Incremental mindsets and the reduced forgiveness of chronic failures

Arseny A. Ryazanov, Nicholas J.S. Christenfeld

Department of Psychology, University of California, San Diego, United States

ARTICLE INFO

Keywords:
Mindset
Lay theories
Morality
Blame
Empathy
Aggression
Motivation

ABSTRACT

Holding an incremental, rather than fixed, mindset confers wide-ranging benefits. Such benefits may, however, be accompanied by increased judgmental harshness of others’ shortcomings. Across 3 studies (Studies 1, 2a, 2b; N = 416), after an induction of either an entity or incremental view of empathy, aggression, or motivation, participants were asked to imagine someone continually failing to show, or showing in abundance, the particular trait, and were then asked how blameworthy/praiseworthy each of these individuals was. Incremental-induced participants blamed a person showing consistently maladaptive levels of the trait more than did entity-induced participants. Increased blame was mediated by increased perceived control over behavior. Study 3 (N = 107) extended findings regarding lay theories of empathy to protagonists in short narratives. Study 4 (N = 184) attempted to reconcile our findings with previous research, showing that increased blame attribution by incremental theorists occurs for continual, but not single failures. Overall results suggest that the benefits of an incremental mindset may be partially offset by greater judgmental harshness of others.

Messages of practically unlimited individual potential are ubiquitous, reinforcing the notion that with sufficient hours of practice, effort, desire, or even through sheer willpower, people can improve just about any aspect of themselves—whether they intend to lose weight, gain intelligence, or curb aggressive outbursts. There is a lay theory implicit in such messages—that we are not fixed, but changeable and improvable through persistent effort. But could such messages also, by emphasizing the efficacy of effort, convey that undesirable trait levels are a personal failing?

Implicit person theories capture the ways in which people organize and interpret their own and others’ abilities. These theories are often categorized into one of two competing assumptions about a given attribute: an entity theory holds the attribute to be a fixed, nonmalleable, trait-like entity, while an incremental theory holds that the attribute is malleable and can be developed with effort (Dweck, 1999; Dweck & Leggett, 1988). A student with an entity theory of intelligence, for example, believes that she has a certain level of intelligence, high or low, and that there is little she can do to change it. A student with an incremental view of intelligence, on the other hand, believes that intelligence can be improved, for example through extra time spent studying. Because incrementalists view trait levels as changeable, they emphasize the behavioral and psychological mediators of traits, such as effort and situational constraints, rather than the underlying levels of the traits themselves (Dweck, Chiu, & Hong, 1995). Incrementalists are more likely, then, to work to improve levels of the trait than entity theorists are. Indeed, interventions that induce incremental mindsets have been shown to result in academic improvements (e.g., Yeager et al., 2016), increased willpower (Job, Dweck, & Walton, 2010), reduced aggression (Yeager, Trzesniewski, Tirri, Nokelainen, & Dweck, 2011), and increased empathy (Schumann, Zaki, & Dweck, 2014), among other improvements (see Dweck, 2012 for overview).

Such incremental mindset interventions are often designed to foster incremental mindsets towards specific traits. For example, an intervention may induce a growth (i.e. incremental) mindset regarding empathy by describing empathic behavior as the result of deliberate effort and thus empathy being improvable rather than fixed and unchangeable (Schumann et al., 2014). Exposing participants to an incremental view of empathy causes them to subsequently expend more empathic effort towards others (Schumann et al., 2014). Whether this increased perceived controllability is accompanied by an increased expectation regarding others’ levels of empathy remains to be explored. One’s judgments of another’s empathic behavior may depend on whether one believes people have control over their level empathy in the first place.

Because mindsets have implications for people’s perceived capacity for change, generally improvement, they are likely to be connected to how people assign blame for shortcomings. Theories of moral responsibility would predict that because incremental inductions ascribe more control over traits and actions, they should result in incrementalists being harsher judges of poor behavior than entity theorists (Molden & Dweck, 2006; Plaks, Levy, & Dweck, 2009). According to these theories, a key component to moral judgment is whether the actor could have, or
should have known to do otherwise (Pizarro & Tannenbaum, 2011). For example, Alikee’s (2000) Culpable Control Model suggests that extent of personal control is the primary factor in ascribing blame. The Path Model elaborates upon this position, proposing that judgments proceed through stages, from control to morality (Malle, Guglielmo, & Monroe, 2014). Indeed, manipulating capacity for choice affects blame attributed by participants (Monroe, Dillon, & Malle, 2014).

