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Moral identity, moral self-efficacy, and moral elevation: A sequential mediation model
predicting moral intentions and behaviour

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Abstract

Witnessing acts of uncommon moral virtue can elicit feelings of moral elevation, which translate further into prosocial intentions and behaviour. Recent findings suggest that moral identity strengthens the elevation response after witnessing such acts. In the present paper, we propose that the positive relationship between moral identity and elevation is mediated by perceived moral self-efficacy (i.e., perceived ability to behave up to one's moral standards), as a result of the moral vicarious experience. We present a set of five studies that tested the effect of moral identity (either measured or manipulated) and moral self-efficacy on elevation, prosocial intentions, and behaviour, following exposure to an act of uncommon virtue. Results supported a sequential mediation model: the positive effect of moral identity on elevation was mediated by moral self-efficacy; and elevation then mediated the effect of moral identity on prosocial intentions (Studies 3a-3b-4) and behaviour (Study 4). Implications and limitations are outlined.

Keywords: moral identity; moral self-efficacy; moral elevation; moral behaviour; prosociality

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History is rife with examples of extraordinary characters who depicted uncommon goodness during their life. However, morality is not restricted to these extraordinary individuals; in fact, ordinary people enact their moral values and show prosocial behaviour in everyday life. Interestingly, witnessing someone performing acts of moral virtue that benefit others can have a strong impact on the observer by eliciting feelings of moral elevation (Haidt, 2003; for a review, see Pohling & Diessner, 2016). Elevation is a distinct positive emotion that entails feelings of warmth in the chest, feeling uplifted, moved, optimistic about humanity, willingness to do good, and genuine motivation to become a better person (Haidt, 2003; Pohling & Diessner, 2016). Acts of charity, kindness, compassion, and self-sacrifice, for example, have been identified as elicitors of elevation (Haidt, 2000, 2003) to the extent that they constitute acts of moral *beauty* and not solely moral *goodness* (for the distinction, see e.g., Diessner, Solom, Frost, Parsons, & Davidson, 2008). Recent evidence suggests that the experience of moral elevation affects people's behaviour (for a review, see Thomson & Siegel, 2017), for example increasing willingness to help an experimenter by performing a boring task (Schnall & Roper, 2012; Schnall, Roper, & Fessler, 2010) or to donate to a charity (Freeman, Aquino, & McFerran, 2009; Thomson & Siegel, 2013; Van de Vyver & Abrams, 2015) – despite a few contradictory findings (e.g., Landmann, Cova, & Hess, 2019). However, the precursors of elevation are not elucidated yet. Propensity to feel inspired by others acting moral could depend on individual factors such as moral identity (e.g., Aquino, McFerran, & Laven, 2011).

In the present paper, we draw from past research to propose that, when witnessing the same act of uncommon moral virtue, people with higher moral identity experience stronger

elevation, and additionally that this effect is mediated by the strength of their moral self-efficacy. We present five studies that test for the effect of moral identity and moral self-efficacy on elevation, and in turn on prosocial intentions and behaviours.

Moral Elevation and the Role of Moral Identity

Elevation is not the only possible response to observing an act of moral virtue. Some studies suggest that people can devalue and exclude ‘moral refusers’ (people who denounce certain behaviours out of moral concerns) when they had previously performed the objectionable behaviour themselves (Monin, Sawyer, & Marquez, 2008; for a review, see Cramwinckel, van den Bos, & van Dijk, 2015). These derogatory reactions to moral refusers seem to arise from the threat they pose to the observer’s self-concept, who appear as a less moral person in comparison (Cramwinckel, van Dijk, Scheepers, & van den Bos, 2013). Hence, outstanding moral people could sometimes be seen as a source of discomfort rather than inspiration since they make the observers’ moral shortcomings salient (O’Connor & Monin, 2016). Indeed, a procedure of self-affirmation, likely to reduce self-threat, was found to increase elevation following exposure to an act of moral virtue and result in greater volunteering (Schnall & Roper, 2012). Another study found that a ‘morally motivated innovator’ who deviates from the status quo out of moral concerns (vs. self-interest) was evaluated positively and elicited inspiration only when participants were passive observers (i.e., their self-concept was not threatened). In contrast, when participants were explicitly asked to adopt the same behaviour (i.e., self-involved and directly comparable), the innovator was evaluated negatively and provoked irritation (Bolderdijk, Brouwer, & Cornelissen, 2018). This mirrors findings in social comparison literature, which describe how upward comparison can be either inspiring or threatening (Collins, 1996; see also Monin, 2007).

The question then arises of who will experience more elevation and how. Recent findings suggest that the observer’s moral identity has an important role to play. Indeed, the

beliefs people have about their own morality could serve as a buffer against the threat triggered by the comparison with other moral exemplars. Stronger moral identity (i.e., strong consideration of moral values as central for the definition of one's identity; see Aquino & Reed, 2002) is associated with higher levels of moral sensitivity (i.e., ability to identify complex moral issues) and moral cognition processes (i.e., understanding of others' feelings and capacity to respond appropriately; Boegershausen, Aquino, & Reed, 2015; Hertz & Krettenauer, 2016). It is, furthermore, a reliable determinant of moral behaviour (see Shao, Aquino, & Freeman, 2008, for a review).

Aquino et al. (2011) proposed that people with stronger moral identity would be more prone to be inspired by other people's uncommon moral deeds. The authors argue that moral identity affects the interpretation of social information (see also Smith & Semin, 2007). As such, 'when people are exposed to acts of uncommon moral goodness, those whose moral identity is more central to their self-definition assign greater psychological weight, relevance, and value to these actions compared with people whose moral identity is less self-defining. As a result, the former will experience a heightened state of moral elevation relative to the latter' (Aquino et al., 2011, p. 705). Indeed, following exposure to an act of moral goodness, participants with a stronger moral identity reported stronger elevation and desire to be a better person, and as a result expressed stronger prosocial intentions and donated more money to a charitable organisation. Moreover, elevation mediated the relation between moral identity and prosocial intentions and behaviour. The positive effect of moral identity on elevation has been replicated in recent studies (Lai, Haidt, & Nosek, 2014; Landmann et al., 2019).

To the best of our knowledge, these studies remain the only few to date to investigate the relations between moral identity and elevation (but for one other study considering moral identity as a moderator of the effect of elevation on prosocial behaviour; Ding et al., 2018). Further exploring the route from moral identity to elevation, and from there to moral

behaviour, is hence necessary. The purpose of this paper is twofold: we aim to replicate recent findings showing that moral identity positively predicts elevation following exposure to an act of moral goodness, and additionally to explore the paths through which it does so. We propose that moral self-efficacy, a specific form of individual self-efficacy, could mediate the relationship between moral identity and moral elevation.

Moral Self-Efficacy

Self-efficacy is a core feature of the human sense of agency and represents one's beliefs about one's capacity to achieve intended and desired results (Bandura, 1982; also see Maddux & Kleiman, 2018, for a recent review). As such, personal self-efficacy is an important determinant of motivation and goal-oriented behaviour. Individuals with high levels of self-efficacy are more likely to maintain their efforts in the face of adversity and succeed in reaching their goals (Bandura, 2013). Self-efficacy beliefs are conceived on a continuum going from a general sense of agency to domain-specific efficacy. As such, moral self-efficacy is a specific form of efficacy that pertains to the perceived capacity to behave up to one's moral standards (e.g., Bandura, 1999). It fosters living up to one's moral values, enhancing engagement in prosocial behaviours and inhibiting engagement in transgressive behaviour (Bandura, 1999; Bandura, Barbaranelli, Caprara, & Pastorelli, 1996). The concept has been studied under various denominations such as moral efficacy (May, Luth, & Schwoerer, 2014), moral agency (Bandura, 1999; Bandura et al., 1996), self-perception of behavioural conduct (Harter, 1988), or empathic self-efficacy (with a narrower focus on prosocial rather than moral behaviour; Caprara, Alessandri, & Eisenberg, 2012; Caprara & Steca, 2005). Research on moral self-efficacy yet remains relatively scarce, in comparison with general self-efficacy or other specific forms of it.

