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When do non-evidential considerations trump evidence as the consciously preferred foundation for belief? The role of commitment to epistemic rationality

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ABSTRACT

People sometimes view it as justified for others (and for themselves) to consciously adopt beliefs that are inconsistent with the available evidence, provided that the belief is thought to promote a moral good. In the present research we examine whether this phenomenon is observed regardless of people's level of commitment to epistemic rationality. Two studies show that how much people value epistemic rationality predicts more favourable evaluations of other people's evidence-based beliefs, and more unfavourable evaluations of beliefs formed based on non-evidential considerations (Study 1–2). The only circumstance where a strong commitment to epistemic rationality did not favour the evidence-based belief was when it required racial stereotyping of a man based on local crime statistics. This exception was not attributable to elevated Care/harm concerns, did not depend on whether the target was black or white (Study 3 A), or on whether stereotyping was based on skin colour or clothing (Study 3B).

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KEYWORDS Belief formation; motivated reasoning; epistemic rationality

Psychology has a long tradition of documenting how our judgments and decisions deviate from objective standards, and how we frequently adopt beliefs that have weak empirical support, are inconsistent with the available evidence, or even with fundamental principles of physical reality (e.g., Baron, 2023; Kahneman, 2011; Kunda, 1990; Stanovich, 1999; Tversky & Kahneman, 1974). A common assumption about these deviations from rationality is that they occur without our conscious awareness (Cusimano, 2025; Kruglanski, 1980; Kunda, 1990; Pyszczynski & Greenberg, 1987). According to this view, people generally want to

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be—and believe that they are—rational, and think they evaluate information in a relatively impartial manner (Ross & Ward, 1996). However, people are frequently unaware that their information processing is not impartial, but influenced by prior beliefs, as well as non-evidential considerations, favouring specific conclusions (Cusimano, 2025: Kunda, 1990). If people become aware of their own bias, however, they are expected to try to correct for it, and to adjust their judgments and beliefs such that they are more consistent with the available evidence (Wegener et al., 2012).

However, evidence has started to accumulate to suggest that people sometimes are aware of engaging in biased reasoning and can view non-evidential information as an appropriate foundation for belief (Cusimano, 2025; Ståhl & Cusimano, 2024; Tenney et al., 2015). For example, Tenney et al. (2015) demonstrated that people frequently promote the adoption of beliefs about various personal projects (e.g., start-up companies, investments, rehabilitation from surgery) that are more optimistic than the available evidence would suggest. This phenomenon appears to be driven by a general belief that overconfidence increases the chances of achieving one's goals, provided that the actor has some level of control over the outcome. Moreover, Cusimano and Lombrozo (2021a, 2023) have shown that people can consciously engage in, condone, and even promote biased reasoning, when it is thought to promote a moral good. For example, they have shown that people view it as justified and appropriate to believe that a friend is innocent, even when there is strong evidence to suggest that they have committed a crime (Cusimano & Lombrozo, 2021a). Similarly, people viewed it as justified and appropriate for a journalist to ignore her statistical knowledge that 80% of young black men in the area were dangerous gang members, and to believe that a young black man approaching her on the sidewalk was unlikely to be a dangerous gang member, explicitly because she thought it was wrong to judge someone on the basis of the colour of their skin. In short, this research suggests that people can view it as justified and appropriate to consciously form beliefs that are inconsistent with the available evidence, if those beliefs promote a moral good (e.g., staying loyal to a friend), or prevent the violation of a moral taboo (e.g., racial stereotyping).

We have a growing understanding of the factors that reduce the unintentional and unconscious influence of biases on our judgments and beliefs. For example, many biases and epistemically suspect beliefs are less prevalent among people who are more inclined to rely on analytic and openminded thinking (e.g., Bago et al., 2020; Baron, 2019; Pennycook et al., 2012, 2015; Stanovich & West, 1998), more committed to forming and evaluating beliefs based on logic and evidence (Ståhl et al., 2016, 2024; Ståhl & Van Prooijen, 2018; Yilmaz & Ståhl, 2025), and to changing their beliefs in accordance with the evidence (Pennycook et al., 2020). Similarly, epistemically suspect beliefs are less pronounced when the goal

to be epistemically rational has been made salient (Adam-Troian et al., 2019), or when people expect to be held accountable for the process through which they made their judgments or formed their beliefs (Lerner & Tetlock, 1999).

However, we know little about what situational circumstances and individual differences may prevent people from viewing beliefs that are consciously formed based on non-evidential grounds (e.g., morality, optimism), and that are clearly inconsistent with the available evidence, as justified and appropriate (Ståhl & Cusimano, 2024). We argue that having a strong commitment to forming beliefs based on logic and evidence should play an important role here as well. Specifically, in situations where the available evidence is clearly inconsistent with important non-evidential considerations (e.g., moral considerations), evidential considerations should be more likely to be viewed as the appropriate foundation for belief among people who are more (vs. less) strongly committed to them.

The present research

In four studies, we tested the hypothesis that people who are more (vs. less) committed to epistemic rationality should be (1) less inclined to view it as justified and appropriate when people consciously adopt a belief based on non-evidential considerations, and (2) more inclined to view it as justified and appropriate when people consciously adopt a belief based on evidence, even when the belief is in conflict with important non-evidential considerations.

In all four studies, we manipulated whether a protagonist adopted a belief based on the available evidence or based on non-evidential considerations. In Study 1, which was not pre-registered, we tested the hypothesis across four different scenarios adapted from previous research (Cusimano & Lombrozo, 2021a, 2023; Tenney et al., 2015). In each scenario, a protagonist either consciously formed a belief based on the available evidence or based on motivation to be overly optimistic (scenarios 1–2), to be morally good (scenario 3), or to avoid a moral taboo (scenario 4). As we report below, we found support for our general hypothesis, except for when the evidence-based belief violated a moral taboo. We then conducted a pre-registered replication (Study 2), with the additional goal to rule out an alternative explanation to one of our findings, and to see if the predicted effect would emerge in the taboo scenario when adding a relevant control to the model. Lastly, Studies 3 A and 3B were pre-registered attempts to explain why having a stronger commitment to epistemic rationality did not predict more favourable evaluations of an evidence-based (vs. morally motivated) belief when that belief violated a moral taboo. All four datasets and analysis scripts are available on OSF: https://osf.io/zv4bf/?view_only=2e2c23b057d74ad78ca6b2f886b5d8dd.

Study 1

Method

Participants and design

An a priori power analysis using G*Power (Faul et al., 2009) indicated that we would need a sample of 539 participants in order to have 80% power to detect an effect of $R^2 > .02$. We therefore requested 600 participants from Cloud research, and ultimately ended up with a final sample of 641 participants, including those who did not click through to the final page (but answered all questions in the survey). All participants resided in the U.S. (49.3% men, 41.5% women, 0.9% nonbinary, and 8% who did not report their gender, $M_{age} = 41.9$, $SD = 12.1$). The race/ethnicity distribution was 43% white, 7.8% African Americans, 4.1% Asian Americans, 2.8% Latinos, 0.6% Native Americans, 1.2% other, and 10.6% did not disclose their race/ethnicity. The study was a 2 (belief: evidence-based/motivated) x 4 (scenario: start-up/stock/friend/race) mixed factorial design. Belief was manipulated between subjects, and scenario was manipulated within subjects.

Procedure and materials

Upon giving their informed consent, participants gained access to the online experiment. Participants were informed that they would fill out some questionnaires about their values and their beliefs, carefully read four different scenarios, and answer some questions about each of them. The four scenarios were adapted from Tenney et al. (2015) and Cusimano and Lombrozo (2021a, 2023). We describe the scenarios briefly below, but all stimulus materials and measures can be found in the Appendix.