The predictions of theories of moral responsibility seem to contradict findings regarding implicit person theories and moral judgment, where, despite perceiving increased control, incrementalists are nevertheless found to be more forgiving (Molden & Dweck, 2006; Plaks et al., 2009). Children with fixed theories of personality showed empathy towards, and recommended more punishment for a new student behaving badly, and emphasized what a behavior revealed about a person’s good or bad character, while incrementalists focused instead on mediating factors (Erdley & Dweck, 1993; Heyman & Dweck, 1998). Among adolescents, entity theorists desired more revenge than incremental theorists did, and exposure to an incremental induction reduced this desire (Yeager et al., 2011). College students who were entity theorists regarding morality made more dispositional attributions for social transgressions and experienced greater negative affect in response to these transgressions than incremental theorists did (Miller, Burgoon, & Hall, 2007). However, the generalizability of these studies is limited in two ways. Firstly, these studies examine moral judgment in the context of global personality theories or lay theories of morality itself. Moral judgment could also, independently of these more global lay theories, depend on the theory of the specific trait along which one evaluates another’s behavior. Secondly, and perhaps more importantly, these studies typically examine singular transgressions, rather than continual patterns of behavior.

Though research on implicit person theories’ impact on blame attribution for behaviors across longer time spans is sparse, initial evidence suggests that incrementalists can be less forgiving than entity theorists when dealing with continual failure. Incrementalists become harsher towards themselves than entity theorists do in the face of multiple failures to improve (Molden & Dweck, 2006). When a difficult continuous task was tied to self-esteem, incremental theorists who continually performed poorly reported lower self esteem than did entity theorists (Niiya, Brok, & Crocker, 2010). Repeated failure to improve by others, despite effort to do so, likewise resulted in greater anxiety among incremental theorists than entity theorists (Plaks, Grant, & Dweck, 2005). Since both incrementalists and entity theorists fit theory-violating information to their worldview, instead of adjusting it (Plaks et al., 2005; Plaks & Stecher, 2007; Xu & Plaks, 2015), it may be that incremental theorists are unable to reevaluate an attribute as relatively uncontrollable when observing continual failure.

The entity theorists’ view of limited potential for improvement may be accompanied by an acceptance of their own or another’s limitations, be they real or imagined. Kamrath and Dweck (2006) found those with an entity theory regarding personality were more accepting of the faults of a dating partner following relationship transgressions, although at the cost of not working towards making changes that could improve the relationship. Subsequent research showed that incrementalist romantic partners, though initially more optimistic about their partners ability to change negative behaviors, were more likely to attribute failure to lack of effort and were more distrustful of partners exhibiting partial success at changing over a two-week period (Kamrath & Peets, 2012).

The divergence between blame for singular transgressions and continual failures may be reconciled by an approach to moral psychology and philosophy known as virtue ethics, which suggests that judgment of specific acts can reflect what the acts reveal about the actor’s character (Ryazanov & Christenfeld, 2017; Ulhmann, Pizarro, & Diermeier, 2015). It may be that, when evaluating transgressions, incrementalists are more likely to assume a positive character that is capable of improvement, while entity theorists see the action as more diagnostic of character. Indeed, entity theorists have been shown to infer traits from singular actions more readily than incremental theorists (e.g., Dweck et al., 1993; Miller et al., 2007). If increased perceived control is accompanied by expectations of improvement across broader patterns of behavior, continual transgressions may provide evidence against an assumed positive character for incrementalists. For incrementalists, a single bad act might not be judged negatively, since it does not reflect being a bad person, and can readily be changed. However, a series of bad acts, betraying a failure to improve, might be judged more harshly. Manipulating whether participants see an actor’s character as evil or good leads them to interpret the same action as more or less blameworthy, respectively (Newman, De Freitas, & Knobe, 2015). For entity theorists, a single bad act and a series of such acts might both signal a bad person, albeit one with limited control and, thus, responsibility.

Alternatively, it could be that the relationship between mindset and blame is not mediated by perceived control. In the study of prejudice, changing the perceived controllability of stigmatized characteristics does not reduce prejudice regarding those characteristics, because here controllability justifies attitudes, rather than causing them (Hegarty & Golden, 2008). The previously discussed Culpable Control Model likewise acknowledges that sometimes control justifies negative attitudes towards an actor rather than causing them (Alikee, 2000). When participants were exposed to a car crash in inclement weather in which the driver was rushing home to hide cocaine, as opposed to an anniversary present, participants rated the former driver as having more control over the car crash (Alikee, 1992). If controllability judgments do not precede blame attributions in the context of implicit person theories, we would expect to see no clear relationship between controllability judged by growth mindset inductions and blame. Given the increasing popularity of growth mindset interventions (e.g., Dweck, 2012), whether such interventions can increase blame attribution over longer patterns of behavior is a pressing issue.