Drawing from several lines of research, we propose that moral self-efficacy plays a role in observers' emotional reaction to acts of uncommon goodness. First, with respect to

appraisal models, emotional reaction to a stimulus depends on the combination of a primary appraisal of the stimulus and a secondary appraisal of the observer's coping potential (see Lazarus & Folkman, 1984; Smith & Kirby, 2009) – or self-efficacy. We propose that moral self-efficacy determines whether a target believes they are capable of behaving as morally as the moral model or not, hence ultimately facilitating an 'appreciative' emotional response (i.e., elevation) rather than a 'resentment' response (e.g., jealousy; Monin, 2007). Second, the relationship between self-efficacy and elevation could be that of a cyclical process (Smith & Kirby, 2009). Indeed, according to Bandura (1977), vicarious experience is one of the four vectors of personal efficacy. The successful other serves as a role model, transmitting competencies and proving that attainment of the goal is possible, which boosts the personal sense of efficacy (Bandura & Menlove, 1968). This, in turn, results in higher success for the observer in adopting the behaviour themselves (e.g., Jackson, Steptoe, & Wardle, 2015).

Following the same reasoning, we propose that observing somebody living up to their moral values serves as a moral vicarious experience and – to the extent that the model is perceived as inspiring and not threatening – increases the sense of moral self-efficacy of the observer further. Accordingly, 'attainable' exemplars of moral behaviour (i.e., reasonable levels of moral engagement, and sources more similar to the self) promoted voluntary service activity engagement to a greater extent than extraordinary and unattainable exemplars (Han, Kim, Jeong, & Cohen, 2017), probably because the former role model convey a greater sense of achievability than the latter.

In summary, exposure to acts of moral virtues should not only be related to feelings of elevation but also to the observer's moral self-efficacy. We propose that the action tendencies defining elevation (i.e., desire of becoming a better person and help others) are underpinned by an upstream boost of moral self-efficacy.

Overview and Hypotheses

Integrating the literature on elevation, moral identity, and moral self-efficacy, we propose that moral identity predicts elevation as a response to exposure to an uncommon act of moral virtue, and that this relationship is mediated by an increase in perceived moral self-efficacy. Indeed, holding exposure to a moral role model constant, the role model will be considered as more inspiring (and less threatening for the self) when the person's moral identity (serving as a buffer) is high. Moral self-efficacy (as a result of the vicarious experience) would hence increase as a function of moral identity. We also propose that moral self-efficacy is different from general self-efficacy and can be measured as such, and that it would be moral, but not general, self-efficacy that mediates the identity-elevation relationship (see Caprara et al., 2012). The boosted sense of moral self-efficacy would then lead to higher elevation and willingness to act in a moral manner oneself. With respect to past findings, we expect that moral identity would also positively predict prosocial intentions and behaviours, and that these effects would be mediated by elevation (Aquino et al., 2011). In other words, we propose a sequential mediation model in which, following exposure to an act of moral virtue, the positive effect of moral identity on prosocial intentions and behaviour is sequentially mediated by moral self-efficacy, then elevation.

We present a set of five studies that tested these hypotheses. Study 1 aimed, first, to replicate past findings that exposure to an act of moral virtue increases elevation and that moral identity moderates the effect of the exposure manipulation. As such, the first study compared a condition of exposure to a moral act to a control condition (neutral). Following studies then focused solely on situations of exposure to a moral act, maintaining it constant across all participants (i.e., no control condition). Study 2 tested whether moral (as opposed to general) self-efficacy would mediate the relationship between moral identity and elevation following exposure to an act of moral virtue. Studies 3a and 3b aimed to replicate the

mediation model while (trying to) manipulate identity. They included measures of prosocial intentions to test further the effect of elevation, self-efficacy, and identity. Finally, Study 4 constituted a last replication of the sequential mediation model while also considering prosocial behaviours.

For the first study, we arbitrarily determined a sample size of $N = 150$, which would be enough to detect a small-to-medium interaction effect (exposure to moral act \times moral identity) with 80% power. For the second study, which focused on just one exposure condition, we set a sample size of $N = 100$. Simulations studies suggest that this sample size would be enough to detect a medium-size indirect effect with 80% power (test based on joint-significance assuming standardised path α and β of medium size; see Fritz & MacKinnon, 2007). Since Study 3a included new variables and a more complex sequential mediation, we decided to increase the sample size to $N = 150$. For the following studies (Studies 3b and 4), we conducted an a priori Monte Carlo power analysis for indirect effects (Schoemann, Boulton, & Short, 2017) based on the observed effect size in Study 3a. The analysis recommended $N = 142$ to detect a similar indirect effect through two sequential mediators at 80% power. We hence maintained a sample size of approx. 150 for Studies 3b and 4.

Study 1

Method

Participants and Procedure

Participants were recruited through the online platform for data collection Prolific (see Peer et al., 2017). For this study and all the following ones, conditions for participation were to be a British national, currently living in the United Kingdom and to be aged 18 or older. One hundred forty-two participants (50 male, 90 female, and 2 undisclosed) of a mean age of 32.5 years ($SD = 12.6$) completed the survey.ⁱ

Participants first indicated demographics and self-rated their moral identity. They then read a short newspaper excerpt whose content constituted the experimental manipulation. They were randomly assigned to one experimental condition in a between-subject design (Exposure to an act of uncommon virtue: $n = 70$; Control: $n = 72$). To make the cover story more realistic, participants then answered a few filler questions about the excerpt (e.g., was the content boring/interesting, trustworthy/not trustworthy) before reporting to what extent they felt different emotions after the reading (elevation and filler emotions; see below). They were finally fully debriefed and thanked for their participation. All data are publicly available on the OSF page dedicated to the project: <https://osf.io/jzf4n/>.

Material

Moral identity. We measured moral identity through the virtue subscale of the Contingencies of Self-Worth instrument (Crocker, Luhtanen, Cooper, & Bouvrette, 2003), which consisted of five items (e.g., ‘I couldn’t respect myself if I didn’t live up to a moral code’) on a 10-point scale (1 = strongly disagree, 10 = strongly agree; Cronbach’s $\alpha = .83$, McDonald’s $\omega_h = .74$, $M = 7.25$, $SD = 1.63$).

Experimental manipulation: Exposure to an act of uncommon virtue. In the Exposure condition, participants read a text describing how a homeless woman in Canada had found a lost purse containing thousands of dollars and had returned it with its entire content, hence demonstrating exceptional honesty.¹ In the Control condition, the text described a rare form of moon eclipse (“Strawberry Moon eclipse”) that had recently been visible in Canada. Both texts were formatted on the same template and were the same length (median reading time of 39 seconds).

