

Self-Serving Bias in Moral Values

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Abstract

Evolutionary psychology suggests that the function of morality is to foster cooperation. Often it is moral to sacrifice self-interest in order to benefit the group, and to be seen as selfish can have severe repercussions. But what if we could convince ourselves, and others, that what satisfies our self-interest is also the most moral? Self-interest may be one place where moral values are derived. We are self-serving in a variety of ways, from how smart or skilled we think we are, to how morally righteous we think we are. Moral judgements are sometimes self-serving too, and it is possible that the things we find morally valuable are influenced in this way. We conduct several experiments examining whether people self-servingly inflate the moral value of traits or qualities they possess. We test this by cleverly manipulating what traits participants believe they have. Across two experiments we find that people self-servingly inflate the moral value of randomly assigned personality traits they believe they possess, and even judge other people who share those same traits as more moral than those who do not. However, we were unable to generalize this self-serving effect to different types of intelligence and discuss why this occurred. Universal moral principles should not depend on an individual's personal traits, yet we find the self-serving bias plays a role in people's moral valuations.

Self-Serving Bias in Moral Values

Philosophers have long debated over the nature of morality, attempting to create moral principles by which people derive their moral values. But philosophers do not agree on these moral principles. Some argue that moral principles can be derived from rationality determined categorical rules (Kant & Schneewind, 2002), others believe moral values should be whatever provides maximum utility (Mill, 2008) or that moral principles follow God's command (Murphy, 2019). However, these differing principles often fail to reflect how ordinary people think about morality (Kahane, 2015; Sarkissian, 2016). Steadfast moral principles are not the only way in which ordinary people develop their moral values.

Examining the function of morality may help explain how people develop moral values. Evolutionary psychology suggests that morality was born to foster cooperation between individuals and minimize selfish behaviours (Tomasello & Vaish, 2013). Across the world cooperative behaviours such as helping, reciprocation, bravery, deferring to superiors, dividing scarce resources and respecting prior possessions are near universally considered morally good (Curry et al., 2019). This is consistent with the perspective that the primary function of moral values is to aid cooperation.

However, there is a tension between using moral values to benefit the group or to benefit the self (Haidt, 2007). Even though people often believe their values to be objective and free from self-interest (Goodwin & Darley, 2008), we argue that self-interest is another place that people derive moral values from, and that they then use these values to serve their own interest. Nietzsche once said “Whatever has *value* in our world now does not have value in itself, according to its nature—nature is always value-less—but has been *given* value at some time, as a present—and it was *we* who gave and bestowed it.” (Anderson, 2017). Nietzsche suggests that nature has no value, and that it is people who create and bestow value onto the world. We argue that people create and push particular values and use these moral

values self-servingly to give themselves some benefit or advantage. One way in which people could use moral values self-servingly is to place high moral value on the skills we excel at and try to convince others to value them too. Some examples of this may include: highly educated people preaching the virtues of education to further themselves as morally virtuous, the wealthy decrying taxation as immoral to keep their vast wealth intact, or a politician long opposed to gay marriage swapping their stance when their child comes out as gay. People may self-servingly inflate the moral importance of some quality or trait that they possess in ways that bring them an advantage.

People need to feel moral (Prentice et al., 2018), and while many sacrifice self-interest in favour of being moral, some seek only to appear and feel moral while avoiding the costs of actually being moral (Batson, 2008; Batson et al., 1999).

Function of Moral Judgements

There are good reasons why people would go to such lengths to appear and feel moral. Being seen as selfish, uncooperative, or immoral can have severe consequences. Moral character dominates our judgements of other people (Goodwin et al., 2014), and immoral behaviour leads to negative moral judgements and a poor reputation. People will avoid cooperating with those who have poor reputations (Rand & Nowak, 2013), and seek to punish them even if the punishment is costly and provides the punisher with no benefit (Fehr & Gächter, 2000). Ultimately a poor reputation can lead to losing access to vital resources (Logan, 2013). For this reason people will go to great lengths to protect their reputation (Vonasch et al., 2017) and strategically manage how they present themselves to others (Alicke & Sedikides, 2009; Rom & Conway, 2018). These consequences strongly motivate people to follow moral rules and avoid gaining a reputation for being selfish, uncooperative, or immoral. However, if one could convince others to value things that benefitted oneself,

they would surely thrive, reaping the benefits of appearing and feeling moral while satisfying self-interest at the same time.

We propose that this act of strategically shifting moral values is not necessarily always brought about by nefarious scheming, but can also take the form of a unconscious and effortless self-serving bias (Hughes & Zaki, 2015; Moore & Loewenstein, 2004).

Judgements of others are often self-serving

People are self-serving in a variety of ways. They will often overestimate their abilities, claim successes as due to their personal characteristics and dismiss their failures to external factors (Allen et al., 2020; Deffains et al., 2016; Kruger & Dunning, 1999). A majority of people will also evaluate themselves as better than average across a variety of tasks, such as being more morally righteous than the average person (Epley & Dunning, 2000), despite the statistical impossibility (Alicke & Govorun, 2005). They might endorse psychological principles that view their characteristics favourably (Ward et al., 2021). People explain poor behaviours of other persons with negative character judgements but make excuses for their own similar behaviours (Furnham, 1982; Malle, 2006). A wide variety of judgements about the self and others are susceptible to this bias.

One function of the self-serving bias is thought to be the enhancement of the individual's personal identity (Alicke & Sedikides, 2009). People pursue status by signalling their value to the group (Anderson & Kilduff, 2009; Winegard et al., 2020), and the self-serving bias may cause people to signal more value than they really have (Anderson et al., 2012). When people cannot objectively increase their value to the group, the self-serving bias allows them to exaggerate their qualities in a bid to convince others of their greater value (Alicke & Sedikides, 2009). We propose a similar behaviour occurs in the moral hypocrisy we are examining. When people cannot objectively increase their moral value, they may do

so by convincing others that their traits or qualities are more morally valuable than they presently are.

Moral judgements are sometimes consistent with the self-serving bias (Epley & Caruso, 2004). Despite the tendency for people to think their moral values are objective (Goodwin & Darley, 2008), there is suggestive evidence that moral judgements can be influenced in self-serving ways. People say that climate change solutions that burden other countries are fairer than those that burden their own (Kriss et al., 2011). People who have the ability and means to evade tax make judgements that tax evasion is less unethical than those without the ability to evade tax (Blaufus et al., 2015). People can prefer immoral traits in other people if they stand to benefit from their immorality (Melnikoff & Bailey, 2018). Likewise, observers will judge cheaters less harshly when the observer stands to gain from the cheating (Bocian et al., 2016). Thus, many behaviours appear to involve self-serving moral judgments.

One study by DeScioli et al. (2014) was able to show that people's judgements of whether equity or equality was fair and moral depended on whether they benefited from either rule. Participants were to complete a task in pairs and receive a monetary reward at the end, they were randomly assigned to be either a Typist (hard task) or a Checker (easy task). The Typist would then decide whether the reward was distributed equitably (75% for Typist, 25% for Checker) or equally (50% split) and both participants were then asked whether they thought the distribution was fair and moral. If moral values are not subject to a self-serving bias then the participants randomly assigned role should not influence whether they judge equity or equality to be fair and moral. The vast majority of Typists chose to distribute rewards equitably and judged this as fairer and more moral than the Checkers, who judged equality to be the fairer option. These results demonstrated that participants judged the rule that served their interests the best to be the fairer and more moral. A follow up experiment

then went further and asked participants fairness and moral judgements on equity and equality prior to their random allocation as well as after their task completion. Participant's judgments changed dramatically to serve their self-interest after their roles had been revealed.

Despite the wealth of studies investigating self-serving moral judgements none to our knowledge have experimentally examined the particular act of self-servingly inflating the moral value of one's own traits or qualities. Correlational methods cannot answer whether people develop traits according to their moral value, or whether they change their moral values to suit the traits they have already developed. While it is possible that people change or promote moral values to suit their interests it is also likely that people cultivate traits and qualities in pursuit of those values. For example, one might pursue education because of their belief in its moral value. Experimental manipulation is needed to determine the direction of causality and show whether there is a self-serving bias behind the moral values people hold.

If morality is objective, the moral value of particular character traits or qualities should be determined by their inherent utility, whether an individual already possesses this trait or not should not be a factor. It should be the case that people strive to develop traits that are morally valuable, rather than shift values to suit what traits they already possess. If morality is subjective, it would show that moral values are in part distorted by self-interest. The implications of this would help explain why differences in moral values occur, that self-interest may make some values more attractive than others.

Present Research

We sought to answer the question of whether people self-servingly inflate the moral value of traits or qualities they possess. This required us to find a way to experimentally manipulate the traits or qualities participants possessed. Without growing humans in a test tube, it is methodologically difficult to bestow a variety of different traits onto participants

via random assignment in a believable manner. Random assignment was essential to show that people would inflate the moral value of traits they think they have, regardless of what inherent value the trait actually possessed. Our solution to this was to exploit the tendency for people to believe vague statements about their personality (Forer, 1949; Furnham & Schofield, 1987), and devise a convincing but fake personality test where we could manipulate the results and test whether participants' beliefs about their own traits self-servingly inflated their moral valuations of those traits.

In the first experiment, we hypothesized that people would exaggerate the moral value of randomly assigned personality traits they believed they possessed compared to personality traits they did not believe they possessed. In a second experiment, we examined whether this self-serving effect would extend to a different trait: intelligence types. We hypothesized that people would exaggerate the moral value of the intelligence type they believed they possessed compared to the intelligence type they did not believe they possessed. In a third experiment, we replicated the results of the first experiment and examined whether the self-serving effect would extend to judgements about other people who shared similar personality traits to the participants. We hypothesized that people would exaggerate the moral goodness of other people when they shared similar personality traits compared to other people who did not share similar personality traits. If moral values are not influenced by a self-serving bias, then the moral value of these traits should not differ depending on what traits were randomly assigned to participants. All three experiments were approved by the Human Research Ethics Committee at the University of Canterbury. Our methods and analyses were preregistered at aspredicted.org.