If incremental mindsets increase control, and control increases blame, then those induced to have an incremental mindset should be more prone to blame for failings. However, control may not always be a predecessor of blame, and incremental mindsets do seem generally to be combined with a view of the core character as good, so single failures may be seen as aberrations (Ryazanov & Christenfeld, 2017). However, continual failures may overcome that tendency. Across longer patterns of behavior, those who see poor behavior as controllable may ascribe more blame than those who see it as diagnostic of bad but uncontrollable character. In this case, inducing an incremental mindset could increase judgmental harshness. To explore whether implicit person theories can result in increased judgmental harshness of undesirable behavior, we explore the effects of inducing implicit theories of particular traits on judgments of patterns of behavior. We hypothesized that consistently undesirable behaviors would elicit more blame and moral judgment among those who view the trait as changeable, by increasing perceived control over the specific trait. Thus, people who have been induced to hold an incremental mindset about empathy, and are then asked to judge another’s consistent failure in that trait, may find that person more blameworthy for their failure. And, conversely, people induced to hold an incremental mindset about empathy may find those showing an abundance of the trait to be more praiseworthy. We also explore whether such findings would generalize to other traits for which the benefits of an incremental mindset have been demonstrated. We test incremental inductions regarding aggression, where inductions of personality as incremental have shown reductions in aggression (e.g., Yeager et al., 2011). We also explore willpower, where inductions have shown, for example, more adaptive attention allocation on cognitive tasks (Schroder, Moran, Donnellan, & Moser, 2014).
1. Study 1 - empathy

1.1. Study 1 procedure

Two hundred and sixty two adults located within the US were recruited as participants via Amazon’s Mechanical Turk (mean age = 36.2, SD = 12.7; 61.5% female; 213 participants were retained for analysis after excluding 49 for failing a basic attention check regarding the topic of the induction article). They were told they would be evaluating the appropriateness of reading materials for a high school audience. Participants were randomly assigned to an induction, adapted from Schumann et al. (2014), which involved reading a putative newspaper article that gave an overview of scientific research having concluded that empathy is either changeable (incremental) or relatively fixed (entity); all inductions are available as supplementary materials online. Participants were then asked to rate the appropriateness of the article for a high school audience on a 7-point scale. Next participants completed a six-item theories of empathy measure, which served as a manipulation check in Schumann et al.’s (2014) study (e.g., A person’s level of empathy is something very basic about them, and it can’t be changed much; 7-point scales anchored on strongly agree and strongly disagree). Afterwards, participants were told about two people: Imagine a person, Carol, who consistently behaves in a way that shows a complete lack of empathy to the suffering of other people. Imagine another person, Jane, who consistently behaves in a way that shows an especially high level of empathy to the suffering of other people. Participants were asked to respond to five statements using 7-point scales: 1) How much of the difference between these two people is under their personal control (none-all), 2) This difference in their behavior reflects aspects of these two people that they cannot do much to alter (not at all - completely), 3) How much of this difference is the result of moral choice? (none - all), 4) How blame-worthy/praiseworthy is Carol for failing to be empathic (completely praiseworthy - completely blame-worthy), 5) How blame-worthy/praiseworthy is Jane for her high level of empathy? (completely praiseworthy - completely blame-worthy). Questions 1 and 2 (reverse-coded) were combined into a perceived control composite measure for analysis.

Participants were then asked a series of questions regarding how they expected their own and other people’s levels of empathy to change over time\(^1\). Participants responded to the following questions using 7-point scales: Do you expect your own level of empathy to change over the course of your life? (not at all - very much); How do you expect your level of empathy to change over the course of your life? (levels of empathy will decrease greatly - levels of empathy will increase greatly); Do you expect other people’s levels of empathy to change over the course of their lives? (not at all - completely); How do you expect other people’s levels of empathy to change over the course of their lives? (levels of empathy will decrease greatly - levels of empathy will increase greatly). The analyses of this set of questions will be deferred to a general analysis of the four studies. Afterwards, participants provided demographic information and were debriefed. All measures, manipulations, and exclusions in the study are disclosed. Final sample sizes were determined using study sample sizes in previous literature (e.g., Schumann et al., 2014), which allowed us to have the same power to detect effects of incrementalism increasing blame that previous studies had to detect its positive effects. Data collection did not continue after data analysis.