¹ The excerpt used can be found here: <https://propelsteps.wordpress.com/2013/09/03/inspirational-incredible-people-who-returned-money-they-found/>

Elevation. We drew from Schnall et al. (2010) and measured elevation with six items in relation with the newspaper excerpt participants had read: ‘How do you feel after having read at the article?’ (‘moved’, ‘uplifted’, ‘optimistic about humanity’, ‘warm feeling in chest’, ‘want to help others’, and ‘want to become a better person’) on a 9-point scale (1 = did not feel at all, 9 = felt very strongly; $\alpha = .94$, $\omega_h = .88$, $M = 4.79$, $SD = 2.27$). Zero-order correlation between moral identity and elevation was $r(140) = .19$, $p = .023$.ⁱⁱ

Results

We regressed elevation on Experimental condition (-1 = Control, +1 = Elevation), moral identity (standardised) and their interaction (overall model: $F(3, 138) = 85.8$, $p < .001$, $R^2_{\text{adj}} = .64$). The analysis yield a main effect of the experimental condition, so that elevation was higher following the Elevation text ($M = 6.57$, $SD = 1.37$) than the Control text ($M = 3.06$, $SD = 1.48$), $b = 1.75$, $SE = .11$, $t(138) = 15.4$, $p < .001$, Cohen’s $d = 2.61$, 95% CI [2.16, 3.07]; as well as a main effect of moral identity, so that stronger moral identity led to higher elevation, $b = .40$, $SE = .11$, $t(138) = 3.54$, $p = .001$, $d = 0.29$, 95% CI [0.13, 0.44]. Finally, the expected Experimental condition \times moral identity interaction was also significant, $b = .25$, $SE = .11$, $t(138) = 2.20$, $p = .030$, $d = 0.19$, 95% CI [0.02, 0.34]. Decomposition of simple effects show that moral identity had a positive impact on elevation in the Elevation condition, $b = .66$, $SE = .16$, $\beta = .29$, $t(138) = 4.19$, $p < .001$, but no impact in the Control condition, $b = .15$, $SE = .17$, $\beta = .07$, $t(138) = 0.92$, $p = .36$.

Discussion

This first study replicated past findings by Aquino et al. (2011) that moral identity moderates the extent to which people experience feelings of elevation in response to witnessing an act of uncommon virtue. Importantly, this result arose while relying on a different measure of moral identity (i.e., virtue subscale of the contingencies of self-worth scale) than previous research (i.e., internalisation subscale of the self-importance of moral

identity scale). As such, it constitutes an important conceptual replication, which both asserts the relevance of the present scale and strengthens the reliability of past findings. Having asserted that the material used was sensitive and reliable, we hence moved on to the test of our specific hypothesis and the investigation of the role of moral self-efficacy in the moral identity/elevation relation. To simplify the methodology and analyses, the following studies focused on a situation of exposure to an act of uncommon virtue. In other words, we did not include a control condition in these studies but maintained the exposure to a moral act constant by subjecting all participants to the same elevation-inducing text reading.

Study 2

Method

Participants and Procedure

Participants were recruited on Prolific under the same conditions as the previous study. One hundred and two British participants (66 female and 36 male) of a mean age of 36 years old ($SD = 13.4$) completed the survey.ⁱⁱⁱ

Participants first indicated demographics and self-rated their moral identity (details of the scales are reported below). All participants then read the elevation-inducing newspaper excerpt used in Study 1. Participants described to what extent they found the behaviour depicted in the article positive, moral, and hard to achieve (filler items), and reflected on the feelings of elevation they felt following their reading (elevation measure). They finally completed measures of moral self-efficacy and general self-efficacy. Descriptive statistics and reliability indices are reported in Table 1.^{iv}

Material

Moral identity. We relied on the same measure of moral identity as in Study 1 (five items, 10-point scale).

Elevation. Elevation was measured as in Study 1 in relation with the newspaper excerpt participants had read (six items, 9-point scale).

General self-efficacy. We relied on Chen, Gully, and Eden (2001)'s scale to measure general self-efficacy. The scale included eight items (e.g., 'Even when things are tough, I can perform quite well') measured on a 10-point scale (1 = cannot do at all, 10 = certainly can do).

Moral self-efficacy. Given that previous measures of moral self-efficacy often have a specific focus (e.g., focusing on adolescents, Harter, 1988; focusing on ethics in work settings, May et al., 2014), we developed a new scale composed of five items (e.g., 'I will be able to behave according to my moral principles') measured on a 10-point scale (1 = cannot do at all, 10 = certainly can do; see Table 1).

Results

Self-Efficacy Measures

Since this study relied on a new measure of moral self-efficacy as a separate construct from general self-efficacy, we started by ensuring that our items indeed measured two different constructs. The 13 items were included in an exploratory factorial analysis (maximum likelihood, extraction based on Eigenvalues > 1) with oblique rotation (Oblimin). The analysis yielded a 2-factor solution accounting for 73% of variance. The first factor corresponded to general self-efficacy and the second to moral self-efficacy (factors were positively correlated, $r = .60$). No cross-loadings exceeded $|.25|$. Therefore, we conducted separate analyses on moral self-efficacy and general self-efficacy scores (all items and loadings are reported in Appendix 1).

Mediation through Moral Self-Efficacy

Following recent recommendations (Yzerbyt, Muller, Batailler, & Judd, 2018), we ran a joint-significant test to examine the component paths, then relied on a bootstrap resampling

method to examine the magnitude of the indirect effect (percentile bootstrap confidence intervals). Analyses were run on R with the *lavaan* package (Rosseel, 2012). We computed a structural equation model (maximum likelihood estimator) including the measurement model (i.e., definition of the latent variables) and the structural model. The resulting mediation model included elevation as dependent variable, moral identity as predictor, and moral self-efficacy as mediator. Figure 1 depicts the structural model tested, and results are reported in Table 2.

As predicted, moral identity was positively linked to both moral self-efficacy and elevation. Moral self-efficacy also positively predicted elevation. The indirect effect of identity on elevation was significant while the direct effect was not. Hence, the data supported the hypothesised correlational mediation model. We additionally tested for an alternative mediation model, in which the effect of moral self-efficacy on elevation would be mediated by moral identity. This model was not supported by the data (see endnote).^v

Mediation through General Self-Efficacy

The mediation model was then run with general self-efficacy in lieu of moral self-efficacy. Moral identity was positively related to general self-efficacy, $b = .57$, $SE = .13$, 95% CI [.32, .83], $z = 4.46$, $p < .001$. However, general self-efficacy did *not* predict elevation, $b = .16$, $SE = .11$, 95% CI [-.07, .38], $z = 1.38$, $p = .17$, hence infirming the idea of a mediation through general self-efficacy (indirect effect: $b = .09$, $SE = .07$, 95% CI [-.05, .25], $z = 1.33$, $p = .18$).

Discussion

This second study tested the idea that moral self-efficacy mediates the positive effect of moral identity on feelings of elevation experienced after having being exposed to an act of moral virtue. Results of a factorial analysis ensured that moral self-efficacy is a separate construct from general self-efficacy that can be reliably measured. Mediation analyses

supported our hypothesis and showed that moral self-efficacy, but not general self-efficacy, mediated the path from moral identity to elevation. Two limitations must be highlighted. First, all our variables were measured in a correlational design, rather than manipulated. As such, all conclusions pertaining to causality must be taken with caution. Second, this study did not investigate the downstream consequences of elevation in terms of intentions to act in a prosocial manner. Studies 3a and 3b were designed to address these limitations.

Study 3a

Studies 3a and 3b aimed to replicate our initial findings while manipulating, instead of measuring identity. Indeed, manipulating the independent variable is necessary to support claims of causality in a mediation model (see e.g., Spencer, Zanna, & Fong, 2005). We adapted an identity manipulation from the literature. However, as described below, the initial manipulation was unsuccessful (Study 3a), which led us to revise and modify the manipulation, this time successfully (Study 3b). In addition, Studies 3a and 3b included measures of prosocial intentions that were absent in the first two studies, in order to test whether increased elevation led to higher intentions. Study 3a relied on a general prosocial intentions measure, while Study 3b used a more specific measure related to a determined charity.

Method

Participants and Procedure

Participants were recruited on Prolific under the same conditions as previous studies. One hundred and fifty-eight British participants (103 female, 54 male, and 1 undisclosed) of a mean age of 33.9 years ($SD = 12.4$) completed the online survey. Participants were randomly assigned to one condition of moral identity in a between-subject design (low identity: $n = 78$, high identity: $n = 80$). Again, we maintained the exposure to an act of uncommon virtue constant by providing all participants with the same elevation-inducing newspaper excerpt as in Studies 1 and 2. Participants read the article, answered a few questions about the behaviour

depicted in it, and reported their feelings of elevation. They completed the moral self-efficacy scale and finally rated their prosocial intentions. All descriptive statistics are reported in Table 3.