The start-up scenario described a woman (Jane) who had received an inheritance and had decided to invest her money in a new business. Her role in the business would be active, sitting on the board of directors, and having considerable influence over how the business was run (i.e., she would have some control over the success of the business). It was explicitly stated that Jane's true chance of success with the business was 65%. In the evidence-based belief condition, Jane objectively assessed the situation and believed that she had a 65% of success. In the motivated belief condition, Jane thought that it was important to be optimistic in order to be successful. She therefore believed that her chance of success was 80%.

The stock scenario described a woman (Marissa) in debt. To help cover her loans, she invested heavily in risky stock. The evidence showed that the stock was not doing well. If it continued this way, Marissa would have lost her investment, and still would have to pay her student loan. In the evidence-based belief condition Marissa changed her belief that the investment would pay off in accordance with the evidence. She decided to sell off the stock and continue to slowly pay off her loan. In the motivated

belief condition, Marissa continued to be optimistic that the stock would come around, despite the evidence, in the hope that she would be able to pay off her student loan in full.

The friend scenario described a young man (Adam) who had been friends with another man (John) since middle school. They were now attending college on the east vs. west coast, but still talked on the phone each month. Adam found out from a mutual friend that John had been arrested for drug possession (cocaine). Adam learned that there was strong evidence that he was guilty, but John asks him to believe him when he says he is innocent. In the evidence-based belief condition, Adam believed that John is guilty, based on the strong evidence. In the motivated belief condition, Adam believed that John is innocent, out of loyalty to his old friend.

The race scenario described a journalist (Dara) working in a small town with a very violent gang that had recently been in the news due to a crime spree. She had been interviewing residents in the street about the crime problem. She knew based on her research that about 80% of young black men in town were members of the gang, and that the percentage was even higher among poor young black men. She was now walking down the sidewalk to her car and a young black man in dirty clothes was walking towards her. In the evidence-based belief condition, Dara believed, based on her knowledge of the statistics, that there was a high risk that the young black man was a dangerous gang member. In the motivated belief condition, Dara didn't believe that the young black man was likely to be a dangerous gang member, because she didn't want to judge a person based on the colour of their skin.

After each scenario, participants were asked a set of five questions about the protagonist's belief (referring to each protagonist by name). How justified or unjustified the protagonist's belief was (1 = *extremely unjustified*, 7 = *extremely justified*), how moral or immoral the protagonist's belief was (1 = *extremely immoral*, 7 = *extremely moral*), how permissible or impermissible the protagonist's belief was (1 = *extremely impermissible*, 7 = *extremely permissible*), to what extent the protagonist's belief deserved praise (1 = *not at all*, 7 = *very much*) and criticism (1 = *not at all*, 7 = *very much*). After reverse-coding the last item, they were all averaged into a reliable belief evaluation scale (α = .71).

To assess participants' commitment to epistemic rationality, we administered the 6-item importance of rationality scale (IRS, Ståhl et al., 2016). We counterbalanced the order, such that half of participants filled out this scale prior to (vs. after) reading the scenarios and answering the questions constituting the dependent variable. The IRS contains items such as "It is important to me personally to be skeptical about claims that are not backed up by evidence" (1 = *strongly disagree*, 7 = *strongly agree*). These items were averaged into a reliable scale (α = .86). For exploratory purposes, we also included the 9-item moralised rationality scale (MRS, Ståhl et al., 2016), the 3-item cognitive reflection test (CRT, Frederick, 2005), and the 4-item CRT-2 (Thomson & Oppenheimer, 2016).

Results and discussion

All means, standard deviations, reliability coefficients, and correlation coefficients can be found in Table 1. Our hypothesis was tested using mixed effects regression. Scenario and subject (intercept) were entered as random effects, whereas belief (1 = evidence-based, 0 = motivated) and the importance of rationality scale (standardized) were entered as fixed effects.

As can be seen in Table 2, all three fixed effects were significant. The IRS predicted more negative evaluations of the belief across the board, and the evidence-based belief was evaluated more favourably than the motivated belief. However, these main effects were qualified by the predicted belief by IRS interaction. As depicted in Figure 1, the IRS was associated with more unfavourable evaluations of the motivated belief, $b = -0.213$, $SE = .066$, $p = .001$, but with marginally more favourable evaluations of the evidence-based belief, $b = .100$, $SE = .055$, $p = .07$.

As a more conservative test of to what extent people view optimism or moral considerations as a reasonable way to justify beliefs, we analysed the item about how justified the protagonist's belief was separately. The belief by IRS interaction was again significant, $b = .46$, $SE = .12$, $p < .001$. The IRS was associated with lower scores on how justified the belief was in the motivated belief condition, $b = -0.30$, $SE = .09$, $p = .001$, but with higher scores in the evidence-based belief condition, $b = .17$, $SE = .08$,

Table 1. Means, standard deviations, alphas, and zero-order correlations with confidence intervals (Study 1).

Variable	*M*	*SD*	α	1	2
1. IRS	5.73	0.97	0.86		
2. CRT	4.49	2.18	0.77	.19** [.11, .28]	
3. Belief eval.	4.47	0.92	0.71	.06 [−0.04, .16]	.06 [−0.04, .15]

Note. *$p < .05$. **$p < .01$.

Table 2. Mixed effects regression predicting belief evaluation (Study 1).

	Belief evaluation			
Predictors	Estimates	*SE*	*t*	*p*
(Intercept)	5.42	0.40	13.41	<0.001
IRS	−0.21	0.07	−3.22	0.001
Belief [Evidence-based]	−1.26	0.50	−2.50	0.013
IRS × Belief [Evidence-based]	0.31	0.09	3.63	<0.001
Random effects				
σ^2		1.31		
$\tau_{00\ ResponseId}$		0.26		
$\tau_{00\ Scenario}$		0.04		
ICC		0.19		
$N_{ResponseId}$		407		
$N_{Scenario}$		4		
Observations		1628		
Marginal R^2 / Conditional R^2		0.057/0.235		

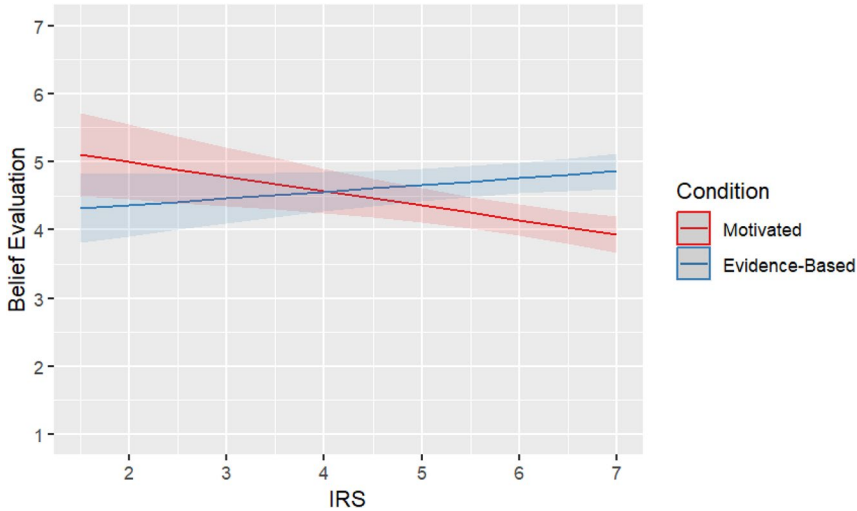

Figure 1. Belief evaluation as a function of belief and the IRS (Study 1).