1.2. Study 1 results

The six-item theories of empathy measure indicated that the articles successfully influenced participant opinions on the entitativity of empathy, t(211) = 9.04, p < .001, d = 1.24 (entity-induced mean = 3.74, SD = 1.45; incremental-induced mean = 5.38, SD = 1.20; Cronbach’s α = 0.96). Next, we examined whether the participants who had been induced to adopt a more incremental view showed increased blame attributions to the person behaving unempathically. Indeed, as hypothesized, participants exposed to an entity view of empathy found the low-empathy person less blameworthy than those exposed to an incremental view did, t(211) = 3.64, p < .001, d = 0.50 (entity-induced mean = 0.72, SD = 1.37; incremental-induced mean = 1.38, SD = 1.36).

The relationship between mindset and blame was mediated by perceived control (Cronbach’s α for perceived control measure = 0.68). The regression of mindset induction on perceived control was statistically significant (β = 1.64, t(211) = 9.05, p < .001, SE = 0.18), as was the regression of perceived control on blame (β = 0.27, t(211) = 4.54, p < .001, SE = 0.059), see Fig. 1. The standardized indirect effect was (0.53)(0.30) = 0.31. The significance of this indirect effect was tested using bootstrapping procedures: unstandardized indirect effects were computed for each of 10,000 bootstrapped samples, and the 95% confidence interval was computed by determining the indirect effects at the 2.5th and 97.5th percentiles. The bootstrapped unstandardized indirect effect fully mediated the relationship between induction and blame (mediated effect = 0.36, p = .01, 95% CI [0.11, 0.62]; direct effect = 0.30, p = .21, 95% CI [−0.17, 0.78]). These procedures will be followed for all subsequent mediation analyses.

Incremental-exposed participants also found the difference in behavior between the two people to reflect differences in moral character to a greater degree than entity-exposed participants did, t(211) = 5.00, **p < .001.**

Fig. 1. Standardized regression coefficients for the relationship between mindset induction and rated blamedworthiness of a person showing a consistently low level of empathy as mediated by perceived control. The standardized regression coefficient between mindset induction and rated blamedworthiness, controlling for perceived control, is in parentheses.
Aggression Theories

Fig. 2. Standardized regression coefficients for the relationship between mindset induction and rated blameworthiness of a person showing a consistently high level of aggression as mediated by perceived control. The standardized regression coefficient between mindset induction and rated blameworthiness, controlling for perceived control, is in parentheses.

***p < .001; *p < .05.

$p < .001, d = 0.69$ (entity-induced mean = 3.77, SD = 1.65, incremental-induced mean = 4.83, SD = 1.43). Incremental participants also found the person showing a high level of empathy more praiseworthy, $t(211) = 3.23, p < .001, d = 0.44$ (entity-induced mean = −0.51, SD = 1.26; incremental-induced mean = −1.10, SD = 1.42; lower numbers indicate greater praise).

1.3. Study 1 discussion

Being induced to hold an incremental, as opposed to entity, view of empathy lead to increased judgmental harshness of an imagined other with a continually low level of empathy. Consistent with theories of moral responsibility, the increase in judgmental harshness was mediated by increased perceived control over behavior. Furthermore, the difference in behavior was moralized to a greater degree among incremental-induced participants. Incremental participants did not find empathic behavior more praiseworthy than entity theorists did, however, suggesting some symmetry in praise and blame, contrary to previous findings that people generally ascribe positive qualities to character more readily than negative ones (e.g., Lockhart, Chang, & Story, 2002; Pizarro, Uhlmann, & Salovey, 2003).

In Experiment 2a and 2b, we explored whether increased judgmental harshness among incremental theorists would replicate with other traits, namely aggression and motivation. Aggression was picked as one of the traits, since its expression so readily has moral implications, and since prior studies have used similar article inductions to demonstrate increased forgiveness for singular transgressions (Yeager et al., 2011). Motivation provides an interesting dilemma for mindset interventions and inductions—the incremental view is that one can do better by working harder, but this assumes that one has control over how hard one is capable of working. What would it mean to not have control over how hard one is willing to work? In a sense, motivation forms a meta-trait for lay theory research, in that if it itself is unchangeable, then limits are placed upon just how much change can be accomplished in any other trait. Here too, article incremental inductions have shown benefits (Schroder et al., 2014).