Material

Moral identity manipulation. We adapted a manipulation described by Lacasse (2016; Study 2), which was itself inspired from past research (Chaiken & Baldwin, 1981; van der Werff, Steg, & Keizer, 2014). The manipulation took the form of a moral behaviour checklist and relied on the assumption that reminding a person of their numerous (vs. few) past moral behaviour would punctually make their moral identity more (vs. less) salient and stronger. We selected 19 behaviours from the index of moral behaviour developed by Chadwick, Bromgard, Bromgard, and Trafimow (2006), which were related to different dimensions of morality. Participants indicated whether each behaviour from the list apply to them ('True for me') or not ('Not true for me') but instructions differed. In the high identity condition, participants were instructed to tick the behaviour if they performed it 'at least occasionally'. In the low identity condition, they could only tick it if they performed it 'a majority of the time.' To increase the salience of the manipulation, participants were asked to count and report how many behaviours, out of 19, they had checked as true for them.

Moral identity manipulation check. We included three items directly measuring moral identity to serve as a manipulation check (items adapted from Lacasse, 2016: 'Acting morally is an important part of who I am', 'I am the type of person who acts morally', and 'I see myself as a moral person'; 7-point scale, 1 = strongly disagree, 7 = strongly agree). An exploratory factor analysis (maximum likelihood, extraction based on Eigenvalues > 1) on these items revealed a single-factor solution accounting for 91% of variance (loadings ranging from .89 to .97).

Elevation. The same six items as in Studies 1-2 were used to assess elevation. To decrease experimental bias, we also included filler items that were not taken into consideration in the analyses (e.g., ‘indifferent’, ‘puzzled’).

Moral self-efficacy. The same items as in Study 2 were used to measure moral self-efficacy.

Prosocial intentions. We measured intentions through the 4-items Prosocial Behavioural Intentions Scale (e.g., ‘How willing you would be to help care for a sick friend or relative’; Baumsteiger & Siegel, 2018) on a 7-point scale (1 = strongly disagree, 7 = strongly agree).

Results

Moral Identity Manipulation Checks

We first tested whether the moral identity manipulation had an impact on the number of behaviours from the checklist ticked as true, and on self-reported moral identity. Contrary to expectations, participants did not significantly self-attribute more behaviours in the high identity condition (high identity: $M = 14.4$, $SD = 2.33$; low identity: $M = 13.9$, $SD = 2.68$), $F(1, 156) = 1.35$, $p = .25$, $\eta^2_p = .009$, neither did they report different levels of self-reported moral identity (high identity: $M = 5.94$, $SD = 1.15$; low identity: $M = 5.82$, $SD = 1.29$), $F(1, 156) = 0.39$, $p = .53$, $\eta^2_p = .002$. Hence, the manipulation seemed to have failed. We additionally tested the effect of the manipulation on elevation and moral self-efficacy. In both cases, the effect was not significant (elevation: $F(1, 156) = 0.23$, $p = .63$, $\eta^2_p = .001$; moral self-efficacy: $F(1, 156) = 1.09$, $p = .30$, $\eta^2_p = .007$). This made the test of any mediation effect impossible.

Mediation through Moral Self-Efficacy

Given the manipulation failure, we decided to test our hypotheses while relying on the identity measure (initially designed as a manipulation check) instead of the manipulation

itself. We computed a structural equation model to test the overall model and analyse how moral identity, moral self-efficacy, and elevation sequentially accounted for prosocial intentions. The model included the measurement model and the structural model (see Figure 2 and Table 4).

Congruent with our hypothesis, self-reported moral identity was positively related to moral self-efficacy, elevation, and prosocial intentions. Moral self-efficacy was also positively related to elevation and intentions; and elevation to intentions. The indirect effect of identity on elevation was significant while the direct effect was not. Finally, its indirect effect on intentions (through self-efficacy and elevation) was significant while the direct effect was not. The direct effect of moral self-efficacy remained significant despite the introduction of the other variables.

We additionally tested for two alternative models: a parallel mediation model and a reverse sequential model where the effect of moral self-efficacy on intentions would be mediated by identity and elevation. These models were not supported by the data (see endnote).^{vi}

Study 3b

Study 3b was a replication of Study 3a except that we (*a*) modified and strengthened the identity manipulation procedure, and (*b*) used a different measure of prosocial intentions.

Method

Participants and Procedure

Similar to the previous studies, 155 British participants (107 female, 46 male, and 2 undisclosed; mean age = 35.1, *SD* = 12.3) were recruited through Prolific and completed the online survey. They were randomly assigned to one condition of moral identity in a between-subject design (low identity: *n* = 76, high identity: *n* = 79). After completing the manipulation, all participants read a newspaper excerpt designed to trigger elevation, answered a few

questions about the behaviour depicted in the article, and reported their feelings of elevation, before completing the moral self-efficacy scale. For this study, we used a different excerpt from that of the previous studies to ensure against any material-specific effect. The story told was very similar except it focused on a (homeless) man from Boston, who had found and returned a huge bag of money.² Finally, we introduced participants to a (fictitious) local organisation and measured their intentions to help the organisation personally. All descriptive statistics are reported in Table 5.

Material

Moral identity manipulation. The manipulation used in Study 3a was adapted in two respects. First, we conducted item-by-item descriptive analyses to identify which behaviours of the checklist had been differentially rated as true as a function of the condition. We retained the items that proved most sensitive and adapted or replaced those that did not. Second, we changed the instructions to increase their impact. In the high identity condition, participants were instructed to tick a behaviour as true if they ‘perform the behaviour at least occasionally or more often. Otherwise, please select “not true”.’ In the low identity condition, participants were instructed to only tick a behaviour as true if they ‘perform the behaviour every time you have the opportunity to do it, without exception. If you don't usually perform the behaviour or do it only some of the time, please select “not true”.’ The final checklist included 18 items. As in the previous study, participants counted and reported how many behaviours they had checked as true for them. All items and descriptive statistics are reported in Appendix 3.

Moral identity manipulation check. The same three items as in Study 3a served as a manipulation check (see Lacasse, 2016).

² The excerpt can be found at: <https://www.bbc.com/news/world-us-canada-24170670>

Elevation and moral self-efficacy. The same items as in Study 3a were used to assess elevation following the reading of the newspaper excerpt, as well as moral self-efficacy.

Prosocial specific intentions. Participants were introduced to a local organisation, Intergenerational Bridge, described as working to reduce the gap between generations. The organisation ‘aims to offer classes and activities where the young and the elderly are brought together to work jointly (for example, gardening) or to exchange their different knowledge and abilities (for example, senior participants help the younger ones by providing cooking classes whereas younger help the senior ones by increasing their computer literacy).’ Four items measured participants’ willingness to help the association by: ‘making a donation to support the project’, ‘volunteer time to support the project’, ‘advertise the project amongst friends and acquaintances’, and ‘support the project in another way’ (7-point scale, 1 = not at all, 7 = absolutely).