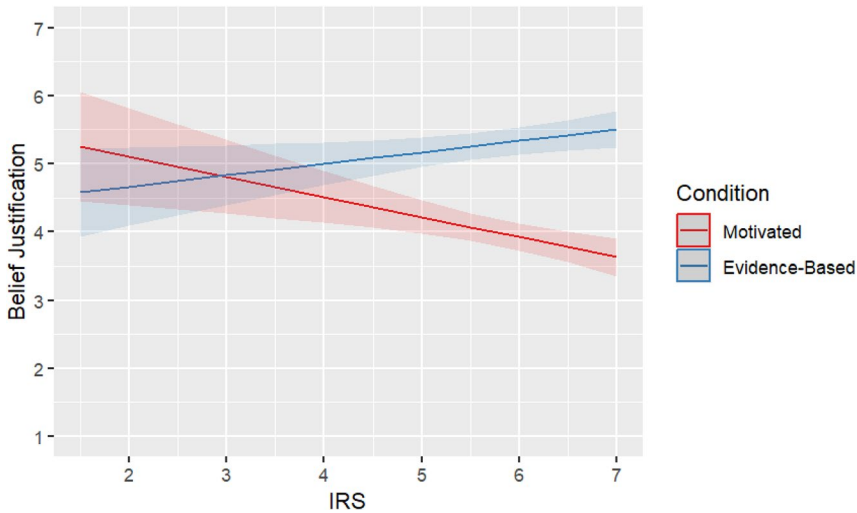

Figure 2. Belief justification as a function of belief and the IRS (Study 1).

p = .026. As can be seen in Figure 2, people who score high on the IRS viewed the evidence-based belief as more justified than the motivated belief, whereas people who score low on the IRS did not.

As a robustness check, we also examined whether the belief by IRS interaction was present in each of the four scenarios. The interaction was significant in the start-up scenario, b = .60, SE = .11, p < .001, the stock scenario, b = .52, SE = .15, p < .001, and the friend scenario, b = .28, SE = .13, p = .03. However, the interaction was not significant in the race

scenario, $b = -0.15$, $SE = .15$, $p = .30$. In fact, none of the fixed effects were significant in the race scenario ($ps > .30$).[1] Thus, the present results suggest that the IRS generally predicts more unfavourable evaluations of beliefs consciously formed based on motivation to be overly optimistic, or morally good, and somewhat more favourable evaluations of evidence-based beliefs. However, an exception is when the evidence-based belief requires taking race-based statistics into account when forming a belief about a young black man on the sidewalk. A possible explanation to this exception is that people who score high (vs. low) on the IRS tend to score higher on moral concerns about harming vulnerable people (Ståhl et al., 2016). It could be that their elevated moral concerns about harming vulnerable people make them reluctant to promote an evidence-based belief when it involves racially profiling a black man. We explored this possibility in Study 2. We also sought to rule out the possibility that the IRS predicted belief evaluations in the friend scenario simply because people who score high (vs. low) on this scale tend to score lower on moral concerns about loyalty (Ståhl et al., 2016). Specifically, people who score high on the IRS may have been more critical of morally motivated belief formation in the friend scenario simply because they don't view loyalty as an important moral value to the same extent as people who score low on the IRS, and not because they are more critical of morally motivated belief formation in general.

Another noteworthy finding from this study is that people were rather negative in their evaluations of the motivated beliefs across the board. The evidence-based belief was more favourably evaluated than the motivated belief in three of the four scenarios, and equally favourably evaluated in the race scenario. This stands in contrast to some previous studies, using very similar scenarios, but finding that people *promoted* forming beliefs based on morally motivated reasoning (Cusimano & Lombrozo, 2021a), or based on the expected benefits of overconfidence (Tenney et al., 2015), over forming beliefs strictly based on the evidence. However, before we draw too strong conclusions based on these initial findings, it is important to replicate them in a pre-registered study. We did that in Study 2.

Study 2

Participants and design. Study 2 was a pre-registered replication of Study 1, https://aspredicted.org/kgzq-6d9h.pdf. We recruited 500 participants residing in the U.S. from Cloud research, and we ended up with a final sample of 516, including those who did not click through to the final

[1]The evidence-based belief was evaluated more favorably than the motivated belief in the start-up scenario ($M = 5.04$ vs. $M = 4.37$), stock scenario ($M = 4.92$ vs. $M = 3.46$), and friend scenario ($M = 4.68$ vs. $M = 4.19$). However, the evidence-based belief was evaluated less favorably than the motivated belief in the race scenario ($M = 4.29$ vs. $M = 4.68$).

page (55.8% men, 40.5% women, 0.8% nonbinary, and 2.9% who did not report their gender, M_{age} = 37.7, SD = 11.4). The race/ethnicity distribution was 65.3% white, 15.1% African Americans, 8.3% Asian Americans, 5.2% Latinos, 1% Native Americans, 2.3% other, and 2.7% did not disclose their race/ethnicity. The study design was identical to Study 1, and a sensitivity analysis conducted using G*power (Faul et al., 2009) indicated that we had 80% power to detect a small effect (R^2 = .02).

Procedure and Materials. Upon giving informed consent, participants got access to the study materials. The procedure and materials were identical to Study 1, with the exception that we added two measures at the end of the study for the purpose of exploratory analyses (the order of the IRS and the scenarios was once again counterbalanced). Specifically, participants also filled out the 10 Care/harm (α = .94) and 10 Loyalty/betrayal (α = .91) items from the MFQ-2 (Atari et al., 2023). The belief evaluation scale (α = .84) and the IRS (α = .85) were the same as in Study 1.

Results and discussion

All means, standard deviations, Cronbach's Alpha, and correlation coefficients can be found in Table 3. As in Study 1, Our hypotheses were tested using mixed effects regression. As stated in our pre-registration, Scenario and subject (intercept) were entered as random effects, whereas belief (1 = evidence-based, 0 = motivated) and the importance of rationality scale (standardized) were entered as fixed effects.

As can be seen in Table 4, the effect of belief from Study 1 was replicated, whereas the effect of the IRS was not. As in Study 1, the evidence-based belief was evaluated more favourably than the motivated belief across the board. More importantly, the predicted belief by IRS interaction was also replicated. As depicted in Figure 2, the IRS was associated with more favourable evaluations of the evidence-based belief, b = .202, SE = .053, p < .001, but not with more unfavourable evaluations of the motivated belief, b = −0.052, SE = .052, p = .32. Thus, the pattern

Table 3. Means, standard deviations, alphas, and zero-order correlations with confidence intervals (Study 2).

Variable	*M*	*SD*	*α*	1	2	3	4
1. IRS	5.68	0.89	0.85				
2. CRT	4.52	1.92	0.72	.11** [.06, .15]			
3. Loyalty	3.04	1.13	0.91	.05* [.01, .09]	−0.07** [−0.11, −0.03]		
4. Care	4.02	0.85	0.94	.31** [.27, .35]	−0.02 [−0.07, .02]	.23** [.19, .27]	
5. Belief eval.	4.45	1.27	0.84	.06** [.02, .10]	−0.02 [−0.06, .02]	.11** [.06, .15]	.11** [.07, .15]

Note. *p < .05. **p < .01.

Table 4. Mixed effects regression predicting belief evaluation (Study 2).