2. Study 2 - aggression & motivation

2.1. Study 2 procedure

The procedure for Studies 2a and 2b paralleled that of Study 1, substituting aggression or motivation for empathy. For 2a, we recruited 116 adults (mean age = 37.3, SD = 13.4; 59.8% female; 102 retained for analysis after 14 participants were excluded for failing the attention check) via Amazon’s Mechanical Turk. Participants were then randomly assigned to read an article describing one’s level of aggression as changeable (incremental) or relatively fixed (entity), adapted from the empathy induction. Next, participants completed a six-item theory of aggression measure, which paralleled the theory of empathy measure. Afterwards, participants read about two people: Imagine a person, Thomas, who consistently behaves in a physically and verbally aggressive way towards people who do not deserve it. Imagine another person, Robert, who consistently does not respond with any aggression, even when repeatedly provoked. Participants were then asked to respond to the same five statements as in the first study, with aggression substituted for empathy. Afterwards, participants responded to questions regarding expectations of change for the self and others, adapted to aggression.

For Study 2b, we recruited 136 adults (mean age = 33.7, SD = 10.9; 59.8% female; 102 participants retained for analysis after 34 were excluded for failing the attention check) via Amazon’s Mechanical Turk. The manipulation and measures were the same as 2a, but with motivation substituted for aggression. Participants were asked to imagine two people: Imagine a person, Jessica, who consistently fails to take action to improve her circumstances because she lacks the motivation to do anything constructive. Imagine another person, Rebecca, who consistently improves her circumstance because she is sufficiently motivated to do so. After imagining both people, participants were asked to respond to five statements, now adapted to motivation. Afterwards, participants responded to questions regarding expectations of change for the self and others. Sample sizes for Studies 2a and 2b were selected to be consistent with prior literature exploring the positive effects of similar inductions.

2.2. Study 2 results

2.2.1. 2a

The six-item theories of aggression measure indicated that the articles had successfully influenced participant opinions on the entity-aggression, $r(100) = 7.04, p < .001, d = 1.39$ (entity-induced mean = 3.82, SD = 1.38; incremental-induced mean = 5.54, SD = 1.10; Cronbach’s α = 0.94). Participants exposed to an entity view of aggression found the person showing a high level of aggression to be less blameworthy than did those exposed to an incremental view, $t(100) = 2.34, p = .021, d = 0.46$ (entity-induced mean = 1.03, SD = 1.23; incremental-induced mean = 1.68, SD = 1.55). The relationship between mindset and blame was mediated by perceived control (Cronbach’s α for perceived control measure = 0.77). The regression of mindset induction on perceived control was statistically significant ($β = 1.44, r(100) = 9.05, p < .001, SE = 0.25$), as was the regression of perceived control on blame ($β = 0.39, r(100) = 4.28, p < .001, SE = 0.09$), see Fig. 2. The standardized indirect effect was $0.51(0.39) = 0.39$. The bootstrapped unstandardized indirect effect with 10,000 resamples was significant, thus, perceived control fully
mediated the relationship between induction and blame (mediated effect = 0.54, p < .001, 95% CI [0.20, 0.91]; direct effect = 0.11, p = .70, 95% CI [-0.45, 0.69]).

Incremental-exposed participants also moralized the difference in behavior to a greater degree than entity-exposed participants, t(100) = 2.01, p = .047, d = 0.40 (entity-induced mean = 4.24, SD = 1.49; incremental-induced mean = 4.85, SD = 1.59). Incremental participants did not praise the positive behavior significantly more, t(100) = 1.61, p = .11, d = 0.32 (entity-induced mean = -0.64, SD = 1.38; incremental-induced mean = -1.15, SD = 1.83).

2.2.2. 2b

The six-item theories of motivation measure indicated that the articles had successfully influenced participant opinions on the entity-tativity of motivation, t(99) = 8.31, p < .001, d = 1.65 (entity-induced mean = 3.98, SD = 1.25; incremental-induced mean = 5.72, SD = 0.82; Cronbach’s α = 0.92; 1 blank response). Participants exposed to an entity view of motivation attributed less blame to a person showing a low level of the trait than did those exposed to an incremental view, t(99) = 2.78, p < .01, d = 0.55 (entity-induced mean = 0.92, SD = 1.11; incremental-induced mean = 1.53, SD = 1.10; 1 blank response). The relationship between mindset and blame was mediated by perceived control (Cronbach’s α for perceived control measure = 0.58). The regression of mindset induction on perceived control was statistically significant (β = 1.14, t(99) = 4.94, p < .001, SE = 0.23), as was the regression of perceived control on blame (β = 0.29, t(99) = 3.51, p < .001, SE = 0.08), see Fig. 3. The standardized indirect effect was (0.44)(0.33) = 0.36. The significance of this indirect effect was tested using bootstrapping procedures with 10,000 resamples. The bootstrapped unstandardized indirect effect was statistically significant, thus, perceived control fully mediated the relationship between induction and blame (mediated effect = 0.27, p = .01, 95% CI [0.05, 0.56]; direct effect = 0.34, p = .19, 95% CI [-0.17, 0.85]).