Results

Moral Identity Manipulation Check

We first tested whether the moral identity manipulation had had an impact on the number of behaviours from the checklist ticked as true, and on self-reported moral identity. This time, participants did significantly self-attribute more behaviour in the high identity condition (high identity: $M = 12.2$, $SD = 2.66$; low identity: $M = 6.70$, $SD = 3.48$), $F(1, 153) = 123.0$, $p < .001$, $\eta^2_p = .45$. Similarly, participants self-reported higher moral identity in the high identity condition (high identity: $M = 6.05$, $SD = 0.87$; low identity: $M = 5.58$, $SD = 1.02$), $F(1, 153) = 9.48$, $p = .002$, $\eta^2_p = .058$. Hence, the manipulation seemed successful. Moreover, the identity manipulation marginally impacted elevation and moral self-efficacy: participants in the high identity condition reported marginally higher elevation (high identity: $M = 5.62$, $SD = 0.95$; low identity: $M = 5.29$, $SD = 1.16$), $F(1, 153) = 3.75$, $p = .055$, $\eta^2_p =$

.024, and higher moral self-efficacy (high identity: $M = 5.76$, $SD = 0.80$; low identity: $M = 5.53$, $SD = 0.80$), $F(1, 153) = 3.26$, $p = .073$, $\eta^2_p = .021$.

Mediation through Moral Self-Efficacy

We computed a structural equation model to test the overall model and analyse how moral identity, moral self-efficacy, and elevation sequentially accounted for prosocial intentions. Figure 3 depicts the structural model tested and results are reported in Table 4. Moral identity positively predicted elevation; however, its effect on self-efficacy was not found significant (albeit going in the expected direction), resulting in a nonsignificant indirect effect on elevation. Self-efficacy was positively related to elevation as well as prosocial intentions. Finally, moral identity marginally predicted prosocial intentions, but due to its nonsignificant relationship with self-efficacy, the indirect effect (through self-efficacy and elevation) was nonsignificant.

Discussion (Studies 3a and 3b)

In Studies 3a and 3b, we aimed to manipulate moral identity by making participants' past moral behaviour more or less salient. The manipulation failed in Study 3a. However, a readapted and reinforced manipulation proved more successful in Study 3b. Results of the two studies (with Study 3a relying on the identity manipulation check in lieu of the manipulation itself) partially replicated that of Study 2, although the identity manipulation (Study 3b) produced less clear effects than its measure (Study 3a). These studies also investigated the further step of the model, that is, prosocial intentions. Elevation, induced by reading a story depicting exceptional moral conducts, positively predicted intentions to behave in a prosocial manner in the near future (Study 3a) and willingness to personally help a local charitable organisation (Study 3b). Elevation also mediated the impact of moral identity on intentions, which is consistent with previous findings (Aquino et al., 2011). Hence, the results provide further support for our sequential mediation hypothesis.

Before concluding, we conducted one last study to test the effect of elevation, moral identity, and moral self-efficacy, on actual prosocial behaviour. Given the difficulties encountered when trying to manipulate identity, in Study 4 we measured it.

Study 4

Study 4 followed a procedure similar to that of the previous studies with the addition of a direct measure of prosocial behaviour. Participants were introduced to the same charitable organisation as in Study 3b. In addition to reporting their intention to volunteer for the charity, they had the opportunity of helping directly by generating and writing down up to three slogans that the charity could use in their information campaign (see details below).

Method

Participants and Procedure

One hundred and twenty-six British participants (92 female and 34 male; mean age = 34.7, $SD = 11.6$) were recruited through Prolific and completed the online survey. The procedure was similar to the previous studies.

Measures

Moral identity, elevation, moral self-efficacy, and prosocial intention measures. Moral identity was measured with the same three items as in Study 3a (adapted from Lacasse, 2016). Similar to Studies 2, 3a and 3b, all participants read an elevation-inducing newspaper article (same excerpt as in Study 3b), and elevation was measured following the reading with the same six items previously used. Moral self-efficacy was measured with the same five items as in previous studies. Finally, prosocial intentions were measured as in Study 3b and represented willingness to volunteer for the Intergenerational Bridge charity. All descriptive statistics are reported in Table 6.

Prosocial behaviour. Following the measure of intention to volunteer for the Intergenerational Bridge charity, we measured participants' immediate helping behaviour

towards the charity. Inspired by previous research (Soyer, Cornelissen, & Karelaia, 2013), we asked participants if they were willing to help the charity by providing slogans that could be used in an upcoming communication campaign. Specifically, instructions read: ‘The local organisation is currently trying to collect short and catchy slogans for their communication campaign, the aims being to increase awareness of the benefits of intergenerational contact. If you have any idea, we invite you to provide 1-3 slogans in the fields below. This could really help out! If you do not want to, you can skip this task.’ Hence, the task was voluntary and participants could skip it if they wanted to. A timer embedded in the online questionnaire measured how much time participants spent on the task (we applied a logarithmic transformation on the raw scores to normalise the distribution and make the variance more comparable to that of the other variables) and whether or not they had proposed at least one slogan. Overall, 32% of participants proposed at least one slogan.

Results

We computed a structural equation model to test the overall model and analyse how elevation, moral self-efficacy, and moral identity accounted for prosocial intentions and behaviour (MLM estimator: maximum likelihood estimation with robust standard errors and a Satorra-Bentler scaled test statistic). Figure 4 depicts the structural model tested and results are reported in Table 7.

Moral identity was positively related to moral self-efficacy and elevation, and moral self-efficacy was positively related to elevation, resulting in a significant indirect effect of identity on elevation (nonsignificant direct effect). Elevation was then significantly related to prosocial intentions. Moral identity had a significant effect on intentions, but with the introduction of the other variables in the model, the direct effect became nonsignificant (significant indirect effect through self-efficacy and elevation). Elevation was similarly related to the first behavioural outcome, time voluntarily spent generating slogans for the

charity. Moral identity had a significant effect on time spent, but with the introduction of the other variables in the model, the direct effect became nonsignificant (significant indirect effect through self-efficacy and elevation). Elevation was finally related to the second behavioural outcome, whether participants generated at least one slogan. The direct effect of moral identity on slogan generation was not significant, but its indirect effect (through self-efficacy and elevation) was.

Discussion

The last study provided further evidence that, after having been exposed to an act of moral virtue, people with a strong moral identity report higher feelings of elevation due to an increase in moral self-efficacy. These results hence replicated the mediation process already observed in the previous studies. Moreover, this study tested for the impact of moral identity, self-efficacy, and elevation, on prosocial behaviours and intentions. Results showed that elevation significantly and positively predicted the three outcomes considered (intention to volunteer for the Intergenerational Bridge charity, probability to voluntarily generate at least one slogan to help the charity, and time spent doing so). Moral identity had a direct effect on intentions and time spent generating slogans, which was mediated by levels of elevation. It had no direct effect, but only an indirect effect, on the probability to generate at least one slogan. It is possible that this last variable suffered from low sensitivity as only a third of participants generated one slogan or more. This, however, also means that participants did understand that the task was non-mandatory and only did it if they wanted to. In other words, it probably constitutes a valid measure of prosocial behaviour.

General Discussion

An increasing body of research investigates moral elevation as an emotional reaction to exposure to acts of uncommon moral virtue, and its effects on subsequent engagement in moral conducts. Less is known, however, about the precursors of elevation and related

individual differences. In the present research, we drew from past research that found moral identity to positively predict levels of elevation in response to witnessing an act of moral virtue (Aquino et al., 2011, Lai et al., 2014; Landmann et al., 2019). We extended this research by investigating the mechanisms underlying this relationship. Specifically, we proposed that moral self-efficacy would increase as a result of this moral vicarious experience but only to the extent that the model is considered as inspiring and not threatening. Moral identity serving as a buffer against such a comparison threat, it should positively predict moral self-efficacy. Moral self-efficacy was then expected to mediate the positive relationship between moral identity and elevation.