	Belief evaluation			
Predictors	Estimates	*SE*	*t*	*p*
(Intercept)	4.54	0.34	13.25	**<0.001**
IRS	−0.05	0.05	−1.00	0.316
Belief [Evidence-based]	−1.04	0.43	−2.45	**0.014**
IRS × Belief [Evidence-based]	0.25	0.07	3.43	**0.001**
Random effects				
σ^2		1.21		
$\tau_{00\ ResponseId}$		0.25		
$\tau_{00\ Scenario}$		0.12		
ICC		0.23		
$N_{ResponseId}$		505		
$N_{Scenario}$		4		
Observations		2020		
Marginal R^2 / Conditional R^2		0.036 / 0.260		

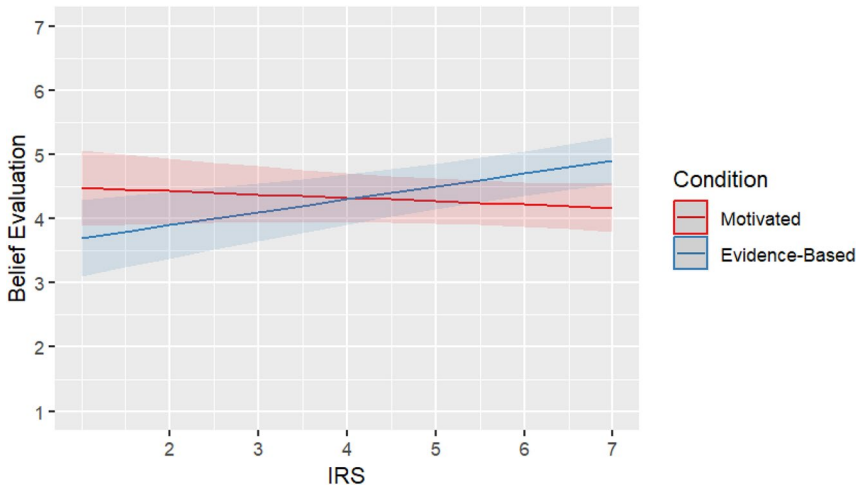

Figure 3. Belief evaluation as a function of belief and the IRS (Study 2).

of the interaction was somewhat different than in Study 1, where it was the motivated belief that was significantly predicted by the IRS, and not the evidence-based belief (Figure 3).

As in Study 1, we also analysed the item about how justified the protagonist's belief was separately. As can be seen in Figure 4, the belief by IRS interaction was once again replicated, $b = .42$, $SE = .10$, $p < .001$. The IRS was positively associated with how justified the belief was in the evidence-based belief condition, $b = .30$, $SE = .09$. $p = .002$, but did not predict belief justification in the motivated belief condition, $b = -0.12$, $SE = .09$, $p = .19$. As can be seen in Figure 4, and consistent with Study 1, people who scored high on the IRS viewed the evidence-based belief as more justified than the motivated belief, whereas people who scored low on the IRS did not.

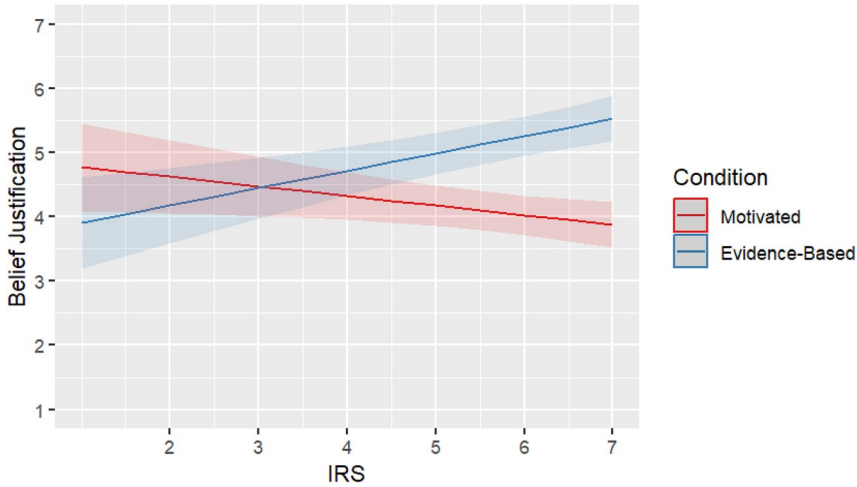

Figure 4. Belief justification as a function of belief and the IRS (Study 2).

As a robustness check, we once again examined whether the belief by IRS interaction was present in each of the four scenarios. Replicating Study 1, the interaction was significant in the start-up scenario, $b = .33$, $SE = .10$, $p < .001$, the risky stock scenario, $b = .49$, $SE = .13$, $p < .001$, and the friend scenario, $b = .34$, $SE = .11$, $p = .002$. By contrast, and consistent with Study 1, the interaction was not significant in the race scenario, $b = -0.15$, $SE = .13$, $p = .25$.[2]

As preregistered, because people who score high on the IRS tend to score high on concerns about harming vulnerable individuals (Ståhl et al., 2016, also see Table 3), we also wanted to see whether the focal belief by IRS interaction would emerge in the race scenario once we controlled for individual differences in moral concerns about Care/harm, and their interaction with the belief manipulation. We did find a belief by Care/harm interaction, $b = -0.54$, $SE = .14$, $p < .001$. Care/harm predicted more favourable evaluations of the motivated belief, $b = .53$, $SE = .10$, $p < .001$, but did not predict evaluations of the evidence-based belief, $b = -0.007$, $SE = .10$, $p = .94$. However, the predicted belief by IRS interaction remained non-existent in this model ($p = .89$). Thus, although individual differences in Care/harm predicted belief evaluations in the race scenario, they cannot explain why the IRS failed to do so.

Lastly, because people who score high on the IRS have been found to score lower on the moral concerns about Loyalty (Ståhl et al., 2016), we also pre-registered that we would examine whether the IRS still moderated the effect of belief in the friend scenario when controlling for Loyalty/betrayal scores and their interaction with belief. Unexpectedly, the IRS correlated slightly positively with Loyalty/betrayal in this study (see Table 3).

[2] As in Study 1, the evidence-based belief was evaluated more favorably on average than the motivated belief in the start-up, stock, and friend scenarios. By contrast, the motivated belief was once again evaluated more favorably on average than the evidence-based belief in the race scenario.

Moreover, we did not find a belief by Loyalty/betrayal interaction on belief evaluations in the Loyalty scenario ($p = .88$), and the belief by IRS interaction remained significant in this model, $b = .35$, $SE = .11$, $p = .002$.

To summarise, we largely replicated the findings from Study 1. The IRS once again interacted with the belief manipulation to predict belief evaluations, although in a slightly different way than in Study 1. Whereas the IRS primarily predicted more unfavourable evaluations of the motivated belief in Study 1, it primarily predicted more favourable evaluations of the evidence-based belief in Study 2. We were also able to rule out the possibility that the reason the belief by IRS interaction was found in the friend scenario was because people who score high on the IRS have lower moral concerns about Loyalty/betrayal.

As in Study 1, the only scenario where we did not find support for our hypothesis was in the race scenario, where the evidence-based belief required racially stereotyping a black man based on forbidden base rates (Tetlock et al., 2000). Notably, although more favourable evaluations of the motivated belief in the race scenario were observed among people who scored high (vs. low) on moral concerns about Care/harm, this did not explain the lack of support for our hypothesis. Thus, there has to be some other reason why people who score high (vs. low) on the IRS are no more inclined to favour the evidence-based belief over the motivated belief in this scenario. One possibility is that, because people who score high (vs. low) on the IRS tend to be more liberal in their political orientation (Ståhl et al., 2016), they are more inclined to view a reliance on racial base rates as a strong taboo (Tetlock et al., 2000). We further examined this possibility in Studies 3 A and 3B, by manipulating whether the protagonist formed a belief about a young black man or a young white man (Study 3 A), or whether the evidence-based belief was formed based on racial statistics or based on statistics associated with clothing (Study 3B). Our first preregistered hypothesis was again that the IRS would interact with the belief manipulation to predict belief evaluations. Our second preregistered hypothesis was that this interaction would be found in the white (vs. black) target condition in Study 3 A, as well as in the clothing (vs. race) condition in Study 3B.

