 1 was quite abstract (asking about the beliefs of United States citizens), and may have been difficult for participants to answer. Accordingly, we ran a follow up Study ($N = 71$) with 15 moral items (some of which overlapped with those in Study 1), in which we asked the question about perceived consensus in a more concrete way – with respect to the particular sample under investigation (other students from the same undergraduate institution). In other respects, the study was very similar to Study 1.

Perceived consensus again strongly predicted objectivity ratings across items, $r(13) = .88, p < .001$, and in a regression analysis it marginally predicted objectivity over and above strength of agreement, $B = .03, \beta = .49, p < .07$. As in Study 1, beliefs about positive moral acts were seen as less objective ($M = 3.74$) than beliefs about a variety of negative moral acts ($M = 4.66$), $t(70) = 7.78, p < .001$. Perceived objectivity also predicted participants' discomfort with another person who disagreed with them over a moral belief, $r(13) = .94, p < .001$, and their belief that the disagreeing other was an immoral person, $r(13) = .96, p < .001$. Perceived objectivity negatively predicted participants' self-rated likelihood of ever giving up the moral belief over which disagreement had arisen, $r(13) = -.94, p < .001$. In each case these relations remained significant when controlling for strength of agreement.

A second caveat with the results of Study 1 is that the greater perceived objectivity of positive moral actions may have arisen because of differences in the moral language employed (Walter Sinnott-Armstrong, personal communication, December 2008). We contrasted beliefs about 'wrong' actions with beliefs about 'good' actions, finding that beliefs about wrong actions were perceived to be more objective than beliefs about good actions. It may be, however, that beliefs about moral rules (i.e., about what is 'wrong' or 'right') are seen as more objective than beliefs about moral value (i.e., about what is 'good' or 'bad'; see e.g., Gert, 2005, p. 325).

Accordingly, we ran a follow-up study ($N = 41$) in which participants rated 12 different scenarios about a protagonist who engaged in some form of moral or immoral behavior. Six of the 12 scenarios described positive moral actions and six described negative immoral actions (materials available from the first author upon request). After reading each scenario, half the participants were randomly assigned to judge the extent to which each action was good or bad on a 9-point scale ranging from "extremely bad" to "extremely good", whereas the other half of the participants made an analogous rating on a 9 point-scale that ranged from "extremely wrong" to "extremely right". All participants then rated the objectivity of each belief, and their reactions to a person who disagreed with them over the belief. This study showed that beliefs about moral acts were again rated as less objective than beliefs about immoral acts, both when the items were framed in terms of moral rules (i.e., "right/ wrong"; positive acts, $M = 5.85$, negative acts, $M = 7.63, t(19) = 4.83, p < .001$, and when they were framed in terms of moral value (i.e., "good/bad"; positive acts, $M = 6.24$, negative acts, $M = 7.28, t(19) = 3.25, p < .01$). However, overall, ratings of the morality of the positive acts ($M = 6.76$) did not differ at all from ratings of the immorality of the negative acts ($M = 6.76$), $p = 1.0$, thus demonstrating that the difference in ratings of objectivity did not owe to more extreme initial assessments of the relevant acts' morality or immorality. Finally, as in the previous studies, across items analyses showed that objectivity predicted both discomfort with a disagreeing other person, $r(10) = .86, p < .001$, and attributions of

immorality to this person, $r(10) = .97, p < .001$, and in both cases, objectivity remained a reliable predictor when controlling for attitude extremity in regression analyses (discomfort, $B = .86, \beta = .89, p < .01$; immorality, $B = 1.43, \beta = 1.06, p < .001$).

These follow up studies consolidated the findings regarding differences in valence, and the relation between objectivity and discomfort with a disagreeing other. In Study 2, we returned to the hypothesis that perceived consensus is a predictor of objectivity judgments, aiming to investigate whether any causal evidence supports this idea. The strong correlations observed in the previous studies could reflect that consensus serves as an input to perceptions of objectivity, but of course, these correlations could also reflect the reverse direction of causality, or an alternative third variable explanation. Study 2 manipulated perceived consensus in order to examine whether it could exert a causal influence on perceptions of objectivity.