Experiment 1

Participants completed a 21-question fake personality test, whereafter they randomly received one of two sets of results informing them of their highest scoring personality trait

and their lowest scoring personality trait. After this, participants were asked to rate the moral value of several different personality traits including the ones they were randomly assigned. These ratings were then compared to see if participants self-servingly rated the personality trait they were assigned as high scoring compared to the trait they were assigned as low scoring. We hypothesized that people would exaggerate the moral value of personality traits they believed they scored high in compared to personality traits they believe they scored low in.

The traits participants received in the fake test results needed to be ones that people could reasonably believe they possess, otherwise there would be no self-serving motive to inflate their value. Similarly, they could not be traits people would immediately know they do not possess, such as extraversion. Most importantly, these traits could not be ones that were highly moralized which might overpower the self-serving effect or produce a ceiling effect.

To that end, a pre-test ($N = 72$) was conducted to find traits suitable for this purpose. Participants were given a list of 48 personality traits and asked to rate how accurately each trait described them as well as rate the moral value of the trait. The personality traits that were rated as high in accuracy but middling in moral value were then considered for the experiment. Highly accurate traits were selected to maximize chances of participants believing they possessed these traits, and middling moral value traits were selected to avoid ceiling and floor effects in moral value ratings. The personality traits of 'Strong-Willed' and 'Idealistic' were finally chosen for the experiment, with half of participants being told they were highly 'Strong-Willed' and low in 'Idealism' with the other half being told the opposite. These traits were also traits that could conceivably be positive or negative. When presented as low-scoring, it was hoped that participants would interpret these traits negatively, such as reading 'Strong-Willed' to be synonymous with 'stubborn' or 'inflexible', and reading 'Idealistic' to be synonymous with 'unrealistic' or 'impractical'. The purpose of putting these

traits in opposition to each other was to exploit the minimal groups paradigm (Diehl, 1990), by creating a clear division of an in-group (people with similar personalities) and an out-group (people with dissimilar personalities). This would serve to motivate participants to self-servingly inflate the value of their trait over the other. This experiment was preregistered at aspredicted.org. (https://aspredicted.org/C2P_MFF)

Method

Participants

We recruited 354 US-based participants through the online research crowdsourcing platform: Prolific (Palan & Schitter, 2018). Nine participants requested their data to be deleted at the end of the experiment and so were deleted from the data set before analysis. Previous research using online crowd-sourcing platforms has suggested using questions designed to check participant attention as a way of ensuring quality of data (Goodman et al., 2013). Seven participants failed this attention check and were excluded from analysis.

After exclusions 337 participants remained (127 males, 204 females, six non-binary). Mean age was 31.4 years ranging from 18 to 73. 69.4% of participants indicated they were White, 8.6% indicated they were Black or African American, 1.5% indicated they were American Indian or Alaskan Native, 14.9% indicated they were Asian and 6.5% indicated they were some other ethnicity.

As preregistered, the main analysis was conducted on participants who believed the fake personality results were accurate, determined by those with accuracy question scores of at least 5 out of 7 ($N = 257$ out of 337; 76.26%). However, additional analyses were conducted to test whether the main results were robust to the entire sample regardless of whether they believed their test results.

Materials

The experiment was designed and completed by participants within Qualtrics online survey software. The fake personality test was created using 21 questions from the Know Your Own Mind Personality Questionnaire (Shepherd, 2003). Personality result stimuli showing their ‘highest scoring personality trait’ and their ‘lowest scoring personality trait’. Moral value questions assessing the moral value of various personality traits. All experimental materials and survey questions can be found in the supplementary materials.

Procedure

After selecting our survey through Prolific, participants were presented with a consent form explaining what participants would be required to perform but did not expose the true nature of the study. The study was expressed as an investigation between personality and moral values and did not disclose that the personality test was fake or that the results of the test were manipulated. Participants would then have to indicate that they had given their consent via a yes or no option to continue the study.

Participants then completed the fake personality test comprised of 21 yes or no questions presented in a randomized order. Once participants completed the personality test, they were presented with a message telling them that their personality results were being scored and the button to continue the survey would appear once scoring was complete, the button was set to appear on screen after four seconds. This pause was intended to enhance believability by simulating the transfer and scoring of the participant’s data.

After clicking the button, participants were evenly divided into two groups with counterbalanced personality results. Participants were shown a text box that indicated their ‘highest scoring personality trait’ and their ‘lowest scoring personality trait’. One group was

shown that they scored highest in ‘Strong-Willed’ and lowest in ‘Idealistic’; the other group was shown the opposite: scoring high in ‘Idealistic’ and lowest in ‘Strong-Willed’.

Under this text was an open text question asked participants to describe a time they showed their high scoring personality traits. This question served as an attention check, with participants failing to answer the question or writing about something irrelevant being excluded from data analysis. This question may have also assisted in believability of results, by exploiting a confirmation bias in having participants selectively think of a time they showed a certain trait.

Participants were then presented with three sets of questions in random order, followed by a list of personality traits (including the two key traits, “Strong-Willed” and “Idealistic”) attached to a Likert scale ranging from Strongly Disagree (1) to Strongly Agree (7). The first set of questions was titled ‘To be a good person, you should be...’, the second set ‘It is morally important to be...’, and the third set ‘It is morally valuable to be...’. Participants then indicated how much they agreed with each statement using a slider. These three sets of questions were then aggregated to form two composite measures of moral value of the two key personality traits. The composite measure of the moral value of ‘Strong Willed’ ($\alpha = 0.81$) and the composite measure of the moral value of ‘Idealism’ ($\alpha = 0.76$) were both internally consistent.

Participants were then asked if they agreed that their personality test results described them accurately and whether it was easy to remember a time when they showed their highly scoring personality traits, these were scored on a 7-point-Likert scale ranging from Strongly Disagree (1) to Strongly Agree (7). Participants were then also asked if they answered all questions truthfully, participants indicating ‘no’ were excluded from analysis. Participants then completed demographics questions.

Finally, participants were then given a debrief, which explained the true purpose of the study and made clear that the personality test and the results given were manipulated. Participants were then given the option to withdraw their data from the study at this point without penalty ($N = 8$).

Results

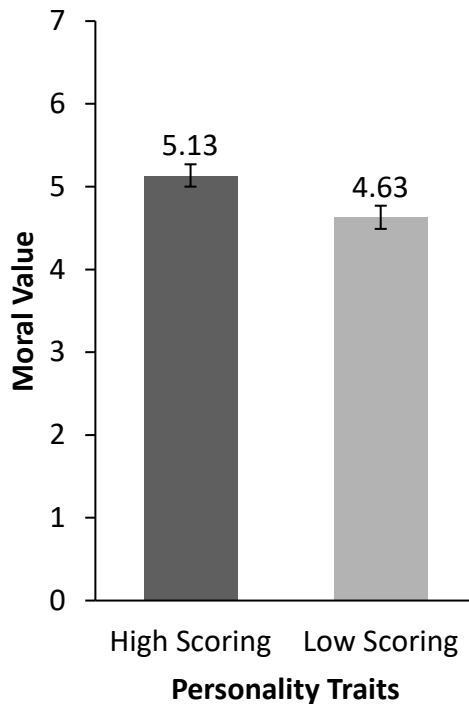
Main Analysis

In order to increase statistical power, moral value scores for ‘Strong-Willed’ and ‘Idealistic’ when they appeared as the participants highest scoring trait were aggregated to form a ‘high scoring trait’ variable. When the key traits appeared as the participants lowest scoring trait they were aggregated to form a ‘low scoring trait’ variable.

The paired samples t -test (Figure 1) showed that participants indicated their high scoring personality traits as more morally valuable ($M = 5.13$, $SD = 1.09$) than their low scoring personality trait ($M = 4.63$, $SD = 1.14$), $t(256) = 6.99$, $p < .001$, $d = 0.44$.

Figure 1

Experiment 1: Mean Moral Value Ratings of High and Low Scoring Personality Traits



Note. Error bars show Mean 95% confidence intervals.

Exploratory Analyses

Individual Trait Analyses. Scores for ‘Strong-Willed’ and ‘Idealistic’ were also examined individually using independent samples *t*-tests (Table 1). Participants who were told they scored high in ‘Strong-Willed’ ($N = 130$) rated the moral value of ‘Strong-Willed’ higher ($M = 5.00$, $SD = 1.18$) than participants told they scored low in ‘Strong-Willed’ ($N = 127$, $M = 4.66$, $SD = 1.20$), $t(255) = 2.26$, $p = .025$, $d = 0.28$.

Participants who were told they scored high in ‘Idealistic’ ($N = 127$) scored the moral value of ‘Idealistic’ significantly higher ($M = 5.28$, $SD = 0.96$) than participants told they scored low in ‘Idealistic’ ($N = 130$, $M = 4.60$, $SD = 1.07$), $t(255) = 5.31$, $p < .001$, $d = 0.66$.

Table 1*Experiment 1: Moral Value by Individual Personality Traits*

Trait	High Scoring	Low Scoring	$t(255)$	p	d
	$M (SD)$	$M (SD)$			
Strong-Willed	5.00 (1.18)	4.66 (1.20)	2.26	.025	0.28
Idealistic	5.28 (0.96)	4.60 (1.07)	5.31	<.001	0.66

Believability. When participants believed their personality results, no significant differences were observed in believability scores across groups (Strong Willed: $N = 130$, $M = 5.68$, $SD = 0.70$; Idealistic: $N = 127$, $M = 5.68$, $SD = 0.74$), $t(255) = 0.00$, $p = 1.00$. Still no significant differences were observed in believability scores when including all participants regardless of belief in their test results (Strong Willed: $N = 169$, $M = 5.11$, $SD = 1.29$; Idealistic: $N = 168$, $M = 5.02$, $SD = 1.42$), $t(355) = 0.56$, $p = 0.58$. This indicates that participants equally believed both sets of fake personality test results and gives us confidence that the observed effect was not influenced by one group having different believability than the other.