Incremental-exposed participants attributed the difference in behavior to a difference in moral character to a greater degree than did entity-exposed participants, t(99) = 2.87, p < .01, d = 0.57 (entity-induced mean = 3.44, SD: 1.61; incremental-induced mean = 4.43, SD = 1.86; 1 blank response). Incremental-exposed participants did praise the positive behavior more, too, t(99) = 2.01, p = .047, d = 0.40 (entity-induced mean = -0.63, SD = 1.76; incremental-induced mean = -1.36, SD = 1.89; 1 blank response).

2.3. Study 2 discussion

As with empathy, being exposed to an incremental, as opposed to entity, view of aggression lead to increased judgmental harshness of an imagined other with a consistently high level of aggression. Again, the increase in judgmental harshness was mediated by increased perceived control over behavior. Furthermore, the difference between the person acting aggressively and the person showing a low level of aggression was viewed as a moral choice to a greater degree by incremental-exposed participants. Study 2a did not find significant differences as a result of induction in praiseworthiness of showing a low level of aggression, suggesting that there may indeed sometimes be an asymmetry in praise and blame.

Exposure to an incremental view of motivation lead to increased judgmental harshness of an imagined other with a consistently low level of motivation. Again, the increase in judgmental harshness was mediated by increased perceived control over behavior. Furthermore, the difference in behavior was viewed as a moral difference to a greater degree by incremental-exposed participants. Unlike Study 2a, Study 2b did find differences in praiseworthiness of showing high motivation as a result of induction. Thus, holding an incremental mindset regarding motivation was associated with increased judgmental harshness of failures along that trait.

The next experiment explores whether the moral judgments would generalize to people described not with traits terms, but rather with a recounting of their behaviors. Accordingly, the procedure was repeated with detailed vignettes that described two people, one behaving empathically and one unempathically.

3. Study 3 - empathy stories

3.1. Study 3 procedure

The procedure from Study 1 was repeated, with 117 college students participating for partial course credit (mean age = 20.2, SD = 1.88; 78.5% female; 107 retained for analysis after excluding participants failing a basic attention check about the topic of the article). In Study 1, participants had been asked to imagine a person with a consistently high level of empathy and a person with a consistently low level of empathy. In Study 3, participants were instead given detailed vignettes describing two managers. One had responded with a series of highly empathetic behaviors when her subordinate’s daughter was involved in a car accident, such as giving the employee her own sick days. The other manager had responded with a consistent lack of empathy to a similar event, by, for example, not seeing the need for the employee to visit her daughter in the hospital because the daughter was unconscious, see supplementary materials for vignettes. Sample size was selected to be consistent with prior studies exploring the positive effects of mindset inductions.
3.2. Study 3 results

The six-item theories of empathy measure indicated that the articles had again influenced participant opinions regarding the entity-tativity of empathy, t(105) = 4.53, p < .001, d = 0.88 (entity-induced mean = 3.75, SD = 1.31; incremental-induced mean = 4.77, SD = 1.00; Cronbach’s α = 0.91). As in the case of imagined scenarios from the first experiment, participants exposed to an entity view of empathy were more forgiving of a person showing a low level of empathy than those exposed to an incremental view, t(105) = 2.18, p = .03, d = 0.42 (entity-induced mean = 0.79, SD = 0.93; incremental-induced mean = 1.19, SD = 0.93). The relationship between mindset and blame was again mediated by perceived control (Cronbach’s α for perceived control measure = 0.16). While the internal reliability of this measure was low in this study, each of the two items independently significantly differed by induction type (p = .011 and p = .002), and the results remain consistent with prior studies. The regression of mindset induction on perceived control was statistically significant (β = 0.74, t(105) = 4.00, p < .001, SE = 0.19), as was the regression of perceived control on blame (β = 0.32, t(105) = 3.79, p < .001, SE = 0.08), see Fig. 4. The standardized indirect effect was (0.36)(0.35) = 0.36. The bootstrapped unstandardized indirect effect with 10,000 resamples was statistically significant, thus, perceived control fully mediated the relationship between induction and blame (mediated effect = 0.21, p < .001, 95% CI [0.07, 0.41]; direct effect = 0.18, p = .19, 95% CI [−0.20, 0.55]).