Study 2

Method

Seventy undergraduate students (28 male; 41 female; 1 unreported) participated in the study for course credit. They each received one of two different versions of a survey packet. In the first part of the survey, participants responded to 14 different moral scenarios, indicating for each one whether they thought the action described was "immoral", "neither immoral nor immoral", or "moral". The 14 scenarios (see Appendix 2) described a wide range of minor or moderate moral infractions (e.g., downloading a TV program in violation of copyright laws), or alternatively, actions that involved some conflict between different moral values (e.g., lying to a friend to avoid hurting their feelings).

In the second part of the study, participants were presented the same scenarios, and were told that we were interested in their reactions to other students' attitudes towards these statements. They were presented bogus information about the percentage of students from the same institution who circled "immoral" for each item, and were then asked three questions on 9-point scales: the extent to which they were surprised by the percentage, how comfortable they would be to have a person who circled "moral" as a room-mate, and, critically, a single question about objectivity – the extent to which they thought there was a correct answer as to whether the behavior described was moral or immoral. The bogus percentages were manipulated so that in one case there was a relative lack of consensus among other students about the issue, whereas in the other case, there was relatively high consensus. In order to maintain the believability of the manipulation, the differences between the low and high consensus percentages were not extreme. For each item, the "low" and "high" consensus numbers were 28 percentage points apart. Each participant only saw either the "low" or "high" percentage for each item. Participants who received the first version of the study received the "high" percentage for items 4, 5, 6, 9, 10, 12, and 14 (see Appendix 2), and the "low" percentage for the remaining items. Participants who received the second version received the complementary percentages. Two items (4. *Lewd comment*, and 13. *Evade taxes*) were presented with percentages of "immoral" responses that were below 50%, so as not to arouse participants' suspicion about the relatively uniform percentages they received. However, for these two cases, it is not clear which of the stipulated percentages indicates greater consensus on the whole, since the remaining percentage must be split between two response categories ("neither immoral nor moral" and "moral"). We therefore did not include these items in the data analyses below. At the conclusion of the study participants answered some basic demographic questions, were probed for suspicion, and then debriefed.

Results and discussion

We analyzed the effect of the consensus manipulation in two separate ways. The first analysis included participants' responses only if either they agreed with the stipulated majority that the action was immoral, or indicated a neutral response. The second analysis included all responses, including those where participants had disagreed with the stipulated majority opinion.

Collapsing across all 12 items, there was a small but reliable effect of perceived consensus on both analysis methods. Considering just the cases where participants agreed with the majority or were neutral (89% of the total responses), participants were more inclined to think there was a correct answer when presented with the high consensus estimate, 6.10 vs. 5.74, $t(69) = 2.28$, $p < .03$. The same effect held when including all responses, including those where participants disagreed with the stated majority – again, responses on the correct answer scale were higher in the high consensus condition, 5.89 vs. 5.54, $t(69) = 2.33$, $p < .03$. Thus, perceived consensus affected perceptions of objectivity in the predicted direction.

General discussion

Summary of the findings

The present paper extends research on perceptions of the objectivity of moral beliefs, by shedding light on what causes people to see moral beliefs as objective, and by showing what other attitudes are associated with perceptions of objectivity. Prior psychological investigations of moral objectivity have tended to focus on comparisons between the perceived objectivity of moral as opposed to non-moral issues (e.g., Goodwin & Darley, 2008; Kuhn et al., 2000; Nichols & Folds-Bennett, 2003; Wainryb et al., 2004; although see Sarkissian et al., *in press*). And indeed, a prevalent assumption in philosophical writing on meta-ethics is that individuals will tend to see all moral beliefs as equivalent in their objectivity or subjectivity (although see Gill, 2008, 2009; and Sinnott-Armstrong, 2009). However, the present results demonstrate that that is not the case, and instead show that there is systematic variability across different sorts of moral belief in terms of how objective they are seen to be.

The valence of moral beliefs affects their perceived objectivity

The present data shows that the valence of moral beliefs is a robust predictor of their objectivity. Beliefs about the wrongness or badness of negative moral actions (e.g., stealing, robbing, cheating) were seen as reliably more objective than beliefs about the rightness or goodness of positive moral actions (e.g., donating money to charity, performing a swim rescue, contributing to environmental causes), and that this does not owe to participants agreeing with beliefs about negative actions more strongly.