Whole Sample Analysis. When participants who did not believe their personality test results are included in the paired samples t -test the effect is diminished ($N = 337$; High traits: $M = 4.99$, $SD = 1.10$; Low traits: $M = 4.64$, $SD = 1.13$), $t(336) = 5.43$, $p < .001$, $d = 0.30$. The effect remains significant even when including these participants, this gives us confidence that random assignment of participants was not undermined by only analyzing participants who believed their result.

Discussion

Our hypothesis was that people exaggerate the moral value of personality traits they believe they have. The results of the main analysis support this. Participants rated the personality traits they were told they scored high in as more morally valuable than the traits they were told they scored low in, to a moderate effect. These results demonstrate that participants exhibited a self-serving bias to rate personality traits they believed they possessed as more morally valuable than those they did not possess, despite these traits being randomly assigned.

Exploratory analyses were conducted on the whole sample without exclusions for low believability scores (< 5). Our hypothesis predicted the manipulation to work in participants who believed their results, but this invites the risk of undermining random assignment. After excluding participants who did not believe their personality results it is possible we are left with participants who actually match their personality results. This would leave us unable to determine the direction of causality of whether people work to develop traits they value or self-servingly value traits they believe they already have. The whole sample analysis continued to show a significant result with high scoring traits being valued more than low scoring traits albeit with a smaller effect size, reducing concern that random assignment had been undermined.

Experiment 2

The results of the Experiment 1 offered support for the self-serving bias in moral values effect. We then sought to test if the self-serving effect generalized beyond personality traits and designed a similar experiment that manipulated a different domain: intelligence types. Participants completed a 6-question fake intelligence test and were randomly assigned to receive results that either indicated they were highly emotionally intelligent or highly analytically intelligent. Participants then rated the moral importance of emotional and

analytical intelligence. We hypothesized that participants would rate the intelligence type they believed they had as more morally valuable than the intelligence type they were not assigned. This study was preregistered at aspredicted.org. (https://aspredicted.org/M14_SF9)

Method

Participants

We recruited 201 US-based participants through the online research crowdsourcing platform: Prolific. Given the shorter length of the experiment we recruited less participants in anticipation there would not be many exclusions. Three participants requested their data to be deleted. A further three participants were excluded after inputting copy-pasted text into the open-answer window.

After exclusions 195 participants remained (88 males, 105 females, two non-binary). Mean age was 30.8 ranging from 18 to 72. 58.5% of participants indicated they were White, 8.7% Black or African American, 0.5% American Indian or Alaskan Native, 21.5% Asian and 10.8% indicated they were some other ethnicity.

As preregistered, the main analysis was conducted using participants who believed the intelligence type test result described them accurately, i.e., those indicating accuracy scores of at least 5 out of 7 ($N = 166$ out of 201; 82.59%). However, additional analyses were conducted to test whether the main results were robust to the entire sample regardless of whether they believed their test results.

Materials

The experiment was designed and completed by participants within Qualtrics online survey software. Six images were sourced from copyright and royalty free image repository: pixabay.com to form the intelligence test. Intelligence Test Result Stimuli showing participant's 'intelligence type' followed by a Barnum-inspired personality description

(Forer, 1949). Moral value questions assessing various traits including emotional and analytical intelligence. All experimental materials and survey questions can be found in the supplementary materials.

Procedure

After selecting our survey through Prolific, participants were presented with a consent form before continuing. Participants were then given a false brief that described the survey as a short-form test that would measure the individual's emotional and analytical intelligence using interpretive imagery. The brief stated that the researchers were interested in the correlation between intelligence types and values.

Participants were then shown six images in a random order and were told to choose one of four words that first resonated with them. After completing all six questions participants were shown a message indicating that their results would appear on the following page.

Following this, participants were randomly assigned to receive a result that indicated they were either highly emotionally intelligent or highly analytically intelligent, sorting participants into either the high emotional condition or the high analytical condition. This result was accompanied by a vague personality interpretation often used in research seeking to exploit the Barnum effect, the tendency for people to believe vague personality statements as meaningful and accurate (Forer, 1949). Participants were then instructed to write a brief open-answer response on how their emotional or analytical intelligence has helped them in their lives, this response was used as an attention check to remove inattentive participants who did not answer the question or wrote irrelevant text.

Participants were then presented with three sets of questions in random order, followed by a list of personality traits which included the two key dependant traits of

emotional intelligence and analytical intelligence. These were attached to a Likert scale ranging from Strongly Disagree (1) to Strongly Agree (7). The first set of questions was titled ‘To be a good person, you should be...’, the second ‘It is morally important to be...’, And thirdly ‘It is morally valuable to be...’. Participants would then indicate how much they agreed with each statement. These three sets of questions were then aggregated to form two composite measures of moral value for the two key intelligence types, emotional intelligence moral value ($\alpha = 0.65$) and analytical intelligence moral value ($\alpha = 0.71$).

Then, participants were asked if they believed their intelligence result described them accurately on a 7-point Likert scale. They were then asked if they answered all questions truthfully, participants indicating ‘no’ would have been excluded from analysis. Participants then completed a series of demographics questions.

At the end of this, participants were given a debrief explaining the true purpose of the study, clarifying that the test and results were false and manipulated. Participants then had the option to withdraw their data from the study without penalty ($N = 3$).

Results

Main Analysis

In order to increase statistical power, moral value scores for ‘Emotional intelligence’ and ‘Analytical intelligence’ when they appeared as the participants highest scoring trait were aggregated to form a ‘high scoring trait’ variable. When the key traits did not appear, they were aggregated to form a ‘low scoring trait’ variable.

The paired samples *t*-test showed no significant difference in moral value scores between their high scoring intelligence type ($M = 5.17$, $SD = 0.99$) and their low scoring intelligence type ($M = 5.13$, $SD = 1.06$), $t(165) = 0.35$, $p = 0.73$, $d = 0.03$.

Exploratory Analyses

Individual Trait Analyses. Scores for ‘Emotional intelligence’ and ‘Analytical intelligence’ were also examined individually using independent samples *t*-tests. Participants who were told they were highly emotionally intelligent ($N = 78$) scored the moral value of emotional intelligence ($M = 5.34$, $SD = 0.96$) non-significantly lower than participants in the high analytical condition ($N = 88$, $M = 5.45$, $SD = 0.94$), $t(164) = -0.77$, $p = 0.45$, $d = -0.12$.

Participants who were told they were highly analytically intelligent ($N = 88$) scored the moral value of analytical intelligence ($M = 5.01$, $SD = 0.99$) non-significantly higher than participants in the high emotional condition ($N = 78$, $M = 4.77$, $SD = 1.08$), $t(164) = 1.48$, $p = 0.14$, $d = 0.23$.

Believability. When participants believed their personality results, no significant differences were observed in believability scores across groups (High Emotional Intelligence: $N = 78$, $M = 5.74$, $SD = 0.70$; High Analytical Intelligence: $N = 88$, $M = 5.90$, $SD = 0.79$), $t(164) = -1.33$, $p = 0.19$, $d = -0.21$.

However, a significant difference was observed in believability scores across the whole sample, including participants even if they did not believe their test results. Participants who were told they were highly emotionally intelligent found their result less accurate ($N = 97$, $M = 5.21$, $SD = 1.34$) than participants who were told they were highly analytically intelligent ($N = 98$, $M = 5.63$, $SD = 1.13$), $t(193) = -2.41$, $p = 0.02$, $d = -0.35$.

Discussion

We hypothesized that participants would rate the intelligence type they scored high in as more morally valuable than the intelligence type they did not score high in. The results do not support the hypothesis. No significant differences were observed in the moral value between high scoring intelligence type and low scoring intelligence type. No significant

differences were observed when examining each trait individually either. It appears as though participants rated emotional intelligence as more morally valuable than analytical intelligence regardless of which test result they received.

There are several factors that may have contributed to these results. Participants unanimously rated emotional intelligence as more morally valuable than analytical intelligence. This may reflect the inherent moral value possessed by emotional intelligence which perhaps outweighed any bias inflicted by the manipulation. The lower sample size may have made any effect of the manipulation harder to detect, although it is not clear an effect may have been present even with a larger sample.

The internal consistency of the aggregated measure for the moral value of emotional intelligence was very low, and the consistency of the aggregate moral value of analytical intelligence being only slightly higher than the traditional cut-off point of 0.7. The questions posed may not have been sufficient to accurately measure the moral value of these intelligence types. Additional or reworded questions could improve reliability in future studies.

When examining the whole sample, a large portion of did not believe their result of being high in emotional intelligence participants ($N = 19$ out of 97; 19.59%). This may indicate that it is harder to manipulate individual's self-perceptions of intelligence than their personality traits in a believable way. While the first experiment successfully manipulated traits, it may have been because the personality traits used were of low importance, whereas intelligence types may be more heavily ingrained in individual's self-perception. If participants were unable to successfully internalize this intelligence type as their own then they would not have sufficient motive to show bias towards it (Diehl, 1990).

When participants received their results, they were only shown that they scored high in either intelligence type, the other type was not shown, nor were participants explicitly told they scored low in that type. This may have resulted in participants not recognizing their intelligence type as an in-group and the opposing type as an out-group, which fails to motivate participants to present a bias towards their own group (Turner, 1975).

Regardless of these shortcomings, it is apparent that the self-serving effect did not generalize from personality traits to different types of intelligence, there are several potential reasons for this. One possibility is that the self-serving effect differs between different domains, stronger in some and weaker or even non-existent in others. However, it does seem unlikely that intelligence is a domain that is uninfluenced by the self-serving bias. It stands to reason that the more important a trait is to the individual a greater self-serving bias should occur in support for that trait. But the more important a trait is to the individual the harder it may be to truly manipulate the participant's belief about whether they possess them or not. The likely reason the manipulation failed to produce a self-serving effect was due to the inherent methodological difficulty in manipulating participant beliefs about their own intelligence as well as inadequacies in the stimuli to support this manipulation as outlined above. Future research should investigate the generalizability of the self-serving moral bias to other individual differences.