The present set of studies supported these hypotheses. Across five studies, results showed that after having been exposed to an outstanding moral person (as opposed to a control condition; Study 1), people with a stronger moral identity experienced stronger moral elevation in virtue of an increased moral self-efficacy (Studies 2 to 4). Moreover, the resulting feelings of elevation led to stronger prosocial intentions (Studies 3a, 3b, & 4) and helping behaviour (Study 4), which is consistent with past findings (e.g., Schnall & Roper, 2012; Schnall et al., 2010; Van de Vyver & Abrams, 2015). Finally, elevation mediated the impact of moral identity on intentions and behaviours, replicating the findings of Aquino et al. (2011). The mediation model held especially while measuring moral identity (Studies 2, 3a, 4); it was going in the same direction but less convincingly so when we attempted to manipulate identity (Study 3b). In sum, the present research replicated and strengthened past findings on the relationship between moral identity and moral elevation, and additionally provided a novel possible explanation of the mechanism through which this relationship develops.

Limitations and Future Directions

The present work presents some limitations that future studies would need to address. Firstly, we need to acknowledge that, since most of the measures were self-reported throughout the studies, they might have been affected by social desirability biases (e.g., Krumpal, 2013). This is particularly relevant for this set of studies since it mostly pertains to the moral domain, which is highly normatively connoted. However, we are confident that social desirability biases do not challenge our results: the instructions emphasised the anonymity of all participants' answers (Singer et al., 1995), and the online design theoretically ensured that participants did not feel observed while completing the study. Moreover, the low rate of compliance in the optional behavioural task (Study 4) can be interpreted as evidence that participants did not feel pressured into answering, or behaving, in a certain manner.

Another limitation is that all five studies focused on a similar population, that is, British laypeople recruited through an online survey platform. Even if some roots of morality seem universal (Hanel, Maio, & Manstead, 2019; Kinnier, Kernes, & Dautheribes, 2000), there might be cultural variations regarding the appreciation of the moral role model and people's response to it (e.g., Ding et al., 2018). Future research will need to try and replicate the present results across different countries and cultures.

On a more methodological note, we experienced complications when trying to experimentally manipulate moral identity. Indeed, even if identity can theoretically be manipulated and researchers have sometimes done it successfully (e.g., by making it contextually more or less salient or by relying on labelling; see Aquino et al., 2011; Lacasse, 2016), it remains difficult to do so. There is evidence that people with a strong identity (i.e., a better-defined self-concept) are less or not at all influenced by information challenging their self-concept (Chaiken & Baldwin, 1981; Markus & Kunda, 1986) and can even actively oppose this information (Swann & Hill, 1982). Aquino, Freeman, Reed, Felps, and Lim

(2009) also found participants with a strong moral identity centrality to be unresponsive to contextual cues aiming at increasing identity centrality. Conversely, participants with a weak moral identity centrality were unresponsive to cues aiming at decreasing identity centrality (a form of ceiling and floor effect). One solution for future research could be to preselect and retain only participants with a moderate identity centrality who should be influenced in both directions, when trying to manipulate identity. Pertaining to the present paper, the predominance of correlational measures forces us to use some caution when inferring from the results obtained. Correlationally speaking at least, the results support the sequential mediation model. However, there could be confounds in the measures and as such a part of the effect might be imputable to external, uncontrolled, factors. In addition to the preceding considerations about moral identity manipulation, future studies might also want to directly manipulate moral self-efficacy directly and test its effect on elevation and prosocial intentions (for a discussion on causal chain designs, see e.g. Spencer et al., 2005).

We must also acknowledge that the present research had a somewhat narrow focus, in the sense that we only investigated elevation as a response to exposure to uncommon acts of moral virtue. Future research should expand the present findings in several aspects. First, it would be useful to concurrently measure elevation and neighbouring other-praising emotions, such as gratitude and admiration. Past research suggests that elevation is more closely related to moral motivations than gratitude/admiration, and provokes a broader and more general motivation to become a better person and be kind to others, as compared to the more specific motivation to give back to a benefactor (as in the case of gratitude) or to work harder to reach personal goals (as in the case of admiration; see e.g., Algoe & Haidt, 2009). Hence, one might want to ensure that the effect of moral identity and moral self-efficacy pertains specifically to elevation rather to other-praising emotions in general.

Second, we did not investigate the ‘dark side’ of exposure to a moral model, which has proved able to trigger derogative reactions and irritation (e.g., Bolderdijk et al., 2018; Cramwinckel et al., 2015; Cramwinckel et al., 2013). It would be interesting to consider simultaneously positive (elevation) and negative (irritation) reactions to the moral model, as a function of moral identity and self-efficacy. The mechanisms could be similar for both reactions, that is, identity and self-efficacy could simultaneously increase elevation and decrease irritation, or irritation could be underpinned by other, specific, mechanisms.

In conclusion, we found moral identity to positively predict reactions to witnessing others acting in an exceptionally moral manner. In an applied perspective, we would suggest that presentation of moral exemplars, for example in the media, should be accompanied by an identity message aiming to re-establish or validate the receiver’s moral identity, so that they feel inspired to join efforts and live up to their moral standards.

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Tables

Table 1. *Descriptive statistics of the constructs measured in Study 2.*

		Descriptive statistics		Pearson's correlations		
		α / ω_h	$M (SD)$	2	3	4
1	Moral identity	.85 / .81	6.90 (1.85)	.25*	.39***	.48***
2	Elevation	.93 / .85	7.16 (1.57)		.45***	.22*
3	Moral self-efficacy	.90 / .82	7.64 (1.52)			.59***
4	General self-efficacy	.95 / .88	6.85 (1.61)			

Note. Moral identity, moral self-efficacy, and general self-efficacy were measured on a 10-point scale. Elevation was measured on a 9-point scale. Reliability indices included α (Cronbach's alpha) and ω_h (McDonald's omega hierarchical).

* $p < .05$, *** $p < .001$

Table 2. *Results of the mediation analysis conducted in Study 2.*

	$b (SE)$	95% CI of b	z -score	p -value
ID \rightarrow SE	.41 (.11)	[.20, .63]	3.77	< .001
SE \rightarrow Elev.	.49 (.14)	[.21, .77]	3.46	.001
ID \rightarrow Elev.*	.26 (.12)	[.03, .48]	2.19	.029
<i>Direct</i>	.05 (.12)	[-.19, .29]	0.43	.67
<i>Indirect</i>	.20 (.08)	[.06, .35]	2.68	.007

Note. ID = moral identity; SE = moral self-efficacy, Elev. = moral elevation.

* represent the total effect.

Table 3. *Descriptive statistics of the constructs measured in Study 3a.*

		Descriptive statistics		Pearson's correlations		
		α / ω_h	$M (SD)$	2	3	4
1	Moral identity	.95 / .93	5.88 (1.22)	.25**	.38***	.23**
2	Elevation	.92 / .88	5.58 (1.16)		.35***	.37***
3	Moral self-efficacy	.84 / .70	5.64 (0.86)			.42***
4	Prosocial intentions	.74 / .63	6.19 (0.79)			

Note. All constructs were measured on 7-point scales.

** $p < .01$, *** $p < .001$

Table 4. Results of the sequential mediation analyses conducted in Studies 3a and 3b.