Study 3A and 3B

Participants and design. We requested 600 U.S. residents from Cloud research for each study, and we obtained 610 responses for Study 3 A, and 623 responses for Study 3B. However, due to substantial missing data, the final sample in Study 3 A only consisted of 515 participants (56.5% men, 43.5% women, <.01% nonbinary/other, $M_{age} = 37.7$, $SD = 14$). The race/ethnicity distribution was 62% Caucasian, 23.7% African American, 6% Asian, 5.2% Latino, 0.4% Native American, and 2.5% other. Similarly, in Study 3B, the final sample only consisted of 514 participants due to

missing data (52% men, 47% women, 1% nonbinary/other, M_{age} = 44, SD = 12). The race/ethnicity distribution was 75% Caucasian, 12% African American, 6% Asian, 4.5% Latino, and 0.4% Native American. With regards to education, 88% had at least some college education, 11% had a high school diploma, and less than 1% had not completed high school. Sensitivity analyses conducted using G*power (Faul et al., 2009) indicated that we had 80% power to detect a small effect (R^2 = .014) in each study.

Study 3 A had a 2 (belief: evidence-based/motivated) x 2 (race: black/white) between-subjects factorial design. Study 3B had a 2 (belief: evidence-based/motivated) x 2 (cue: race/bandana) between-subjects factorial design. Both studies were preregistered (Study 3 A: https://aspredicted.org/wvv4-px7j.pdf; Study 3B: https://aspredicted.org/x3v6-t5gs.pdf.)

Procedure and materials. The scenarios were identical to the race scenario in Study 2, with the following exceptions. In the white condition (Study 3 A) we changed the description of the small town such that it had a problem with 80% of young white (rather than black) men being dangerous gang members, and the journalist was approached by a young white (rather than black) man. In the bandana condition (Study 3B), race was never mentioned. Instead, participants were told that 80% of young men wearing a red bandana were members of the dangerous gang, and the journalist was approached by a young man in a red bandana. Belief was manipulated in the same way as in Study 2, except that the motivated belief was justified by not wanting to judge a person based on their clothing (rather than their skin colour) in Study 3B. We used the same items to measure belief evaluation (Study 3 A: α = .76, Study 3B: α = .75) and again used the IRS to measure individual differences in commitment to epistemic rationality (Study 3 A, α = .87; Study 3B, α = .84). Due to a coding error, the IRS was always administered prior to the scenarios in Study 3 A, whereas the order was counterbalanced (as intended) in Study 3B. At the end of Study 3B, participants also filled out the Harm/care scale (Atari et al., 2023), the politeness and compassion scales from the BFAS (DeYoung et al., 2007), and a three-item measure of their political orientation (α = .95). Specifically, they were asked about their political views on economic issues, social issues, as well as their general political outlook (1 = *very liberal*, 7 = *very conservative*). These measures were included for exploratory analyses to see if any of these variables served as moderators.

Results and discussion

All descriptive statistics from these two studies are presented in Tables 5 and 6. Our hypotheses were tested using multiple linear regression. In Study 3 A, belief (1 = evidence-based, 0 = motivated, race (1 = white, 0 = black), the IRS (standardized), and their interactions were included in the regression model. In Study 3B, (or cue), the IRS (standardized), and their interactions were included in the regression model. In Study 3B,

belief (1 = motivated, 0 = evidence-based), cue (1 = race, 0 = bandana), the IRS (standardized), and their interactions were included in the regression model.

Study 3 A. As can be seen in Table 7, the belief manipulation had no effect on belief evaluations in this study. Moreover, there was no belief by IRS interaction, nor a three-way interaction between belief, race, and the IRS. Thus, we found no support for our hypotheses. The only significant effect on belief evaluations was that of the IRS. Across belief and race conditions, the IRS was associated with more favourable belief evaluations.

As in previous studies, we also analysed the item about how justified the protagonist's belief was separately. Here we did find a main effect of belief, as participants evaluated the evidence-based belief as more justified than the motivated belief, $b = .94$, $SE = .13$, $p < .001$. However, this effect was not moderated by race, nor by the IRS. Thus, again we did not find any support for our hypotheses.

To summarise, people viewed the evidence-based belief as more justified than the motivated belief. However, they did not discriminate between evidence-based and motivated beliefs in their evaluations of how favourable and appropriate the belief was to hold. Lastly, evaluations of the belief were not affected by the race of the target, nor by the IRS. Thus, regardless of the target's race, people who score high (vs. low) on the IRS were no more inclined to favour evidence-based beliefs over motivated beliefs when the evidence-based belief involved racial profiling based on crime statistics.

Study 3B. As can be seen in Table 8, we found a main effect of belief, indicating that the evidence-based belief was evaluated slightly more favourable than the motivated belief. However, this effect was qualified by a belief by cue interaction, depicted in Figure 5. Simple slopes analyses indicated that, in the bandana condition, the evidence-based belief was more favourably evaluated than the motivated belief, $b = -0.29$, $SE = .14$, $p = .04$. By contrast, in the race condition, the motivated belief was marginally more favourably evaluated than the evidence-based belief, $b = .258$, $SE = .14$, $p = .06$. However, none of these effects were qualified by the IRS. Thus, we found no support for our hypotheses.

We also ran a number of exploratory regression analyses to examine whether any of the effects obtained were moderated by political

Table 5. Means, standard deviations, alphas, and zero-order correlations with confidence intervals (Study 3 A).

Variable	*M*	*SD*	1	2
1. IRS	5.62	0.94		
2. CRT	4.88	1.72	.13** [.04, .21]	
3. Belief eval.	4.49	1.14	.15** [.07, .23]	.01 [−0.08, .10]

Note. *$p < .05$ **$p < .01$.

Table 6. Means, standard deviations, and correlations with 95% confidence intervals (Study 3B).

Variable	*M*	*SD*	1	2	3	4	5	6	7
1. CRT	4.25	2.16							
2. IRS	5.76	0.91	.13** [.05, .22]						
3. MRS	3.97	1.12	−0.00 [−0.09, .08]	.33** [.25, .40]					
4. Belief eval.	4.67	1.12	−0.02 [−0.11, .07]	.07 [−0.01, .16]	−0.06 [−0.14, .03]				
5. Politeness	4.07	0.59	.11* [.02, .19]	.31** [.23, .38]	−0.10* [−0.18, −0.01]	.07 [−0.02, .15]			
6. Compassion	3.98	0.77	.01 [−0.08, .10]	.25** [.17, .33]	−0.02 [−0.11, .06]	.03 [−0.05, .12]	.51** [.44, .57]		
7. Care	3.90	0.92	−0.09* [−0.18, −0.01]	.29** [.21, .37]	.11* [.02, .19]	.10* [.01, .18]	.39** [.31, .46]	.71** [.66, .75]	
8. PO	3.69	1.78	−0.13** [−0.21, −0.04]	−0.26** [−0.33, −0.17]	−0.10* [−0.19, −0.01]	.06 [−0.03, .14]	−0.11* [−0.20, −0.03]	−0.15** [−0.23, −0.06]	−0.19** [−0.27, −0.10]

Note. *$p < .05$ **$p < .01$.

Table 7. Multiple regression predicting belief evaluation (Study 3 A).

	DV			
Predictors	Estimates	*Std. Error*	*Statistic*	*p*
(Intercept)	4.48	0.10	44.69	**<0.001**
Race [White]	−0.10	0.14	−0.71	0.480
Belief [Evidence-based]	−0.04	0.14	−0.28	0.781
IRS	0.22	0.10	2.20	**0.028**
Race [White] × Belief [Ev-based]	0.33	0.20	1.65	0.100
Race [White] × IRS	−0.12	0.14	−0.88	0.378
Belief [Ev-based] × IRS	0.02	0.14	0.12	0.904
(Race [White] × Belief [Ev-based]) × IRS	−0.01	0.20	−0.06	0.951
Observations	516			
R^2 / R^2 adjusted	0.035 / 0.022			

Table 8. Regression analysis of belief evaluation (Study 3B).