Experiment 3

The field of Psychology is currently suffering from a replication crisis (Allison et al., 2016; Pashler & Wagenmakers, 2012; Simmons et al., 2011), where popular and influential psychology research is failing to replicate (Camerer et al., 2018). Given the null results of Experiment 2, we had the choice of testing whether the self-serving effect could generalize to another domain, or ensuring the effect observed in Experiment 1 was reproduceable. We thought it prudent to replicate the effects of Experiment 1 in a new sample and reduce our

chances of adding another false-positive to the field. All measures and manipulations are the same as those outlined in Experiment 1, with some additional extensions added.

We took this opportunity to examine whether this self-serving effect also extended to judgements about other people. Moral judgements are primary in the judgement of character (Goodwin et al., 2014), and so we sought to examine whether people would judge others who shared the same personality traits as themselves more favourably than those who do not share similar personality traits. If people exhibit a self-serving bias towards the moral value of personality traits they possess this should extend to others in possession of the same traits. By raising the perception of moral goodness of other people with similar traits to themselves, they stand to benefit by virtue of possessing those same traits.

Participants would read a description of some other person featuring various details about them, but importantly showed they possessed a key personality trait that was manipulated to be the same as the participant's high scoring personality trait. Based on previous research on social perception (Fiske et al., 2007), participants were then asked to judge how competent, warm, and morally good this other person was. Afterwards they would similarly read a description of another person, but they possessed a key personality trait that was the same as the participant's low scoring personality trait. They were again asked to judge how competent, warm, and morally good this other person was. Thus, we hypothesized that people would exaggerate the moral goodness of these other people when they shared similar personality traits compared to the other people who did not share similar personality traits. This study was preregistered at aspredicted.org. (https://aspredicted.org/D4T_2LM)

Method

Participants

We recruited 350 US-based participants through the online research crowdsourcing platform: Prolific. Two participants requested their data to be deleted at the end of the experiment and so were deleted from the data set before analysis. 16 participants failed the attention check and were excluded from analysis.

After exclusions 332 participants remained (124 males, 197 females, 11 non-binary). Mean age was 31.1 years ranging from 18 to 67. 61.4% of participants indicated they were White, 14.2% indicated they were Black or African American, 0.6% indicated they were American Indian or Alaskan Native, 14.8% indicated they were Asian, 0.3% indicated they were Native Hawaiian or Pacific Islander and 8.7% indicated they were some other ethnicity.

As preregistered, the main analysis was conducted on participants who believed the fake personality results were accurate, determined by those with accuracy question scores of at least 5 out of 7 ($N = 251$ out of 332; 75.5%).

Materials

The experiment was designed and completed by participants within Qualtrics online survey software. The first half of the experiment features the same personality test, results, and moral value questions as Experiment 1. Descriptions of the other people indicated whether their personality results were similar or dissimilar, as well as various facts such as eye and hair colour. Other person judgements asked participants to rate these other people on traits related to competence, warmth, and morality. All experimental materials and survey questions can be found in the supplementary materials.

Procedure

Participants completed the same fake personality test, results and attention check as outlined in Experiment 1. They were then presented with the same moral value questions as in Experiment 1. These were three sets of questions in random order, followed by a list of personality traits (including the two key traits, “Strong-Willed” and “Idealistic”) attached to a Likert scale ranging from Strongly Disagree (1) to Strongly Agree (7). The first set of questions was titled ‘To be a good person, you should be...’, the second set ‘It is morally important to be...’, and the third set ‘It is morally valuable to be...’. Participants then indicated how much they agreed with each statement using a slider. These three sets of questions were then aggregated to form two composite measures of moral value of the two key personality traits. The composite measure of the moral value of ‘Strong Willed’ ($\alpha = 0.81$) and the composite measure of the moral value of ‘Idealism’ ($\alpha = 0.81$) were both internally consistent.

After judging the moral value of the personality traits, participants were shown descriptions of fictional characters Sam and Tony under the guise that they were previous participants who had completed this personality test. These descriptions contained trivial information such as eye and hair colour in bullet-point format. Most importantly, these descriptions indicated a personality test result that matched either the participant’s highest or lowest scoring personality trait. Prevalence of whether Sam or Tony possessed the high trait (or low trait) was counterbalanced across participants evenly.

Participants then were asked “How... do you think Sam(Tony) is?” and rated the character on nine different traits on an 8-point-likert scale ranging from Very Little (1) to Very Much (8). An 8-point scale was used instead of 7-point to prevent participants from defaulting to a neutral option (4). These traits were competent, intelligent, confident, sincere, good-natured, warm, trustworthy, morally good, fair. Aggregate variables were also created

for these other-person judgements when the other-person was in the similar condition and dissimilar condition. The aggregate for competence was created by combining ratings of ‘competent’, ‘intelligent’ and ‘confident’ (Similar $\alpha = 0.76$, dissimilar $\alpha = 0.78$). The aggregate for warmth was created by combining ratings of ‘sincere’, ‘good natured’ and ‘warm’ (Similar $\alpha = 0.80$, dissimilar $\alpha = 0.85$). The aggregate for morality was created by combining ratings of ‘trustworthy’, ‘morally good’ and ‘fair’ (Similar $\alpha = 0.85$, dissimilar $\alpha = 0.88$). All aggregate variables were deemed sufficiently internally consistent. Participants then completed the same questions on believability and demographics as outlined in Experiment 1.

At the end of this, participants were given a debrief explaining the true purpose of the study, clarifying that the test and results were false and manipulated and that the characters Sam and Tony were purely fictitious. Participants then had the option to withdraw their data from the study without penalty ($N = 2$).

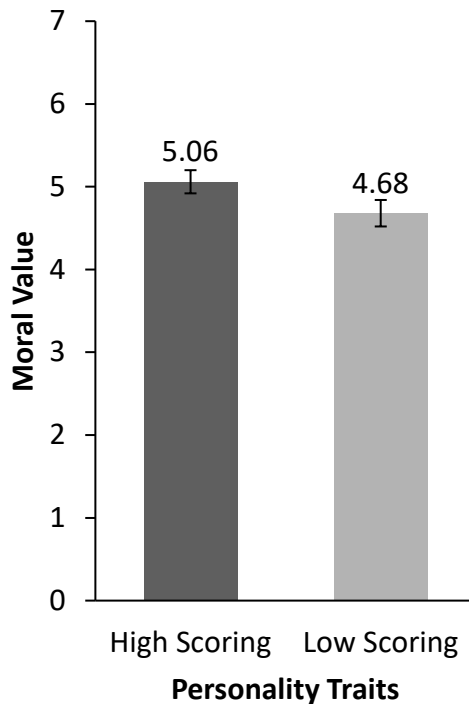
Results

Main Analyses

Personality Trait Analysis. The paired samples t -test (Figure 2) showed that participants indicated their high scoring personality traits as more morally valuable ($M = 5.06$, $SD = 1.13$) than their low scoring personality trait ($M = 4.68$, $SD = 1.27$), $t(250) = 4.85$, $p < .001$, $d = 0.31$.

Figure 2

Experiment 3: Mean Moral Value Ratings of High and Low Scoring Personality Traits



Note. Error bars show Mean 95% confidence intervals.

Other-Person Judgement Analysis. Paired samples *t*-tests (Table 2) showed that participants rated other-persons as more competent when similar ($M = 5.73$, $SD = 1.09$) to themselves versus dissimilar ($M = 5.56$, $SD = 1.19$), $t(250) = 2.16$, $p = 0.03$, $d = 0.14$.

Participants also rated other-persons as more warm when similar ($M = 5.56$, $SD = 1.14$) to themselves versus dissimilar ($M = 5.11$, $SD = 1.23$), $t(250) = 5.29$, $p < .001$, $d = 0.33$.

Participants continued to rate other-persons as more moral when similar ($M = 5.49$, $SD = 1.15$) to themselves versus dissimilar ($M = 5.10$, $SD = 1.21$), $t(250) = 4.94$, $p < .001$, $d = 0.31$.

Table 2*Summary of Other-Person Judgements.*

Trait	Similar	Dissimilar	$t(250)$	p	d
	$M (SD)$	$M (SD)$			
Competence	5.73 (1.13)	5.56 (1.19)	2.16	0.03	0.14
Warmth	5.56 (1.14)	5.11 (1.23)	5.29	<.001	0.33
Morality	5.49 (1.15)	5.10 (1.21)	4.94	<.001	0.31

Additional Analyses

Individual Trait Analyses. Scores for ‘Strong-Willed’ and ‘Idealistic’ were also examined individually using independent samples t -tests (Table 3). Participants who were told they scored high in ‘Strong-Willed’ ($N = 124$) almost significantly rated the moral value of ‘Strong-Willed’ higher ($M = 5.09$, $SD = 1.19$) than participants told they scored low in ‘Strong-Willed’ ($N = 127$, $M = 4.82$, $SD = 1.22$), $t(249) = 1.77$, $p = .077$, $d = 0.22$.

Participants who were told they scored high in ‘Idealistic’ ($N = 127$) scored the moral value of ‘Idealistic’ significantly higher ($M = 5.04$, $SD = 1.08$) than participants told they scored low in ‘Idealistic’ ($N = 124$, $M = 4.53$, $SD = 1.30$), $t(249) = 3.32$, $p = .001$, $d = 0.42$.

Table 3*Experiment 3: Moral Value by Individual Personality Traits.*

Trait	High Scoring	Low Scoring	$t(249)$	p	d
	$M (SD)$	$M (SD)$			
Strong-Willed	5.09 (1.19)	4.82 (1.22)	1.77	.077	0.22
Idealistic	5.04 (1.08)	4.53 (1.30)	3.32	.001	0.42

Believability. When participants believed their personality results, no significant differences were observed in believability scores across groups (Strong Willed: $N = 124$, $M = 5.73$, $SD = 0.70$; Idealistic: $N = 127$, $M = 5.63$, $SD = 0.70$), $t(249)$, $p = 0.24$. Still no

significant differences were observed in believability scores when including all participants regardless of belief in their test results (Strong Willed: $N = 164$, $M = 5.07$, $SD = 1.39$; Idealistic: $N = 168$, $M = 5.01$, $SD = 1.32$), $t(330) = 0.37$, $p = 0.71$. This again provides confidence that the observed effect was not influenced by differences in test result believability.