	Study 3a				Study 3b			
	<i>b</i> (SE)	95% CI of <i>b</i>	<i>z</i>	<i>p</i>	<i>b</i> (SE)	95% CI of <i>b</i>	<i>z</i>	<i>p</i>
ID → SE	.30 (.06)	[.18, .42]	4.90	< .001	.11 (.07)	[-.03, .24]	1.57	.12
SE → Elev.	.43 (.13)	[.18, .69]	3.33	.001	.57 (.12)	[.35, .80]	4.95	< .001
ID → Elev.*	.24 (.08)	[.09, .39]	3.17	.002	.17 (.08)	[.001, .33]	1.97	.048
<i>Direct</i>	.11 (.08)	[-.05, .27]	1.38	.17	.11 (.08)	[-.05, .26]	1.35	.18
<i>Indirect</i>	.13 (.05)	[.04, .22]	2.85	.004	.06 (.04)	[-.02, .14]	1.51	.13
Elev. → Int.	.11 (.04)	[.03, .19]	2.62	.009	.60 (.14)	[.32, .88]	4.24	< .001
SE → Int.*	.25 (.07)	[.11, .38]	3.52	< .001	.48 (.17)	[.15, .81]	2.83	.005
<i>Direct</i>	.20 (.07)	[.07, .33]	3.07	.002	.13 (.17)	[-.20, .47]	0.78	.44
<i>Indirect</i>	.05 (.02)	[.01, .09]	2.15	.031	.34 (.10)	[.14, .55]	3.32	.001
ID → Int.*	.08 (.03)	[.01, .15]	2.28	.023	.23 (.12)	[-.005, .47]	1.92	.055
<i>Direct</i>	-.01 (.03)	[-.07, .06]	-0.20	.84	.12 (.11)	[-.10, .33]	1.07	.29
<i>Indirect</i>	.01 (.01)	[.001, .03]	2.01	.045	.04 (.03)	[-.02, .09]	1.43	.15

Note. ID = moral identity; SE = moral self-efficacy, Elev. = moral elevation, Int. = Prosocial intentions.

* represent total effects.

Table 5. Descriptive statistics of the constructs measured in Study 3b.

	Descriptive statistics		Pearson's correlations		
	α / ω_h	<i>M</i> (<i>SD</i>)	2	3	4
1 Moral identity (manipulation)	-	-	.16 [†]	.14 [†]	.16 [†]
2 Elevation	.92 / .85	5.46 (1.06)		.39 ^{***}	.44 ^{***}
3 Moral self-efficacy	.84 / .76	5.65 (0.80)			.27 ^{**}
4 Prosocial intentions	.84 / .80	6.60 (1.48)			

Note. Moral identity manipulation was coded: -1 = low identity, +1 = high identity. Elevation and moral self-efficacy were measured on 7-point scales. Prosocial intentions were measured on a 9-point scale.

[†] $p < .08$, ^{**} $p < .01$, ^{***} $p < .001$

Table 6. *Descriptive statistics of the constructs measured in Study 4.*

	Descriptive statistics		Pearson's correlations			
	α / ω_h	$M (SD)$	2	3	4	5
1 Moral identity	.94 / .93	6.05 (1.12)	.35***	.71***	.35***	.19*
2 Elevation	.91 / .76	5.48 (1.09)		.41***	.42***	.22*
3 Moral self-efficacy	.90 / .88	5.64 (0.89)			.36***	.11 ^{ns}
4 Prosocial intentions	.88 / .83	6.57 (1.80)				.16 ^{ns}
5 Time spent on slogans	-	36.0 (42.9)				

Note. Moral identity, elevation, and moral self-efficacy were measured on 7-point scales. Prosocial intentions were measured on a 9-point scale. Time spent on slogans in indicated in seconds.

* $p < .05$, *** $p < .001$

Table 7. Results of the mediation analysis conducted in Study 4.

	<i>b</i> (SE)	95% CI of <i>b</i>	<i>z</i>	<i>p</i>
ID → SE	.55 (.07)	[.42, .68]	8.22	< .001
SE → Elev.	.64 (.21)	[.23, 1.06]	3.05	.002
ID → Elev.*	.37 (.10)	[.18, .56]	3.74	< .001
<i>Direct</i>	.02 (.15)	[-.27, .30]	0.12	.91
<i>Indirect</i>	.35 (.12)	[.12, .59]	2.92	.003
Elev. → Int.	.43 (.13)	[.17, .70]	3.21	.001
SE → Int.*	.58 (.27)	[.05, 1.11]	2.13	.034
<i>Direct</i>	.30 (.27)	[-.23, .82]	1.11	.27
<i>Indirect</i>	.28 (.12)	[.04, .52]	2.26	.024
ID → Int.*	.48 (.13)	[.22, .75]	3.63	< .001
<i>Direct</i>	.16 (.18)	[-.19, .51]	0.90	.37
<i>Indirect</i>	.15 (.07)	[.02, .29]	2.21	.027
Elev. → PB1	.10 (.04)	[.02, .18]	2.37	.018
SE → PB1*	.09 (.05)	[-.01, .19]	1.71	.088
<i>Direct</i>	-.07 (.09)	[-.25, .11]	-0.74	.46
<i>Indirect</i>	.07 (.04)	[-.003, .13]	1.87	.062
ID → PB1*	.09 (.04)	[.01, .17]	2.29	.022
<i>Direct</i>	.09 (.06)	[-.03, .21]	1.46	.15
<i>Indirect</i>	.04 (.02)	[.01, .08]	2.35	.019
Elev. → PB2	.11 (.04)	[.02, .19]	2.45	.014
SE → PB2*	-.06 (.10)	[-.25, .13]	-0.64	.52
<i>Direct</i>	-.13 (.10)	[-.32, .06]	-1.31	.19
<i>Indirect</i>	.07 (.04)	[-.002, .14]	1.90	.057
ID → PB2*	.03 (.04)	[-.06, .11]	0.63	.53
<i>Direct</i>	.06 (.07)	[-.08, .20]	0.81	.42
<i>Indirect</i>	.04 (.02)	[.01, .09]	2.14	.033

Note. ID = moral identity; SE = moral self-efficacy, Elev. = moral elevation, Int. = Prosocial intentions; PB1 = time spent on the slogans (prosocial behaviour); PB2 = whether participants generated at least one slogan (prosocial behaviour).

* represent total effects.

Figures

Figure 1. *Structural mediation model tested in Study 2. Values represented standardised betas; the direct effect of moral identity on elevation is indicated under brackets. In all figures, dotted lines represent nonsignificant paths and regular lines significant paths.*

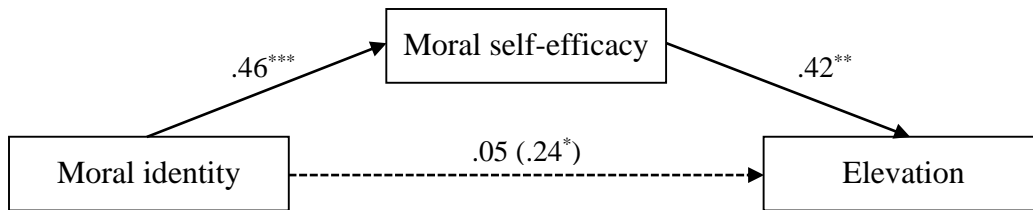


Figure 2. *Structural model tested in Study 3a. Values represented standardised betas; the direct effects are indicated under brackets.*

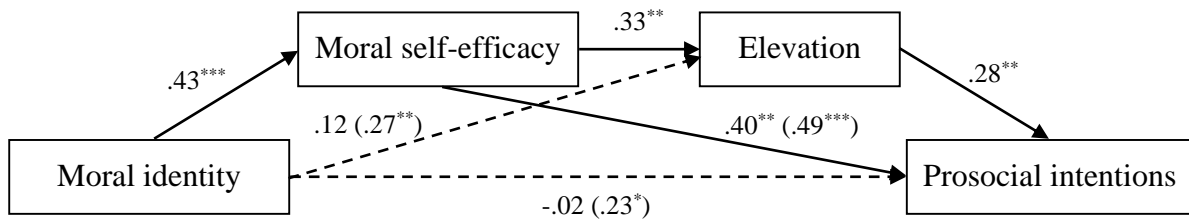


Figure 3. *Structural model tested in Study 3b. Values represented standardised betas; the direct effects are indicated under brackets.*