	Belief evaluation		
Predictors	Estimates	*CI*	*p*
(Intercept)	4.75	4.56 – 4.94	**<0.001**
cue [race]	−0.15	−0.42 – 0.12	0.278
belief [Motivated]	−0.29	−0.57 – −0.01	**0.040**
IRS	0.07	−0.14 – 0.27	0.537
cue [race] × belief [Motivated]	0.55	0.16 – 0.94	**0.006**
cue [race] × IRS	−0.07	−0.35 – 0.20	0.603
belief [Motivated] × IRS	0.11	−0.17 – 0.40	0.426
(cue [race] × belief [Motivated]) × IRS	−0.00	−0.39 – 0.39	0.992
Observations	514		
R^2 / R^2 adjusted	0.026 / 0.013		

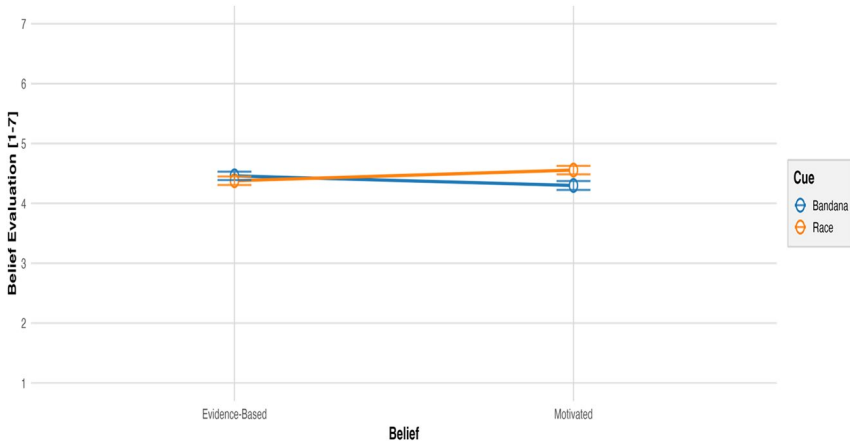

Figure 5. Belief evaluation as a function of cue and belief (Study 3B).

orientation, care/harm, compassion, or politeness. The only individual difference variable that served any moderating role was political orientation. Specifically, political orientation moderated the effect of belief, $b = -0.33$,

SE = .13, *p* = .019. Simple slopes analyses showed that conservatives (+1SD) evaluated the evidence-based belief mora favourably than the motivated belief, *b* = −0.28, *SE* = .07, *p* < .001. By contrast, liberals (−1SD) evaluated the motivated belief more favourably than the evidence-based belief, *b* = .18, *SE* = .07, *p* = .01. This effect was not moderated by cue (race vs. bandana), as there was no three-way interaction (*p* = .65). Thus, conservatives viewed it as more appropriate to rely on knowledge about crime statistics rather than moral considerations when forming a belief about the young man on the sidewalk, regardless of whether the crime statistics applied to his race or clothing. By contrast, liberals viewed it as more appropriate to rely on moral considerations, rather than knowledge about crime statistics, regardless of whether the crime statistics concerned his race or clothing. Importantly, when controlling for political orientation, and its interactions, the IRS still did not emerge as a moderator of any of the effects of belief and/or cue (*p*s > .21).

Lastly, we also conducted a separate analysis of the item specifically asking how justified the belief was. Once again, we found that the evidence-based belief was perceived as more justified than the motivated belief, *b* = −1.00, *SE* = .13, *p* < .001. However, this effect was qualified by a belief by cue interaction, *b* = −61, *SE* = .26, *p* = .017. Simple slopes analyses revealed that, although the evidence-based belief was always perceived as more justified than the motivated belief, this effect was larger in the bandana condition, *b* = −1.31, *SE* = .18, *p* < .001 than in the race condition, *b* = −0.70, *SE* = .18, *p* < .001. Neither of these effects were moderated by the IRS (*p*s > .60).

To conclude, people consistently viewed the evidence-based belief as more justified than the motivated belief. However, they nevertheless evaluated the less justified (motivated) belief slightly more favourably than the more justified (evidence-based) belief, but only when the more justified belief was based on race-based stereotyping. When stereotyping was based on clothing, the evidence-based (vs. motivated) belief was evaluated more favourably. As was the case in Study 3 A, the IRS played no role in evaluations of these beliefs. Thus, when evidence-based beliefs involve stereotyping, regardless of whether it is based on skin colour or clothing, people who are more committed to epistemic rationality do not evaluate evidence-based beliefs (vs. motivated beliefs) any more favourably than people who are less committed to epistemic rationality. The only individual difference variable that did serve a moderating role in this study was political orientation. Whereas conservatives evaluated the evidence-based (vs. motivated) belief more favourably, liberals evaluated the motivated (vs. evidence-based) belief more favourably. This effect was not moderated by whether the crime statistics were based on race or clothing.

General discussion

It has frequently been assumed that people think they should strive to form beliefs in an impartial, evidence-based manner, and that they will

try to correct for bias in their reasoning whenever they become aware of it. Indeed, even though there are individual differences in how committed people are to various epistemic virtues, people generally endorse open-minded, impartial, logical, and evidence-based reasoning (e.g., Baron, 2019, Pennycook et al., 2020, Ståhl et al., 2016). However, recent research suggests that people sometimes view beliefs as justified and appropriate when formed based on non-evidential considerations, such as whether or not they think the belief will increase the chances of achieving an important goal, promote a moral good, or prevent a violation of a moral taboo (Cusimano, 2025; Cusimano & Lombrozo, 2021a, 2023; Ståhl & Cusimano, 2024; Tenney et al., 2015). In fact, people can condone the formation of a belief based on non-evidential considerations while being aware that the belief is inconsistent with the best available evidence (Cusimano & Lombrozo, 2021a). These findings raise questions regarding how evidence-based belief formation can be promoted under such circumstances. Specifically, although we know that accuracy prompts, reflection, cognitive sophistication, and commitment to openminded, evidence-based reasoning generally serve to protect the integrity of people's reasoning about various epistemically suspect ideas, we do not know whether this is the case in situations where non-evidential justifications for belief are perceived as appropriate.

The purpose of the present research was to begin to address this question, by examining whether individual differences in commitment to epistemic rationality predict how people evaluate beliefs explicitly formed based on motivated and non-evidential (vs. evidential) considerations. In an exploratory study, and a pre-registered replication, we generally found support for the hypothesis that people who are strongly (vs. weakly) committed to epistemic rationality are less (more) inclined to view beliefs formed based on non-evidential (evidential) considerations as justified and appropriate. This was the case regardless of whether the non-evidential considerations were driven by motivation to be overconfident about a new start-up business/risky financial investment, or by motivation to stay loyal to an old friend. In all these cases, people who were strongly committed to epistemic rationality viewed the belief formed based on evidential considerations as more justified and appropriate than the belief formed based on non-evidential considerations. By contrast, people who were weakly committed to epistemic rationality viewed both beliefs as equally justified and appropriate. We were also able to rule out that people who are strongly (vs. weakly) committed to epistemic rationality were more inclined to favour an evidence-based belief over a morally motivated belief simply because they care less about loyalty (they did not).

Across both studies, there was one circumstance under which commitment to epistemic rationality did not predict evaluations of beliefs formed based on evidential (vs. non-evidential) considerations. This was the case when the evidence-based belief required racial stereotyping based on forbidden base rates, whereas the motivated belief was explicitly based

on a reluctance to judge people based on the colour of their skin. Notably, this exception was not explained by elevated concerns about harming vulnerable people among individuals who were strongly (vs. weakly) committed to epistemic rationality (Study 2).