Whole Sample Analysis. When participants who did not believe their personality test results are included in the paired samples t -test, the effect is diminished but remained significant (High traits: $M = 4.95$, $SD = 1.15$; Low traits: $M = 4.67$, $SD = 1.23$), $t(331) = 4.16$, $p < .001$, $d = 0.23$.

Other person judgements also exhibited a slight reduction in effect but remained significant when examining the whole sample. (Similar Competent: $M = 5.71$, $SD = 1.06$; Dissimilar Competent: $M = 5.55$, $SD = 1.17$), $t(331) = 2.42$, $p = 0.02$, $d = 0.13$. (Similar Warmth: $M = 5.50$, $SD = 1.12$; Dissimilar Warmth: $M = 5.14$, $SD = 1.22$), $t(331) = 5.13$, $p < .001$, $d = 0.28$. Similar Moral: $M = 5.45$, $SD = 1.12$; Dissimilar Moral: $M = 5.15$, $SD = 1.18$), $t(331) = 4.56$, $p < .001$, $d = 0.25$.

Other-Person Judgements by Group. As seen in Table 4, participants scoring high in ‘Strong-Willed’ rated similar ‘Strong-Willed’ other-persons as more competent ($M = 5.93$, $SD = 1.08$) than participants rating similar ‘Idealistic’ other-persons ($M = 5.54$, $SD = 1.07$), $t(249) = 2.89$, $p = .004$, $d = 0.37$. This effect was also present when rating dissimilar other-persons, with ‘Idealistic’ participants rating dissimilar ‘Strong-Willed’ other-persons higher in competence ($M = 5.84$, $SD = 1.14$) compared to ‘Strong-Willed’ participants rating dissimilar ‘Idealistic’ other-persons ($M = 5.28$, $SD = 1.18$), $t(249) = 3.84$, $p < .001$, $d = 0.49$.

Participants scoring high in ‘Idealism’ almost significantly rated similar ‘Idealistic’ other-persons as more warm ($M = 5.68$, $SD = 1.05$) than participants rating similar ‘Strong-

Willed' other-persons ($M = 5.42$, $SD = 1.22$), $t(249) = 1.80$, $p = 0.07$, $d = 0.23$. This effect was significant for 'Strong-Willed' participants who rated dissimilar 'Idealistic' other-persons as warm ($M = 5.36$, $SD = 1.22$) compared to 'Idealistic' participants rating dissimilar 'Strong-Willed' other-persons ($M = 4.87$, $SD = 1.19$), $t(249) = 3.24$, $p = .001$, $d = 0.41$.

No significant differences were observed between-groups when rating similar other-persons on morality (Strong-willed $M = 5.46$, $SD = 1.22$, Idealistic $M = 5.52$, $SD = 1.08$), $t(249) = -0.41$, $p = 0.68$, $d = -0.05$. However, participants scoring high in 'Strong-Willed' rated dissimilar 'Idealistic' other-persons as highly moral ($M = 5.31$, $SD = 1.20$) compared to participants rating dissimilar 'Strong-Willed' other-persons ($M = 4.90$, $SD = 1.20$), $t(249) = 2.73$, $p = .007$, $d = 0.34$.

Table 4

Other-Person Judgements by Personality Trait Groups.

Trait	Other-Person	High SW	High Ideal	$t(249)$	p	d
		$M (SD)$	$M (SD)$			
Competence	Same Trait	5.93 (1.08)	5.54 (1.07)	2.89	.004	0.37
	Opposite Trait	5.28 (1.18)	5.84 (1.14)	-3.84	<.001	-0.49
Warmth	Same Trait	5.42 (1.18)	5.68 (1.05)	-1.80	0.07	-0.23
	Opposite Trait	5.36 (1.22)	4.87 (1.19)	3.24	.001	0.41
Morality	Same Trait	5.46 (1.22)	5.52 (1.08)	-0.41	0.68	-0.05
	Opposite Trait	5.31 (1.20)	4.90 (1.20)	2.73	.007	0.34

Note. High SW: Participants scoring high in Strong-Willed and low in Idealism. High Ideal: Participants scoring high in Idealism and low in Strong-Willed.

Exploratory Mega-Analyses

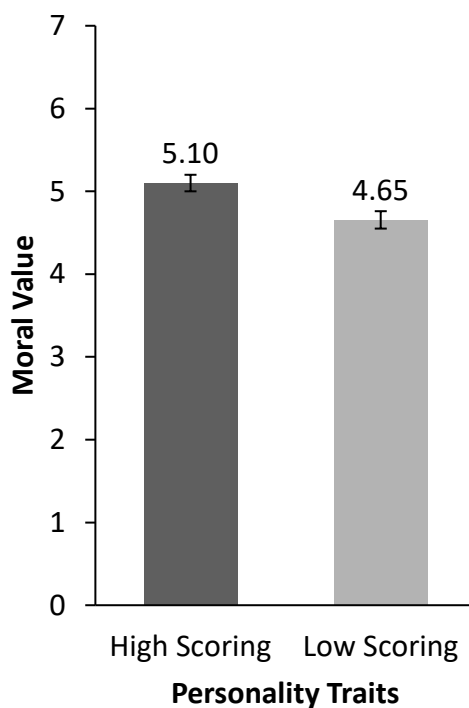
Since the experimental manipulation and subsequent moral value measures were identical between Experiment 1 and Experiment 3, responses were pooled together to conduct a mega-analysis. Mega-analysis involves pooling together raw data from similar or identical

measurements to form a larger singular sample, offering higher-powered analysis that are more reliable to estimate the true effect (Eisenhauer, 2021). These analyses were again conducted on participants who believed the fake personality results were accurate, determined by those with accuracy question scores of at least 5 out of 7 ($N = 508$ out of 669; 75.9%).

Main Analysis. The paired samples t -test (Figure 3) showed that participants indicated their high scoring personality traits as more morally valuable ($M = 5.10$, $SD = 1.11$) than their low scoring personality trait ($M = 4.65$, $SD = 1.20$), $t(507) = 8.31$, $p < .001$, $d = 0.37$.

Figure 3

Mega-Analysis: Mean Moral Value Ratings of High and Low Scoring Personality Traits



Note. Error bars show Mean 95% confidence intervals.

Individual Trait Analyses. Scores for ‘Strong-Willed’ and ‘Idealistic’ were also examined individually using independent samples t -tests (Table 5). Participants who were told they scored high in ‘Strong-Willed’ ($N = 254$) rated the moral value of ‘Strong-Willed’

higher ($M = 5.04$, $SD = 1.19$) than participants told they scored low in ‘Strong-Willed’ ($N = 254$, $M = 4.74$, $SD = 1.21$), $t(506) = 2.84$, $p = .005$, $d = 0.25$.

Participants who were told they scored high in ‘Idealistic’ ($N = 254$) scored the moral value of ‘Idealistic’ significantly higher ($M = 5.16$, $SD = 1.03$) than participants told they scored low in ‘Idealistic’ ($N = 254$, $M = 4.57$, $SD = 1.19$), $t(506) = 5.96$, $p < .001$, $d = 0.53$.

Table 5

Mega Analyses: Moral Value by Individual Personality Traits.

Trait	High Scoring	Low Scoring	$t(506)$	p	d
	$M (SD)$	$M (SD)$			
Strong-Willed	5.04 (1.19)	4.74 (1.21)	2.84	.005	0.25
Idealistic	5.16 (1.03)	4.57 (1.19)	5.96	<.001	0.53

Believability. When participants believed their personality results, no significant differences were observed in believability scores across groups (Strong Willed: $N = 254$, $M = 5.70$, $SD = 0.70$; Idealistic: $N = 254$, $M = 5.65$, $SD = 0.72$), $t(506)$, $p = 0.42$. Still no significant differences were observed in believability scores when including all participants regardless of belief in their test results (Strong Willed: $N = 333$, $M = 5.09$, $SD = 1.34$; Idealistic: $N = 336$, $M = 5.02$, $SD = 1.37$), $t(667) = 0.66$, $p = 0.51$.

Discussion

Our experiment tested two hypotheses. First, that people would exaggerate the moral value of personality traits they believe they have, rating traits they were told they scored high in as more morally valuable than traits they were told they scored low in. Secondly, we expected participants to rate other-persons, who share similar personality test results to themselves, as more competent, warm, and moral than other-persons who had dissimilar personality test results to themselves. The results of the main analyses support both

hypotheses. As with Experiment 1, participants rated the personality traits they were told they scored high in as more morally valuable than the traits they were told they scored low in to a small-to-moderate effect. When judging other-persons, participants significantly rated similar other-persons as being higher in competence to a small effect, warmth, and morality to a small-to-moderate effect than dissimilar other-persons.

When including participants who did not believe their personality test results, the main analyses remained significant, albeit with reduced effect size. These results demonstrate that participants exhibited a self-serving bias to rate personality traits they believed they possessed as more morally valuable than those they did not possess, and by extension rating other-persons who shared those traits as being more competent, warm, and moral than other-persons who did not share those traits.

We performed a mega-analysis combining the personality trait moral value judgements from Experiment 1 and Experiment 3, allowing us to better estimate the true effect. The results continued to support the hypothesis. Participants rated personality traits they believed they scored high in as more morally valuable than personality traits they believe they scored low in, to a small-to-moderate effect. Individual trait analysis continued to show significant differences in line with Experiment 1. A moderate effect was observed between the high and low ratings of the trait 'Idealistic', while a small but significant effect was observed between the high and low ratings of the trait 'Strong-Willed'. This continues to suggest an inherent value in 'Strong-Willed' that reduces the manipulation's effects, while it is very easy for participants to imagine 'Idealistic' as both a positive and a negative trait. Across both studies, no differences were observed in the believability of the fake personality test results between both groups, even when including participants who did not believe their results.

General Discussion

Across two experiments we found that people readily inflated the moral value of typically non-moral traits when they believed they possessed them, despite those traits being randomly assigned. This provides evidence that moral judgements are in part influenced by self-interest: that in addition to striving to develop morally valuable traits and qualities, people also convince themselves and others that the traits they already possess are morally valuable. In other words, people self-servingly make moral judgments that value the traits and qualities they already possess.