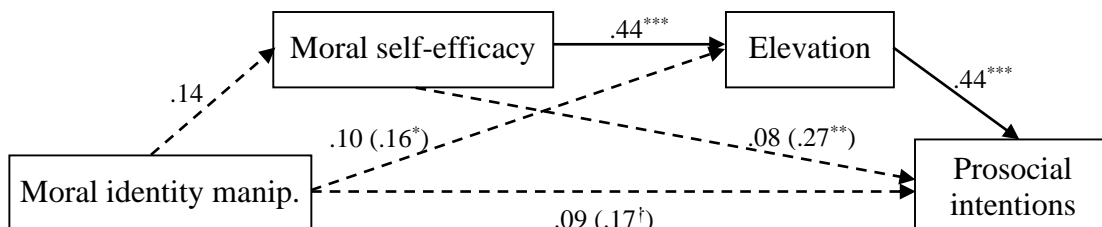
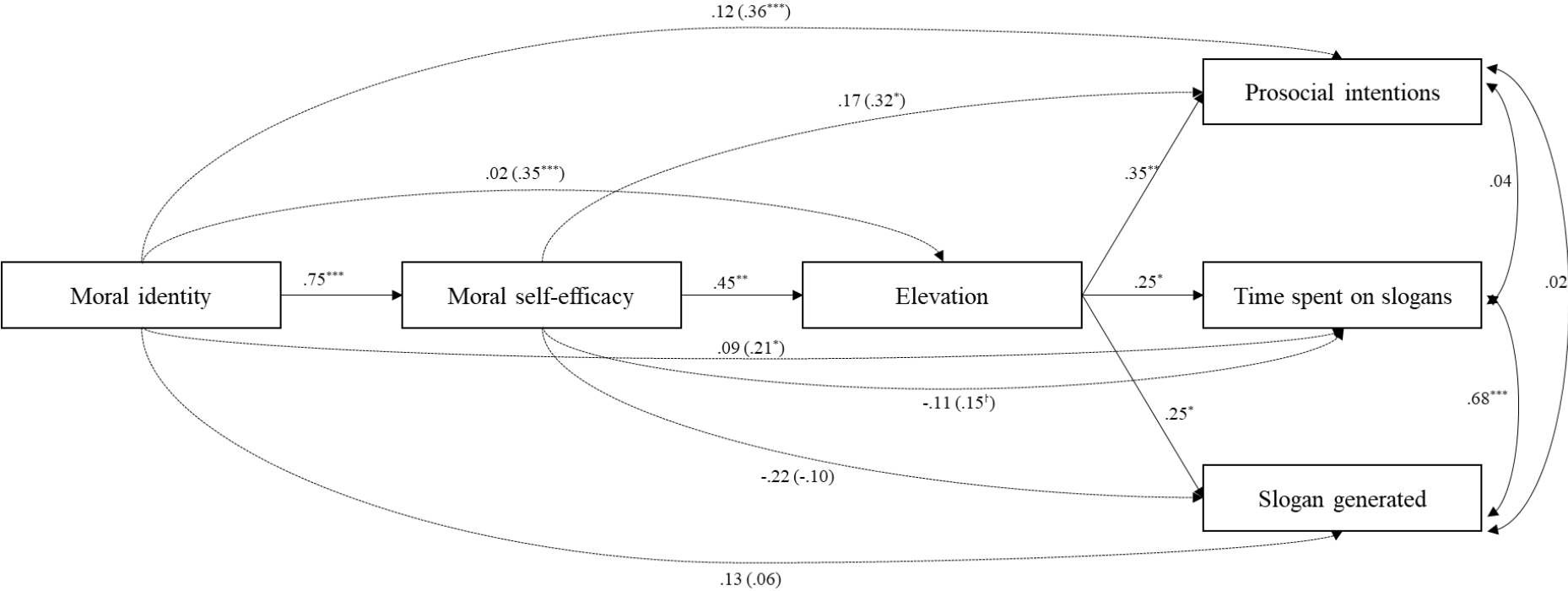


Figure 4. Structural model tested in Study 4. Values represented standardised betas; the direct effects are indicated under brackets.



Notes

ⁱ An additional eight participants completed the survey but did so in less than 2 minutes. To ensure response quality, we discarded these participants from all analyses. It can be noted that the pattern of results was roughly similar when including these participants.

ⁱⁱ We tested the unidimensional nature of the elevation through an exploratory factorial analysis (maximum likelihood, extraction based on Eigenvalues > 1 , rotation allowed). In this study and all the following, the analysis indicated a one-factor solution accounting for 68% to 77% of variance across studies. All items loadings were $> .65$ and most (80%) were greater than $.80$.

ⁱⁱⁱ Across studies, we found a main effect of gender on moral elevation ($0.30 < d_s < .67$) and prosocial intentions ($0.43 < d_s < 0.63$), so that women reported higher elevation and stronger intentions. Gender, however, did not interact with any of the predictors, nor did it hindered the mediation sequences (results were unchanged when gender was included as a predictor). Hence, we do not discuss this variable further.

^{iv} One could wonder why elevation was assessed before self-efficacy, when the hypothesis is that an increase in self-efficacy predicts an increase in elevation. The order was determined by the cover story and logical constraints: it would have been strange for the participant to be asked to read an article, then assess their self-efficacy which is not related to the article, and then come back to the article to evaluate the target's behaviour and emotions felt in reaction. In contrast, it was more logical to deal with the constructs directly related to the article first, and assess efficacy next. Moreover, we also tested for an alternative mediation model that follows the temporal order of measures (i.e., identity as IV, elevation as mediator, and self-efficacy as DV). The results provided no evidence of mediation this way. All paths were significant, $\beta > .24$, $p < .029$, and the total effect of identity on self-efficacy ($b = .42$, $SE = .11$, 95% CI [.20, .63], $z = 3.79$, $p < .001$) was not impacted by the inclusion of elevation in the model, indirect effect: $b = .34$, $SE = .10$, 95% CI [.14, .54], $z = 3.34$, $p = .001$.

^v We additionally tested for an alternative mediation model, in which the effect of moral self-efficacy on elevation would be mediated by moral identity. In this model, self-efficacy positively predicted moral identity, $b = .52$, $SE = .14$, 95% CI [.25, .79], $z = 3.78$, $p < .001$, but the effect of moral identity on elevation was not significant, $b = .05$, $SE = .12$, 95% CI [-.19, .29], $z = 0.43$, $p = .67$. The direct effect of self-efficacy on elevation was significant despite the inclusion of moral identity in the model, $b = .49$, $SE = .14$, 95% CI [.21, .77], $z = 3.46$, $p = .001$, and the indirect effect was not significant, $b = .03$, $SE = .06$, 95% CI [-.10, .15], $z = 0.43$, $p = .67$. Hence, the results suggest that self-efficacy mediates the effect of moral identity on elevation, and not the other way around.

^{vi} In Study 3a, we tested again for the alternative mediation model (mediation of the effect of self-efficacy by moral identity and elevation). In this model, the direct effect of self-efficacy on intention remained significant despite the inclusion of identity and elevation, $b = .20$, $SE = .07$, 95% CI [.07, .33], $z = 3.07$, $p = .002$. Elevation was not significantly predicted by identity, $b = .11$, $SE = .08$, 95% CI [-.05, .27], $z = 1.38$, $p = .17$, making the indirect effect non-significant, $b = .01$, $SE = .01$, 95% CI [-.01, .02], $z = 1.19$, $p = .23$. Hence, the data did not support the alternative mediation model. Studies 3b and 4 similarly provided no support for this alternative model.

In Studies 3a, 3b, and 4, we additionally tested for a parallel mediation model (i.e., where the effect of moral identity on intentions and behaviours would be mediated in parallel by self-efficacy and elevation). The indirect paths were significant; however, likelihood ratio tests indicated that the parallel mediation model fit the data less well than the sequential mediation model; for Study 3a, $\Delta\chi^2(1) = 11.6$, $p < .001$; for Study 3b: $\Delta\chi^2(1) = 14.7$, $p < .001$; for Study 4: $\Delta\chi^2(1) = 9.43$, $p < .001$.