In Study 3 A and 3B we set out to explain why evaluations of evidence-based beliefs that required racial stereotyping were not predicted by commitment to epistemic rationality. If the reason is that racial stereotyping of a black man is considered a particularly strong moral taboo in the U.S., then commitment to epistemic rationality might promote a belief formed based on statistical evidence if the target was white rather than black. However, contrary to this hypothesis, the race of the target did not moderate participants' evaluations of the evidence-based (vs. motivated) belief, and this was the case regardless of their level of commitment to epistemic rationality (Study 3 A). In Study 3B we investigated whether commitment to epistemic rationality would promote a belief formed based on statistical evidence if the cue tied to the statistical evidence was something less controversial than skin colour (a bandana). People did evaluate the motivated (vs. evidence-based) belief more favourably in the race condition than in the bandana condition, consistent with the notion that racial profiling is viewed as a strong taboo. However, commitment to epistemic rationality did not moderate this effect. In fact, the only individual difference variable that served a moderating role in this study was political orientation. Whereas liberals favoured the motivated (vs. evidence-based) belief, conservatives favoured the evidence-based (vs. motivated) belief. Notably, this was the case regardless of whether the relevant cue was skin colour or clothing.

Limitations and suggestions for future research

Because the IRS, the scenarios, and the dependent variables were administered during the same session, the results obtained could potentially be inflated by a consistency effect. That is, participants who filled out the IRS first (vs. evaluated the scenarios first) may have adjusted their responses to the scenarios (vs. the IRS) to appear more consistent than they actually are. Notably, we tried to address this very problem by counterbalancing the order in which we administered the IRS and the dependent variables (except in Study 3 A). However, future studies could address this issue more definitively by administering the predictor variables and the scenarios (and dependent measures) in separate sessions.

Another limitation of the present research is that the underlying mechanism responsible for the focal interaction effect remains unclear. One possibility is that the interaction emerges because people who are highly committed to epistemic rationality disagree with the notion that motivated reasoning has beneficial downstream consequences. However, another possibility is that, even though people who are highly committed to

epistemic rationality agree that motivated reasoning can have beneficial consequences, they believe that it is more important to be epistemically rational. Future studies could address this issue by assessing people's beliefs about the practical and moral consequences of motivated reasoning directly and examine how they relate to the IRS.

Another question raised by the present findings is whether people's level of commitment to epistemic rationality also predicts their own likelihood of engaging in conscious motivated reasoning. Notably, it has been documented that people not only condone consciously morally motivated reasoning under certain circumstances (Cusimano & Lombrozo, 2021a), but also that they can engage in it themselves (Cusimano & Lombrozo, 2023). Because the IRS assesses how important it is for people that they *personally* form epistemically rational beliefs, we strongly suspect that people who score high (vs. low) on the IRS will be more reluctant to engage in conscious motivated reasoning. However, this question has yet to be addressed empirically.

Taken together, the present findings suggest that being strongly committed to epistemic rationality generally predicts a preference for evidence-based (vs. motivated) belief formation, even in situations when the evidence is in stark conflict with motivation to take important non-evidential considerations into account. Specifically, being committed to epistemic rationality predicts a preference for evidence-based belief formation in situations where being overconfident is expected to improve the chances of attaining an important personal goal (Tenney et al., 2015), as well as when forming a belief that is inconsistent with the evidence is in the service of being loyal to a friend (Cusimano & Lombrozo, 2021a). However, the present findings also suggest that being committed to epistemic rationality will not always predict more favourable evaluations of evidence-based belief formation—at least when it involves stereotyping someone based on statistical evidence tied to either their skin colour or clothing.

It is not yet clear why people's commitment to epistemic rationality is irrelevant for belief formation preferences under these circumstances. One possibility is that stereotyping/profiling based on base rates has become such a politicised issue in the U.S., that the primary factor determining whether you are willing to rely on statistical evidence for such purposes is your political orientation. Indeed, some of our findings pointed in this direction, as political orientation was the only individual difference variable that moderated the effect of the belief manipulation. Another possibility is that the exception is broader than clear cases of stereotyping/profiling and may apply to situations where the evidence is statistical (vs. diagnostic) in nature more generally (e.g., Cusimano & Lombrozo, 2021b; Tribe, 1971; Wells, 1992). Notably, whenever evidence was provided in the present studies that was directly diagnostic of the target person (or business), being strongly committed to epistemic rationality predicted more favourable evaluations of the evidence-based (vs. motivated) belief. By contrast, whenever the evidence was statistical in nature, rather than directly diagnostic, being committed to epistemic rationality ceased to predict a preference for the evidence-based belief.

Future studies are needed to determine whether this exception is restricted to cases of stereotyping/profiling, or whether it applies to statistical (vs. diagnostic) evidence more generally. Our suspicion is that the former is likely to be the case, and that what ultimately matters is whether or not the evidence-based belief violates a moral taboo. After all, in the absence of any direct diagnostic information, relying on (accurate) statistical evidence is a more epistemically rational reasoning strategy than to ignore such evidence altogether (Brodt & Ross, 1998; Jussim et al., 1996; Lewis et al., 2012; Madon et al., 1998). Therefore, it would be surprising if people who are strongly committed to epistemic rationality would be no more favourably inclined towards such statistically based reasoning than people who are not—at least in cases where it does not violate a moral taboo. Future studies, systematically varying whether the evidence is statistical or directly diagnostic in nature, as well as whether the evidence violates a moral taboo or not, are needed to resolve this issue.

Another question raised by the present findings, as well as by previous research suggesting that people can consider certain beliefs justified and appropriate even though they are inconsistent with the available evidence (Tenney et al., 2015, Cusimano & Lombrozo, 2021a), is to what extent they truly do view those beliefs as justified and appropriate—or merely claim that this is the case. It has long been established that people can engage in strategic impression management, as well as self-deceptive enhancement, when they respond to sensitive questions (e.g., Leary & Kowalski, 1990; Paulhus, 2001). Future studies are needed to clarify to what extent such processes intentionally or unintentionally are distorting people's belief evaluations, as well as whether people's level of commitment to epistemic rationality may moderate such distortions.

Conclusion

People can view it as justified and appropriate to form beliefs based on moral, and even purely instrumental, considerations, even when aware that the beliefs are inconsistent with the available evidence. The present research provides initial evidence that not everyone is equally inclined to embrace such conscious motivated reasoning. In particular, we have demonstrated that people who are more strongly committed to being epistemically rational are less (more) inclined to view beliefs as justified and appropriate when based on non-evidential (evidential) considerations—unless adopting the evidence-based belief requires statistically based stereotyping.

Disclosure statement

No potential conflict of interest was reported by the author(s).

The data supporting this article are openly available on OSF https://osf.io/zv4bf/?view_only=2e2c23b057d74ad78ca6b2f886b5d8dd.

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Appendix

Start-up scenario (evidence-based)

Jane has received an inheritance, and one of the decisions she has made is to invest the inheritance in a new business. (The decision to invest in this business was Jane's to make.) If the business is successful, the profit will be substantial, but if the business fails, Jane will lose the investment entirely. Jane's role in the business will be active—she will have a seat on the board of directors and will have considerable influence over how the business is run. Jane's true chance of success is 65% Based on her objective assessment of the situation, Jane believes that her chances of success are 65%.

Start-up scenario (motivated)

Jane has received an inheritance, and one of the decisions she has made is to invest the inheritance in a new business. (The decision to invest in this business was Jane's to make.) If the business is successful, the profit will be substantial, but if the business fails, Jane will lose the investment entirely. Jane's role in the business will be active—she will have a seat on the board of directors and will have consider-

able influence over how the business is run.Jane's true chance of success is 65% However, Jane believes that it is important to be an optimist in order to succeed. She therefore believes that her chances of success are 80%.

Stock scenario (evidence-based)

Marissa has a large amount of student debt. To help her cover her student loans, she invested heavily in a risky stock, hoping to hit it big and pay her loans all at once. The evidence suggests the stock is not performing well. If the stock continues to decline, Marissa will have lost money from her investment and still have to make student loan payments. Based on the evidence, Marissa no longer believes the investment will pay off. She therefore decides to sell the investment and continue slowly paying off her student loans.