Incremental-exposed participants moralized the difference in behavior marginally more than entity-exposed participants did, t(105) = 1.76, p = .08, d = 0.34 (entity-induced mean = 4.36 SD: 1.44, incremental-induced mean = 4.85, SD = 1.46). Unlike in Study 1, incremental-exposed participants did not praise the positive behavior more than entity-exposed participants did, t(105) = 1.58, p = .12, d = 0.31 (entity-induced mean = −1.74, SD = 1.26; incremental-induced mean = −1.24, SD = 1.90). If anything, the results trended towards entity-exposed participants praising more.

3.3. Study 3 discussion

Exposure to the incremental, rather than entity, view of empathy lead to increased judgmental harshness of protagonists in a vignette showing a low level of empathy. Thus, our findings from the first experiment were replicated and extended to judging others from more detailed accounts of behavior. While the difference in moralizing behavior was marginal, it was consistent with the pattern observed from the first experiment. Unlike in that experiment, a significant relationship between induction and praise was not observed.

4. Study 4 - the consistency of failure

The results of the previous studies all suggest that entity theorists can be more forgiving than incremental theorists when actors continually fail to improve along particular traits. In order to reconcile our results with the literature showing more incremental theorists to generally be more forgiving, we directly compare the consistent failures we have explored thus far with single instances of failure. It could be that incremental theorists more readily excuse singular failures under the assumption that actors will work to improve themselves, but become increasingly judgmental relative to entity theorists when the failure is consistent and thus signals a lack of effort, or decision not to improve oneself. Study 4 explores whether this is the case.

One could make the argument that the interventions used in the preceding studies cause people to adopt an “impatient” understanding of incrementalism. Indeed, there is some evidence that changeability correlates with positive outcomes in empathy incremental mindsets, but that controllability correlates with negative outcomes (Tulleet & Plaks, 2016). Our findings extend beyond empathy, to at least motivation and aggression, and we also use the same empathy induction mindset researchers have used to demonstrate benefits of incremental mindsets. It could, however, be that, by having included control measures, we suggested to participants that control is an important factor in attributing blame. To verify that increased incremental-induced blame was not an artifact of suggesting that control and character-judgments are factors to consider when attributing blame, Study 4 excludes all questions regarding character and controllability. The absence of these questions allows for a purer test of whether incremental inductions themselves are interpreted as conveying controllability and, as a consequence, increased blame. We also incorporated a measure of punishment. There could be many reasons to punish including deterrence, “just deserts”, and incapacitation (Carlsmith, Darley, & Robinson, 2002). It could be, for example, that, though they view offenders as less blameworthy, entity theorists feel a heightened need to keep the offender out of society, because of a pessimism regarding their ability to improve.

4.1. Study 4 procedure

The procedure for Study 4 paralleled that of Study 1, but no longer included a praiseworthy individual, and split participants into either seeing consistent or single failure. As in previous studies, half of participants were exposed to an incremental article, and half to an entity article. Half of participants now saw Carol’s empathic failure as consistent “Imagine a person, Carol, who consistently behaves in a way that shows a complete lack of empathy towards the suffering of other people”.

Empathy Theories (Stories)

![Diagram of Empathy Theories](image_url)
Next we examined whether people’s judgments of punishment showed the same effects as their blame attribution did. Punishment was overall correlated with blame attribution, $F(1, 182) = 62.4, p < .001, r = 0.51$. However, punishment did not neatly track blame attribution differences between inductions, in that we did not observe an interaction between failure (consistent or single) and induction, $F(1, 180) = 0.200, p = .66, r = 0.11$ (entity-induced consistent mean = 3.00, SD = 1.69; entity-induced single mean = 2.79, SD = 1.40; incremental-induced consistent mean = 3.02, SD = 1.50; incremental-induced single mean = 2.61, SD = 1.37). There was no main effect of induction, $F(1, 182) = 0.084, p = .77, r = 0.02$, nor an effect of consistency of failure, $F(1, 182) = 1.91, p = .17, r = 0.10$, though consistent failure trended towards being rated as deserving more severe punishment.

4.3. Study 4 discussion

Study 4 is a partial reconciliation of our results with the general finding in the implicit person theory literature that incremental theorists attribute less blame than entity theorists do. Though we find no evidence for incrementalists being more forgiving for failures seen as single instances, we replicate our prior finding that failures that are consistent become more blameworthy for incrementalists than entity theorists, and find that this effect does not extend to single failures. Thus, our effect of greater blame ascribed by those induced to hold an incremental mindset seems to depend on the failure being consistent. It may be that incrementalists assume a positive character capable of improvement when observing single failures, but grow to view consistent failure as reflecting a negative character that is capable of improvement, but has chosen not to do so, and attribute more blame to the actor accordingly. While it could be the case that our participants endorsed an “impatient” incrementalism rather than a more functional “patient” incrementalism, this would appear to be a problem that extends beyond our methodology and to the study of inducing growth mindsets more generally, as questions regarding control were not asked in this study.