Consensus affects perceived objectivity

We also found that the perceived consensus regarding a particular moral belief is an input to its perceived objectivity. Study 1 and its follow up demonstrated this in correlational analyses – moral beliefs were seen as more objective to the extent that they were seen as being widely held. Study 2 corroborated this finding and showed that perceived consensus exerts a causal role on perceptions of objectivity – a subtle experimental increase in the degree of consensus about a particular moral issue increased its perceived objectivity.

Objectivity is associated with more closed responses to disagreement

To the extent that participants thought that a particular moral belief was objective, the less comfortable they were with another person's disagreeing with that belief, the more immoral they thought this other person was, and the less they thought it was possible they

themselves could change their mind with respect to the belief in question. These relations all held when controlling for how strongly participants' endorsed the moral belief in question. Thus, despite some prior predictions to the contrary (e.g., Snare, 1992), it appears that greater objectivity is associated with more 'closed' rather than more 'open' responses in the face of moral disagreement.

Future directions

There are several avenues open for future research. With respect to the finding that beliefs about negative moral actions are seen as more objective than beliefs about positive moral actions, it is possible that the items we investigated are not broadly representative of the valence-based categories they are designed to represent. We think that it is unlikely that the observed difference in perceived objectivity owes to this, since the difference held across all three studies in which it was tested, using a variety of different moral beliefs. However, future investigations of this comparison could aim to use items matched more tightly in terms of content (although see Janoff-Bulman et al., 2009, for challenges with this approach). More work is also needed to identify the precise reason for this effect. These findings are consistent with a range of 'negativity dominance' findings in other literatures (see Baumeister et al., 2001; Rozin & Royzman, 2001). But this overarching similarity does not explain the source of these effects. One possible causal mechanism is that this tendency arises as a consequence of moral education, which arguably stresses prohibitions more than it promotes particular good ends or virtues (as of course does the law, see Janoff-Bulman, *in press*). However, this just pushes the question back one step further – why is it that moral education stresses the avoidance of negative acts more than it actively encourages the commission of positive acts? A perhaps more fundamental explanation is that there is a greater sense of obligatoriness when it comes to negative moral actions. Indeed, a recent study showed that people see the commission of positive moral actions as being more a matter of personal preference than the omission of negative immoral actions, which were seen as more obligatory (Janoff-Bulman et al., 2009). In essence, while it is important to perform some good acts, which particular ones to perform is a matter of individual choice (i.e., whether to donate to charity A, charity B, or to do something else entirely). It may also be that in comparison with the refraining from immoral acts, positive moral acts are seen as having a more 'expressive' quality, and may be seen as more uniquely defining of one's moral identity (e.g., Reed, Aquino, & Levy, 2007). Further research is thus needed to establish whether these (or other) accounts adequately explain the valence-based objectivity findings reported here.

With regard to the correlates of objective views of moral beliefs, the fact that perceived objectivity was consistently associated with closed responses to disagreement is clearly not sufficient to claim that perceived objectivity causes such responses. Although we suspect this may be the case, further laboratory studies are needed to disentangle the causal role of objectivity here.

Conclusions

The question of whether lay individuals are typically objectivist or subjectivist about their moral beliefs is receiving increasing empirical attention, not only because of its psychological interest, but also because it is relevant to philosophical discourse on meta-ethics (see Sarkissian et al., *in press*). The present results add to a growing body of evidence which suggests that there is no simple answer to this question. Complementing recent studies that have demonstrated important individual differences in how objective people are about their moral beliefs (see e.g., Beebe & Sackris, *in preparation*; Cokely & Feltz, *in preparation*; Goodwin & Darley, 2008, 2010), the present studies show that the same individual will often regard different