In Experiments 1 and 3, we created a fake personality test with manipulated results, randomly assigning participants to be told they were either high in ‘Strong-Will’ and low in ‘Idealism’ or they were told the opposite, that they were high in ‘Idealism’ and low in ‘Strong-Will’. These were traits that are typically not moralized very highly, yet when participants believed they scored high in these traits they indicated they were more morally valuable than when they believed they scored low in them. This clearly demonstrated a self-serving bias in what participants judged to be morally valuable. These experiments dovetail with experiments by DeScioli et al. (2014), who found that people were readily willing to change whether they thought equity or equality was fair and moral based on whether they stood to gain under that rule. The authors suggested that this strategic shifting in what one considers moral would extend into other domains beyond equity and equality. Our results show that personality traits are one such domain where moral values can change based on what is beneficial to the individual.

In Experiment 3 we were able to replicate this effect, and further found that this self-serving bias towards traits extended to perceptions of other people. When participants read about other people who shared the same personality traits as themselves, they judged them to be more competent, warm, and moral than other people who did not share those traits. These

results suggest that these moral judgments are deeper than superficial. People internalized their judgments of these traits as morally valuable and extended their trait valuations to apply to other people. In other words, what was initially self-serving later influenced judgments of other people with similar traits.

In Experiment 2 we sought to examine if this self-serving effect could generalize beyond personality traits. Our results were unable to show a generalization to different intelligence types. This may be because intelligence is too self-important of a trait to manipulate people's beliefs about. Intelligence is generally highly valued (Schwartz, 1992), and people often vastly overestimate their own intelligence (Kruger & Dunning, 1999), therefore people may have rejected the suggestion they were less intelligent in one domain, which undermined our manipulation. This is reflected in the whole-sample believability analysis, where participants were less likely to believe results indicating they were more emotionally intelligent at the cost of analytical intelligence compared to participants told the opposite. This highlights the importance of choosing traits that are only moderately valued in order to avoid an unbalanced manipulation.

Limitations

Participant samples in these experiments were all US-based and predominantly white. While these results cannot be generalized beyond western, educated, industrialized, rich and democratic societies (Henrich et al., 2010), it is also possible that the magnitude of the self-serving bias could differ within WEIRD populations. Given the deeply entrenched individualism in US society (Bazzi et al., 2020), and the increasing polarized political climate in the US (Iyengar et al., 2019), it is possible that the self-serving effect could be amplified in this population, while weaker or undetectable in different populations. Further research should examine how this effect differs across different countries and cultures.

The personality traits of ‘Strong-Willed’ and ‘Idealistic’ showed differing levels of manipulation across the experiments (Table 1, Table 3, Table 5). This reflects the differences in inherent moral value the traits possess as well as the differences in how readily able participants were in viewing these traits as positive or negative. In this case it seems as though participants had a harder time imagining ‘Strong-Willed’ as a negative trait, thus the smaller effect when compared to ‘Idealistic’ which observed a far greater difference in moral valuations. This highlights the methodological challenge of finding suitable stimuli to test this self-serving effect. Some traits will have a large amount of moral value that self-interest cannot overcome, while other traits will be easily recognized by participants as to whether they truly possess them or not. Further research should determine which traits are more easily manipulable.

Our experiments only succeeded in manipulating the moral value of personality traits. It is possible, albeit unlikely, that participants actually did possess the personality traits they were assigned, which would undermine random assignment. To address this concern, we tested whether the effect remained even when including participants who did not believe their test results. The self-serving effect remained significant. But to further account for this possibility, we sought to observe the self-serving bias in a different paradigm, using somewhat vague categories of analytical and emotional intelligence. However, we were unable to successfully observe a self-serving effect with regards to these intelligence types. It stands to reason that a self-serving bias in moral values should strongly apply to such important traits as intelligence, education, physical strength, and financial status, yet it is incredibly difficult to believably randomly assign these traits in an experimental setting. Imagine testing whether people self-servingly inflate their moral valuations of education by randomly assigning people to believe they are highly educated versus less educated—it would not work because people know their level of education. People seem to have a fairly

robust self-perception of important traits such as these, which makes it extremely difficult to convince them that they may or may not possess one of these things. Future research should seek novel ways to surpass this intensely challenging methodological difficulty.

Implications

Objective theories of morality suggest that universal moral values can be determined by rational principles (Kant & Schneewind, 2002), or whether they provide maximum utility (Mill, 2008), or whether they are ordained by God (Murphy, 2019). Universal moral principles should not be determined by whether the individual personally stands to benefit. Yet our experiments provide evidence that the self-serving bias influences people's moral judgements in this way.

The self-serving bias influences our self-perceptions of many different domains such as humour and intelligence (Kruger & Dunning, 1999), driving ability (Svenson, 1981), and our moral righteousness (Epley & Dunning, 2000). Our experiments show that this bias extends to the moral value of arbitrarily chosen personality traits – so long as the individual believes they possess them. Not only am I better than average, but the traits I have must be more morally valuable than the average person's traits too.

If this self-serving effect generalizes further than personality traits it could explain differences in moral values between different groups of people (Graham et al., 2009). Groups may place greater moral value in skills that develop within, and benefit said groups, such as urban groups valuing tolerance and diversity or rural groups valuing close relationships and grit. This generalization could even extend to seemingly non-moral things, such as tall people believing basketball is the morally superior sport compared to gymnastics whereas short people may think the opposite.

Conclusion

Although universal moral principles should not depend on individual's personal traits, we have found evidence of a self-serving bias in people's moral values, that when people believe they possess a particular personality trait they inflate the moral value of that trait, despite those traits actually being randomly assigned. This self-serving bias also extended to judgements about other people who shared similar traits to themselves. People believed that others who shared these same traits were more competent, warm, and moral than those who did not share these traits. Nietzsche once said: "... Nature is always value-less—but has been *given* value at some time ... and it was *we* who gave and bestowed it." (Anderson, 2017). The evidence shows that we do bestow value, albeit sometimes self-servingly.

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Supplementary Materials

Experiment 1 Materials

Fake Personality Test Questions

- When climbing stairs do you usually take them two at a time?
- Have you ever seriously felt that you might be happier living by yourself on a desert island?
- Do you think that young children should be taught to cross roads independently?
- Do you think people spend too much effort guarding their future, with savings and insurance, etc?
- Do you think the risk of lung cancer from smoking has been exaggerated?
- Would you be careful to declare everything at the customs if you had been traveling abroad?
- Would you feel terribly embarrassed if someone caught you naked by mistake?
- Do you buy presents for people even though there is no occasion that calls for it?
- Do you read a quality newspaper regularly and at length?
- Do you think it is futile to wonder about what there is in outer space?
- Do you set an alarm clock if you have to be up in the morning?
- Are you often acutely aware of the ticking of clocks?
- Do you indulge in superstitious rituals like avoiding the cracks in the pavement when you walk or lining up items to have perfect symmetry?
- Do little inaccuracies or wrong pronunciations by a TV presenter make you angry?
- Are you often tempted to correct people's grammar when talking to them?
- Does it concern you whether your clothes are fashionable or not?
- Do you keep a medical cabinet with a variety of leftovers from past prescriptions?
- Do you sometimes catch yourself apologizing when you have not actually done anything wrong?
- Do you often grind your teeth, consciously or unconsciously?
- If someone went to the front of a queue out of turn, would you do something about it?
- Do you always obey "keep off the grass" signs?
- Do you find it difficult to get rid of a salesman who is persistent and wasting your time?
- Do you let an escalator carry you along without walking yourself?
- Do you prefer paintings that are subtle and discreet rather than vivid and shocking?
- Does it annoy you when a supposed expert fails to come up with a definite solution to a problem?
- Do you find it difficult to resist picking up and cuddling small furry animals?
- Would you rather be an air pilot than a dress designer?
- Do you sometimes tell people what you think they want to hear so they will think better of you?
- Do you ever make decisions by the toss of a coin or by leaving things in the lap of the gods?

Adapted from: Shepherd, P. (2003). Know Your Own Mind Personality Questionnaire.
Retrieved from <https://trans4mind.com>

Experiment 1 Personality Test Results

Group 1

Personality Results

Your **highest** scoring personality trait: **Strong-Willed** (*Your percentile: 87*)

Your **lowest** scoring personality trait: **Idealistic** (*Your percentile: 11*)

In the box below, briefly (about a sentence) describe a time when you showed your **highest scoring** personality trait.

Group 2

Your **highest** scoring personality trait: **Idealistic** (*Your percentile: 87*)

Your **lowest** scoring personality trait: **Strong-Willed** (*Your percentile: 11*)

In the box below, briefly (about a sentence) describe a time when you showed your **highest scoring** personality trait.

Moral Value Questions

‘To be a good person, you should be...’, the second ‘It is morally important to be...’, and ‘It is morally valuable to be...’.



Accuracy Check

“My personality test results described me accurately”

Strongly Disagree (1), Disagree (2), Somewhat Disagree (3), Neither Agree nor Disagree (4), Somewhat Agree (5), Agree (6), Strongly Agree (7).

“It was easy to remember a time when I showed my highest trait.”

Strongly Disagree (1), Disagree (2), Somewhat Disagree (3), Neither Agree nor Disagree (4), Somewhat Agree (5), Agree (6), Strongly Agree (7).

“Did you answer all of the questions to the best of your ability? (Your answer will not affect your eligibility for compensation). Yes/No

Demographics

“What is your gender?” Male, Female, Other

“What is your age?”