Stock scenario (motivated)

Marissa has a large amount of student debt. To help her cover her student loans, she invested heavily in a risky stock, hoping to hit it big and pay her loans all at once. The evidence suggests the stock is not performing well, but Marissa finds it helpful to be optimistic and wait for a future turnaround. If the stock continues to decline, Marissa will have lost money from her investment and still have to make student loan payments. Marissa continues to believe that the stock will come around, and therefore holds on to the investment in hopes of paying off her loan in full.

Friend scenario (evidence-based)

Adam and John grew up together on the same block and attended the same elementary school, middle school, and high school. Throughout this time, they were very good friends. They helped each other in school and supported each other in hard times. After high school, they started college at different schools at opposite ends of the country. Even though they no longer saw each other, they kept in touch by talking on the phone a couple times a month. They both continued to think of each other as close friends. A few months after starting college, Adam learns from a mutual friend that John is in trouble at his college. Apparently, the campus police found a small bag of cocaine in John's dorm room and are now investigating him for known possession of a controlled substance. When Adam asks John about the rumour, John admits that he is being investigated but then says, "I know it looks bad but please believe me that it isn't mine. You're one of my closest friends and I need someone on my side". Over the next few days, Adam learns more about John's situation from some mutual friends who attend John's school. Adam learns that John does not share his dorm room with anyone else at his school. Additionally, people have seen John hanging around known drug dealers off campus. Lastly, John's class attendance has been poor since the semester began. Although everyone is speculating about whether John is guilty or innocent, the case will not be settled for a couple of months. Based on all of the evidence, Adam believes that his friend John is guilty of possession of a controlled substance.

Friend scenario (motivated)

Adam and John grew up together on the same block and attended the same elementary school, middle school, and high school. Throughout this time, they were very good friends. They helped each other in school and supported each other in hard times. After high school, they started college at different schools at opposite ends of the country. Even though they no longer saw each other, they kept in touch by talking on the phone a couple times a month. They both continued to think of each other as close friends. A few months after starting college, Adam learns from a mutual friend that John is in trouble at his college. Apparently, the campus police found a small bag of cocaine in John's dorm room and are now investigating him for known possession of a controlled substance. When Adam asks John about the rumour, John admits that he is being investigated but then says, "I know it looks bad but please believe me that it isn't mine. You're one of my closest friends and I need someone on my side". Over the next few days, Adam learns more about John's situation from some mutual friends who attend John's school. Adam learns that John does not share his dorm room with anyone else at his school. Additionally, people have seen John hanging around known drug dealers off campus. Lastly, John's class attendance has been poor since the semester began. Although everyone is speculating about whether John is guilty or innocent, the case will not be settled for a couple of months. Because he wants to be loyal to his old friend, Adam believes that John is innocent.

Race scenario (evidence-based)

Dara is a reporter in a small town. The town is home to a local gang which has recently been in the news because of a crime spree. In the past couple of months, there have been about 20 violent robberies or assaults traced back to this gang. Dara is writing a story about the atmosphere around town after these events. She is conducting interviews with residents and observing (from a distance) how people interact with one another. Dara has learned that most of the young Black men who live in the town are affiliated with the gang. Based on her reporting, as well as other data, she knows that 4 out of 5 (80%) of young Black men in this town are in a gang. Among the poor young male Black population, the percentage is even higher. It is now late in the day and Dara is walking down the street to her car. When she looks up, she sees a young Black man ahead of her walking in the opposite direction - they will cross paths soon. He is a wearing a jacket with a name patch that says Michael. He seems to be texting on an old cell phone. Dara notices that his shirt, like the rest of his clothes, is old and dirty, suggesting that he is fairly poor. Dara wonders whether he is a gang member but cannot tell for certain. Everyone she has spoken to has told her how dangerous the gang has become, so if he is a gang member, then he very likely to be dangerous. However, Dara does not want to think that she is in danger right now, and she does not want to be like the cops in the area who have been profiling young Black men. Based on her knowledge that 80% of young black men in the neighbourhood are gang members, and an even higher percentage among poor black men, Dara believes that Michael is likely to be a dangerous gang member.

Race scenario (motivated)

Dara is a reporter in a small town. The town is home to a local gang which has recently been in the news because of a crime spree. In the past couple of months, there have been about 20 violent robberies or assaults traced back to this gang. Dara is writing a story about the atmosphere around town after these events. She is conducting interviews with residents and observing (from a distance) how people interact with one another. Dara has learned that most of the young Black men who live in the town are affiliated with the gang. Based on her reporting, as well as other data, she knows that 4 out of 5 (80%) of young Black men in this town are in a gang. Among the poor young male Black population, the percentage is even higher. It is now late in the day and Dara is walking down the street to her car. When she looks up, she sees a young Black man ahead of her walking in the opposite direction - they will cross paths soon. He is a wearing a jacket with a name patch that says Michael. He seems to be texting on an old cell phone. Dara notices that his shirt, like the rest of his clothes, is old and dirty, suggesting that he is fairly poor. Dara wonders whether he is a gang member but cannot tell for certain. Everyone she has spoken to has told her how dangerous the gang has become, so if he is a gang member, then he very likely to be dangerous. However, Dara does not want to think that she is in danger right now, and she does not want to be like the cops in the area who have been profiling young Black men. Because Dara does not want to judge Michael based on the colour of his skin, Dara believes that Michael is not a dangerous gang member.

Bandana scenario (evidence-based)

Dara is a reporter in a small town. The town is home to a local gang which has recently been in the news because of a crime spree. In the past couple of months, there have been about 20 violent robberies or assaults traced back to this gang. Dara is writing a story about the atmosphere around town after these events. She is conducting interviews with residents and observing (from a distance) how people interact with one another. Dara has learned that most of the young men who live in the town, and who wear a red bandana, are affiliated with the gang. Based on her reporting, as well as other data, she knows that 4 out of 5 (80%) of young men in this town, wearing a red bandana, are in a gang. Among poor young men, the percentage is even higher. It is now late in the day and Dara is walking down the street to her car. When she looks up, she sees a young man with a red bandana ahead of her, walking in the opposite direction - they will cross paths soon. He is a wearing a jacket with a name patch that says Michael. He seems to be texting on an old cell phone. Dara notices that his shirt, like the rest of his clothes, is old and dirty, suggesting that he is fairly poor. Dara wonders whether he is a gang member but cannot tell for certain. Everyone she has spoken to has told her how dangerous the gang has become, so if he is a gang member, then he is very likely to be dangerous. Based on her knowledge that 80% of young men in the neighbourhood, who wear a red bandana, are gang members, and an even higher percentage among poor men, Dara believes that Michael is likely to be a dangerous gang member.

Bandana scenario (motivated)

Dara is a reporter in a small town. The town is home to a local gang which has recently been in the news because of a crime spree. In the past couple of months, there have been about 20 violent robberies or assaults traced back to this gang. Dara is writing a story about the atmosphere around town after these events. She is conducting interviews with residents and observing (from a distance) how people interact with one another. Dara has learned that most of the young men who live in the town, and who wear a red bandana, are affiliated with the gang. Based on her reporting, as well as other data, she knows that 4 out of 5 (80%) of young men in this town, wearing a red bandana, are in a gang. Among poor young men, the percentage is even higher. It is now late in the day and Dara is walking down the street to her car. When she looks up, she sees a young man with a red bandana ahead of her, walking in the opposite direction - they will cross paths soon. He is a wearing a jacket with a name patch that says Michael. He seems to be texting on an old cell phone. Dara notices that his shirt, like the rest of his clothes, is old and dirty, suggesting that he is fairly poor. Dara wonders whether he is a gang member but cannot tell for certain. Everyone she has spoken to has told her how dangerous the gang has become, so if he is a gang member, then he is very likely to be dangerous. Because Dara does not want to judge Michael based on the colour of his bandana, she believes that Michael is not a dangerous gang member.