Appendix 1. The eighteen scenarios used in Study 1, grouped by category

Moral	
Negative acts	<p>1. Steal wallet. Jason is saving up for an ipod, but he is getting impatient that it is taking so long to have enough money. After he has finished dinner at a local restaurant one evening, he notices that another customer has left their wallet behind on the table next to him. He is able to look inside the wallet discreetly, and finds \$200 in cash. He takes the \$200, and leaves the restaurant. Rate the extent to which you agree with the claim that Jason's actions are morally wrong.</p> <p>2. Punch. After a very difficult day at work, Frank goes to his local bar to watch his favorite team. As soon as Frank sits down, he overhears a fellow patron make disparaging comments about Frank's team to the bartender. Frank immediately walks over to the person who made the comment, and punches him off his bar stool. Rate the extent to which you agree with the claim that Frank's actions are morally wrong.</p> <p>3. False alibi. One of Megan's best friends is being charged with murder. Megan is convinced that he is innocent, although she does not know what he was doing on the night of the alleged murder. Without having been asked, Megan provides a false alibi to the police for her friend, claiming that she was with him on the night of the night of the alleged murder. Rate the extent to which you agree with the claim that Megan's actions are morally wrong.</p> <p>4. Urinate on memorial. Tom is out with his friends one night and has been drinking. As they are walking home, they encounter a memorial for victims of 9/11, with flowers lain at the base of it. Tom wants to impress his friends, and so he decides to vandalize the memorial. He urinates on the memorial and on the flowers. Rate the extent to which you agree with the claim that Tom's actions are morally wrong.</p> <p>5. Nazi salute. Mike is a professional sportsman. He is playing in a match against a team that is known to have a large Jewish support-base, and these opposition supporters are heckling him. He responds by turning to these supporters, mimicking Adolf Hitler's mustache, and giving them a Nazi salute. Rate the extent to which you agree with the claim that Mike's actions are morally wrong.</p> <p>6. Burn flag. Amy is a high school history teacher. She has become increasingly dissatisfied with her government's foreign policies, and wants to communicate that to her students. She decides to do this by burning a US flag in front of them. Rate the extent to which you agree with the claim that Amy's actions are morally wrong.</p>
Positive acts	<p>7. Swim rescue. Sarah is sunbathing at the beach on a day off work. She notices that a small crowd has gathered on the shore, which is pointing to a swimmer who has been caught in a rip current, and appears to be drowning. There are no lifeguards at this particular beach. Sarah joins the crowd, and they try to decide what to do. Sarah is only a moderately strong swimmer, and probably not the strongest in the group. But, since no-one is taking any action, Sarah volunteers to swim out to the swimmer. She manages to reach the swimmer and succeeds in bringing him to safety. Rate the extent to which you agree with the claim that Sarah's actions are morally good.</p> <p>8. Donate income. In the past, John has saved 10% of his income for vacations. But, after some deliberation, he decides that this money could be put to better use. He decides to change his savings plan so that he instead donates this saved income to charity, which he does so anonymously. Rate the extent to which you agree with the claim that John's actions are morally good.</p> <p>9. Eco consumerism. Anna is buying a new car and is deciding between two different models. Both cars are equally suitable for her needs and taste. However, one car is 20% more expensive than the other because it emits considerably less greenhouse gas. Anna is concerned about global warming, and thus decides to buy the more expensive, environmentally friendly model. Rate the extent to which you agree with the claim that Anna's choice is morally good.</p>
Contested value of life issues	<p>10. Abortion. Eve is 2 months pregnant. Despite Eve's wanting to have the child, she does not know who the father is, and after considering her financial situation, she considers that having the child would be too big a burden. She decides instead to have an abortion. Rate the extent to which you agree with the claim that Eve's choice is morally permissible.</p> <p>11. Assisted death. Bob's father is gravely ill with rheumatoid arthritis. This condition leaves him in constant and excruciating pain. When Bob's father was healthier, he had previously spoken to Bob about not wanting to live in such pain. He now requests Bob's help in assisting him to die. Bob assists his father by obtaining a certain type of drug, which his father takes and then dies. Rate the extent to which you agree with the claim that Bob's actions are morally permissible.</p> <p>12. Turn off life support. Mary's mother has been in a coma for the past 2 years. During that time, Mary's mother has been in a persistent vegetative state, and has been on constant life support. Her doctors estimate that there is almost no chance that she will make any sort of recovery. When Mary's mother was healthier, she had previously spoken to Mary about not wanting to live in such a condition. One night, Mary decides to end her mother's life by turning off her life support machine. Rate the extent to which you agree with the claim that Mary's actions are morally permissible.</p>
Factual	<p>13. Evolution of species. Gary is a student in high school. He is taking a course on biology and evolution. One day he reads in his text book that homo sapiens evolved from more primitive primate species. Rate the extent to which you agree with this claim in Gary's textbook.</p> <p>14. Geography. Melissa is an elementary school student. In her geography class, the teacher is teaching the students about the locations of various US cities. The teacher says that Boston (Massachusetts) is further north than San Diego (California). Rate the extent to which you agree with the claim made by Melissa's teacher.</p>
Social conventional	<p>15. Pajamas to lecture. Samantha is a college professor. She is prone to somewhat eccentric habits. One day she decides to give a lecture wearing pajamas and a bath robe. Rate the extent to which you agree with the claim that Samantha engaged in wrong behavior.</p> <p>16. Eat with hands. Roger is a business executive. While at a restaurant with clients, Roger orders a steak, and proceeds to eat it with his bare hands, without touching his knife and fork. Rate the extent to which you agree with the claim that Roger engaged in wrong behavior.</p>
Taste	<p>17. Michael Bolton. Susan and her friends are comparing their favorite male singers. Susan claims that Frank Sinatra is a better singer than Michael Bolton. Rate the extent to which you agree with Susan's claim.</p> <p>18. Chocolate ice cream. Tony and his friends are discussing their favorite foods. Tony makes the claim that chocolate ice cream tastes better than zucchini. Rate the extent to which you agree with Tony's claim.</p>