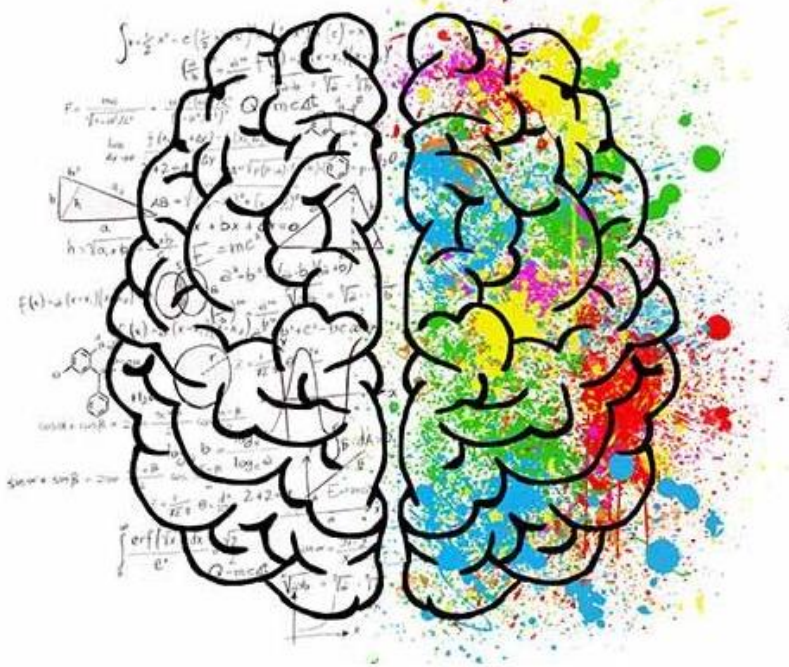
“What is your race?” White, Black or African American, American Indian or Alaska Native, Asian, Native Hawaiian or Pacific Islander, Other

“What is your ethnicity?” Hispanic, Not Hispanic

Experiment 2 Materials

Cover Story

Are you more Analytically Intelligent or Emotionally Intelligent?



The Department of Psychology at the University of Canterbury have been developing a short-form test that reliably measures people's analytical and emotional intelligence using interpretive imagery. We are wanting to further understand the relationship between people's intelligence types and values using this test.

In this survey you will be taking a test that measures analytical and emotional intelligence. You will be presented with six pictures and be asked to choose between four options.

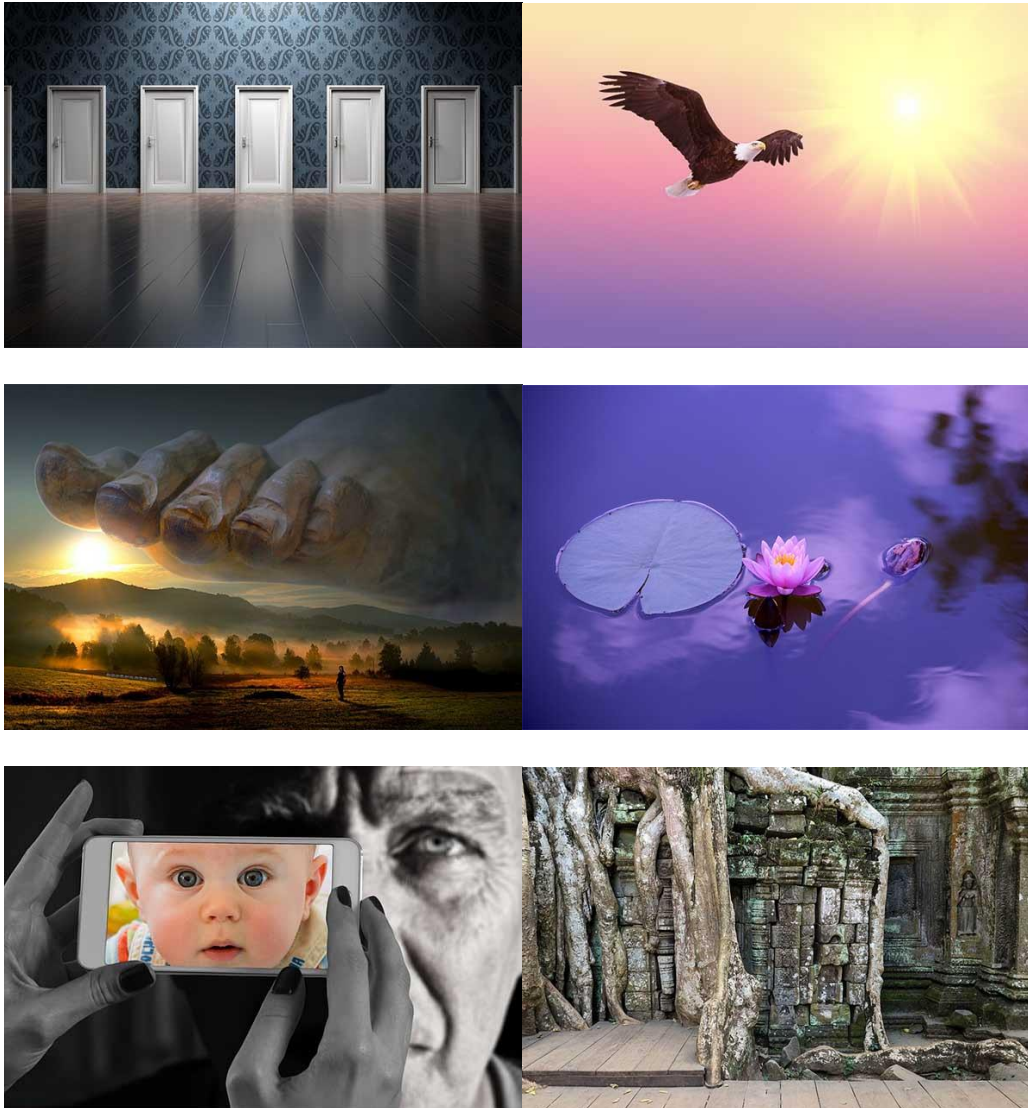
Choose the first option that resonates with you.

You will be shown your result and then asked some questions on values and demographics.

Fake Intelligence Type Test Images

Participants will view six pictures and choose a word from several options to describe the image.

The images are copyright and royalty free, sourced from Pixabay.com.



Participants will be able to choose words ranging from: peace, life, calm, serenity, anxiety, indecision, opportunity, bravery, knowledge, history, ingenuity, beauty, power, domination, hopelessness, resolve, loss, progress, magic, regret, hope, freedom, justice, natural.

Intelligence Type Test Results

Group 1



You have High Emotional Intelligence

As someone high in emotional intelligence, you pride yourself on being an independent thinker and do not have to accept others' opinions without satisfactory proof. At times you have doubts as to whether you have made the right decision or the right thing. At times, your emotional intelligence fuels you with energy and drive, but can sometimes leave you exhausted and drained. Overall, while you have some weaknesses, your emotional intelligence allows you to compensate for them.

In the box below, briefly (about a sentence) describe how your **Emotional Intelligence** helps you.

Group 2



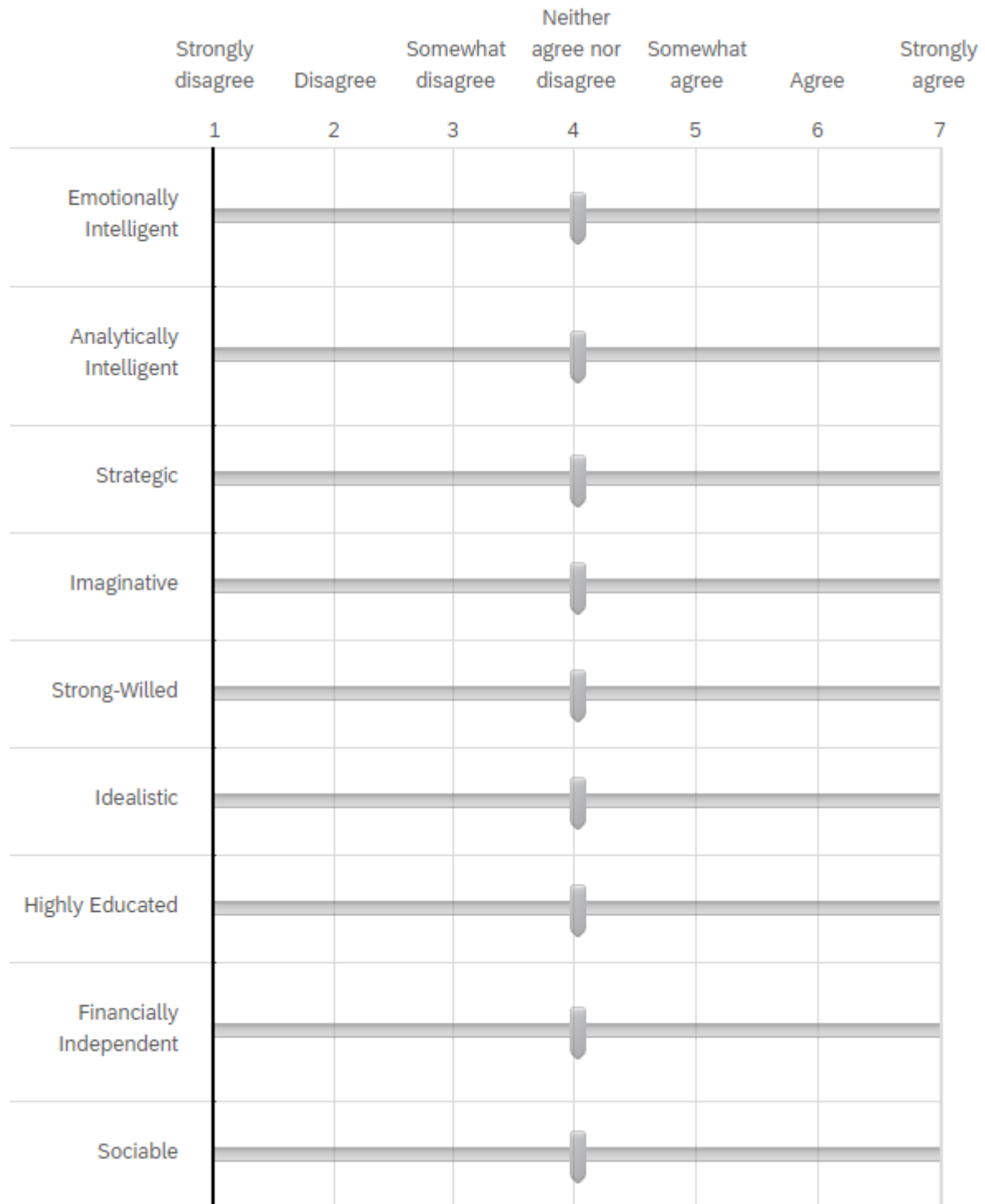
You have High Analytical Intelligence

As someone high in analytical intelligence, you pride yourself on being an independent thinker and do not have to accept others' opinions without satisfactory proof. At times you have doubts as to whether you have made the right decision or the right thing. At times, your analytical intelligence fuels you with energy and drive, but can sometimes leave you exhausted and drained. Overall, while you have some weaknesses, your analytical intelligence allows you to compensate for them.