Appendix 2. The 14 items used in Study 2, along with the bogus consensus estimates provided in the high and low consensus conditions, respectively

Item	Low consensus	High consensus
	%	%
1. <i>Lie to avoid hurt feelings.</i> A person lies to someone in order to avoid hurting their feelings.	51	79
2. <i>Download TV program.</i> A person downloads a TV program in violation of copyright laws.	59	87
3. <i>Extra-marital relationship.</i> A woman whose husband is technically brain dead, and who will die within 6 months, starts up an extra-marital relationship with another man while her husband is still alive.	60	88
4. <i>Report supervisor.</i> (Filler item). An employee reports a supervisor who makes a lewd sexual comment to a female co-worker, which results in a long legal battle between the workplace and the co-worker.	33	5
5. <i>Brother and sister kiss.</i> An adult brother and sister kiss passionately.	71	99
6. <i>Ritalin before exam.</i> Despite not having attention deficit and hyperactivity disorder (ADHD), nor a prescription for the drug, a student takes the drug Ritalin, in order to improve her concentration while studying for an exam.	57	85
7. <i>Steroids for sports.</i> A young man takes steroids in order to perform better at sports. His family does not have enough money to pay college tuition, so he hopes to fulfill his goal of becoming a doctor by getting an athletic scholarship to a Division I school.	61	89
8. <i>Park in handicapped spot.</i> A person who is in a rush parks illegally in a handicapped spot while picking up a prescription at the pharmacy. (The car-park is approximately half-full)	51	79
9. <i>Single mother prostitutes.</i> A single mother prostitutes herself in order to feed her two children, ages 3 and 5, who have been without food for two days.	62	90
10. <i>Executive defrauds.</i> An executive at a large multi-national corporation notices that the company has engaged in illegal activities that have defrauded investors and harmed thousands of lower-income people. Instead of reporting the company to the authorities, the executive blackmails the board of the company and disperses the wealth among the lower-income families.	66	94
11. <i>Mild drunk driving.</i> A person goes to a dinner party and has four drinks throughout the course of the night. The person suspects that they might be over the blood-alcohol limit, but since they live only five minutes away, and are dropping off a friend on the way home, they drive anyway.	68	96
12. <i>Vaccination kills.</i> A hospital administrator institutes a vaccination program that will prevent 1,000 children from dying from an epidemic of a new infectious disease. However, the vaccine itself will kill 100 children because it sometimes causes the same disease.	50	78
13. <i>Evade taxes.</i> (Filler item). A person living in a country with corrupt leadership evades paying taxes because he knows that the money goes directly to officials instead of going toward efforts to improve life for the majority of the country's citizens.	48	20
14. <i>Embezzle charity.</i> A person is given a large sum of money by a charity organization in order to set up a health clinic in a poor neighborhood. Instead, the person uses the money to pay his sick child's medical bill, which he otherwise cannot afford.	69	97

moral beliefs as differentially objective. These differences arise both from the valence of moral beliefs, and from how such beliefs are socially represented, and they relate to how closed people's responses are to moral disagreement.

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