In the box below, briefly (about a sentence) describe how your **Analytical Intelligence** helps you.

Moral Value Questions

‘To be a good person, you should be...’, the second ‘It is morally important to be...’, and ‘It is morally valuable to be...’.



Accuracy Check

“My intelligence test result described me accurately”

Strongly Disagree (1), Disagree (2), Somewhat Disagree (3), Neither Agree nor Disagree (4), Somewhat Agree (5), Agree (6), Strongly Agree (7).

“It was easy to think of how my type of intelligence helped me.”

Strongly Disagree (1), Disagree (2), Somewhat Disagree (3), Neither Agree nor Disagree (4), Somewhat Agree (5), Agree (6), Strongly Agree (7).

“Did you answer all of the questions to the best of your ability? (Your answer will not affect your eligibility for compensation). Yes/No

Demographics

“What is your gender?” Male, Female, Other

“What is your age?”

“What is your race?” White, Black or African American, American Indian or Alaska Native, Asian, Native Hawaiian or Pacific Islander, Other

“What is your ethnicity?” Hispanic, Not Hispanic

Experiment 3 Materials

Other-Person Descriptions

Sam Similar

▼  Display this question

If Personality Results Your highest scoring personality trait: Strong-Willed (Your percentile: 87)... Is Displayed

Sam scored very similar to your personality test. (***Strong-Willed*** percentile: 82) (***Idealistic*** percentile: 14)

Sam:

- Is 37 years old
- Has light brown hair and green eyes
- Favourite colour is orange
- Is 5 foot 7 inches tall
- Plays soccer

▼  Display this question

If Your highest scoring personality trait: Idealistic (Your percentile: 87) Your lowest scoring pers... Is Displayed

Sam scored very similar to your personality test. (***Idealistic*** percentile: 82) (***Strong-Willed*** percentile: 14)

Sam:

- Is 37 years old
- Has light brown hair and green eyes
- Favourite colour is orange
- Is 5 foot 7 inches tall
- Plays soccer

Tony Dissimilar

▼  Display this question

If Personality Results Your highest scoring personality trait: Strong-Willed (Your percentile: 87)... Is Displayed

Tony scored very differently to your personality test. (*Idealistic percentile: 89*) (*Strong-Willed percentile: 12*)

Tony:

- Is 32 years old
- Has dark brown hair and brown eyes
- Favourite colour is red
- Is 6 foot 2 inches
- Plays tennis

▼  Display this question

If Your highest scoring personality trait: Idealistic (Your percentile: 87) Your lowest scoring pers... Is Displayed

Tony scored very differently to your personality test. (*Strong-Willed percentile: 89*) (*Idealistic percentile: 12*)

Tony:

- Is 32 years old
- Has dark brown hair and brown eyes
- Favourite colour is red
- Is 6 foot 2 inches
- Plays tennis

Tony Similar

▼  Display this question

If Personality Results Your highest scoring personality trait: Strong-Willed (Your percentile: 87)... Is Displayed

Tony scored very similar to your personality test. (*Strong-Willed percentile: 89*) (*Idealistic percentile: 12*)

Tony:

- Is 32 years old
- Has dark brown hair and brown eyes
- Favourite colour is red
- Is 6 foot 2 inches
- Plays tennis

▼  Display this question

If Your highest scoring personality trait: Idealistic (Your percentile: 87) Your lowest scoring pers... Is Displayed

Tony scored very similar to your personality test. (***Idealistic percentile: 89***) (***Strong-Willed percentile: 12***)

Tony:

- Is 32 years old
- Has dark brown hair and brown eyes
- Favourite colour is red
- Is 6 foot 2 inches
- Plays tennis

Sam Dissimilar

▼  Display this question

If Personality Results Your highest scoring personality trait: Strong-Willed (Your percentile: 87)... Is Displayed

Sam scored very differently to your personality test. (***Idealistic percentile: 82***) (***Strong-Willed percentile: 14***)

Sam:

- Is 37 years old
- Has light brown hair and green eyes
- Favourite colour is orange
- Is 5 foot 7 inches tall
- Plays soccer

▼  Display this question

If Your highest scoring personality trait: Idealistic (Your percentile: 87) Your lowest scoring pers... Is Displayed

Sam scored very differently to your personality test. (***Strong-Willed percentile: 89***) (***Idealistic percentile: 12***)

Sam:

- Is 37 years old
- Has light brown hair and green eyes
- Favourite colour is orange
- Is 5 foot 7 inches tall
- Plays soccer

Other-Person Judgements

Sam Judgements

How ... do you think Sam is?

	Very Little							Very Much
Competent	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Intelligent	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Confident	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Sincere	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Good natured	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Warm	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Trustworthy	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Morally Good	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Fair	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Tony Judgements

How ... do you think Tony is?

	Very Little							Very Much
Competent	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Intelligent	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Confident	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Sincere	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Good natured	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Warm	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Trustworthy	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Morally Good	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Fair	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Accuracy Check

“My intelligence test result described me accurately”

Strongly Disagree (1), Disagree (2), Somewhat Disagree (3), Neither Agree nor Disagree (4), Somewhat Agree (5), Agree (6), Strongly Agree (7).

“It was easy to think of how my type of intelligence helped me.”

Strongly Disagree (1), Disagree (2), Somewhat Disagree (3), Neither Agree nor Disagree (4), Somewhat Agree (5), Agree (6), Strongly Agree (7).

“Did you answer all of the questions to the best of your ability? (Your answer will not affect your eligibility for compensation). Yes/No

Demographics

“What is your gender?” Male, Female, Other

“What is your age?”

“What is your race?” White, Black or African American, American Indian or Alaska Native, Asian, Native Hawaiian or Pacific Islander, Other

“What is your ethnicity?” Hispanic, Not Hispanic

Consent Form

Department of Psychology

Telephone: +64 369 0726

Email: brad.tookey@pg.canterbury.ac.nz

25th September 2020

HEC Ref: HEC 2019/72

Personality and Values

Consent Form for the Participants in this study

This is a scientific study conducted by Bradley Alan Tookey, a Master's student, under supervision by Dr. Andrew Vonasch in the Department of Psychology at the University of Canterbury, New Zealand. The purpose of the study is to examine the relationship between personality and the ratings of various values. We are wanting to understand the relationship between personality and what people value. You have been approached to take part in this study because you are on Prolific. I have located your contact details through Prolific.

If you choose to take part in this study, your involvement in this project will be taking a personality test. After the personality test your results will be presented to you. Following this, you will be asked to rate the importance of several values. Your participation is estimated to take 7 minutes. Your data will be recorded and used in aggregate for the purposes of statistical analyses. Your personal responses will not be analyzed separately or linked to you in any way and will only be accessible to myself and my supervisor. This study may include questions designed to ensure participants are paying attention, which may be used to exclude nonattentive participants from analyses. You will still receive remuneration even should you be deemed nonattentive.

We do not anticipate any risks of participating in today's study.

Participation is voluntary and you have the right to withdraw at any stage without penalty.

You must fully complete the survey to receive remuneration, you may opt to have your data deleted from the study at the end of the survey and still receive remuneration. You may ask for your raw data to be returned to you or destroyed at any point. If you withdraw, I will remove information relating to you. However, once analysis of raw data starts it will become increasingly difficult to remove the influence of your data on the results.

The results of the project may be published, but you may be assured of the complete confidentiality of data gathered in this investigation: your identity will not be made public.

To ensure anonymity and confidentiality, your Prolific ID and any other potentially identifying information will be deleted from the dataset when it is downloaded. Your Prolific ID and any other potentially identifying information will not be published. When the study is completed and published, only the fully deidentified and confidential data from all participants in the study will be stored online in a public repository accessible to other researchers. A thesis is a public document and will be available through the UC Library.

The project is being carried out as a requirement for a master's degree by Bradley Alan Tookey under the supervision of Dr. Andrew Vonasch, who can be contacted at andrew.vonasch@canterbury.ac.nz. He will be pleased to discuss any concerns you may have about participation in the project.

This project has been reviewed and approved by the University of Canterbury Human Ethics

Committee, and participants should address any complaints to The Chair, Human Ethics Committee, University of Canterbury, Private Bag 4800, Christchurch (human-ethics@canterbury.ac.nz).

If you agree to participate in the study, please check the box below and continue to the study on the next page.

Debrief**EXPERIMENT DEBRIEF INFORMATION****Personality and Values**

This experiment is designed to examine how self-serving bias may influence the moralization of certain values. We presented you with a fake personality test and gave randomly assigned personality traits as the results. We hypothesized that participants would be more likely to rate personality traits they believed to be their own as more morally important than other traits.

In today's experiment, you were given a fake personality test and given false results that were randomly assigned. The descriptions about Sam and Tony were also fictitious and were manipulated to show similar personality scores to the ones you were randomly assigned.

We apologize for not telling you the full purpose of the study ahead of time. If we had, you would have been more likely to reconsider your biases which would have invalidated the results of the study. We chose to use randomly assigned results to ensure the self-serving bias could arise; if we did not then we would only be measuring the relationship between personality and moral value selection. Because we were not entirely truthful, you have the right to have your data deleted from the study. If you choose to do this, it will be as if the study never happened, so we won't learn any scientific knowledge from your participation. You would, however, still receive the usual compensation for participation.

If you wish to have your data deleted from the study please write "I wish to have my data deleted."