It is surprising that our single-failure condition, which uses the same induction previously used to demonstrate the benefits of incrementalism (Schumann et al., 2014), does not increase forgiveness of other’s empathic failures, despite many studies showing this effect more generally (e.g., Yeager et al., 2011). Though our own theorizing does not entirely account for the lack of effect, neither can implicit person theories as currently specified, and future theorizing must reconcile the observed lack of increased forgiveness by incrementalists for single failures with theory suggesting they should be generally more forgiving. Nonetheless, we do confirm that increased judgmental harshness emerges when there is continual failure. Our findings regarding punishment are also unclear: it appears that though entity theorists blame consistent failures less than incrementalists do, the decrease in blame does not correspond to a decrease in punishment severity. This may well be due to the various functions of punishment, some of which depend on moral blame, and some of which depend on predictions of the improbability of behavior.

5. General results

In all the studies, after evaluating the two actors, participants had been asked their expectations of change in trait levels for themselves and others. This permits an analysis of whether being induced to hold an incremental mindset not only creates a possibility of change, but an expectation of change, and, more specifically, improvement.

A meta-analytic approach (Schwarzer, Carpenter, & Rücker, 2015), standardizing effect sizes across sample sizes for the five studies ($N = 669$), yielded a significant effect of the induction on expectations of change for the self, standardized mean difference (SMD) $= 0.722, p < .001$, 95% CI $[0.56, 0.88]$ (entity-induced mean = 3.64,
SD = 1.77, incremental-induced mean: 5.05, SD = 1.66; scale anchored at 1 and 7), as well as for others, \( smd = 0.892, p < .001, 95\% \) CI [-0.74, 1.05] (entity-induced mean = 3.57, SD = 1.57; incremental-induced mean = 5.01 SD = 1.35; all meta-analytic results for self/other are also present in the individual studies, across the three traits measured). These findings show that, across the five studies, being exposed to an incremental induction not only increased perceptions of one's own changeability, but also fostered an expectation that this change will occur. The expected change did not reflect greater variability, but instead reflected an asymmetrical expectation of improvement—incremental induced participants expected their own change to be in a more positive direction, \( smd = 0.456, p < .001, 95\% \) CI [0.28, 0.59] (entity-induced mean = 0.582, SD = 1.07; incremental-induced mean = 1.16, SD = 1.30, scale anchored on −3 and 3), and others to change in a more positive direction as well, \( smd = 0.500, p < .001, 95\% \) CI [0.34, 0.65] (entity-induced mean = 0.293, SD = 1.02; incremental-induced mean = 1.01, SD = 1.13; scale anchored on −3 and 3). This is consistent with people generally seeing negative attributes as the more changeable aspects of the self, and incrementalists nonetheless maintaining a fixed positivity towards which all should be striving. Failure to make progress towards improvement becomes more blameworthy than not being capable of making the progress in the first place. The effects of incremental inductions appear to be accompanied by an assumed expectation, or norm of improvement, which, when not met, may signal character to a greater degree to incrementalists than to entity theorists, who may not hold the same expectation.

Consistent with already-presented findings for each individual trait across the four studies exploring consistent praise and blame, a meta-analytic approach shows that entity-exposed participants overall attributed less blame to the person showing undesirable trait levels, \( smd = 0.477, p < .001, 95\% \) CI [0.30, 0.65], (entity-induced mean = 0.84, SD = 1.21; incremental-induced mean = 1.42, SD = 1.27), and less praise to the person showing desirable trait levels than incremental-exposed participants did, \( smd = 0.255, p = .004, 95\% \) CI [0.08, 0.43] (entity-induced mean = −0.81, SD = 1.46; incremental-induced mean = −1.19, SD = 1.69), see Fig. 6.

Given the numerous studies demonstrating broad benefits of an incremental mindset, it may be that those at the extreme of incrementalism are most prone to blame others for their failures, and that blame does not linearly relate to incrementality, particularly among more restrained incrementalists. Exploratory analyses utilized Akaike Information Criteria to compare models (Hurvich & Tsai, 1989). These analyses supported an experiential model with both induction and self-reported incrementality entered as factors for data from the first four studies (which examined consistent failures only) fitting the relationship between self-reported mindset and blame better than the linear model (AICc 1239 vs. 1701, respectively), suggesting that data more parsimoniously fit an exponential model than a linear one. This is consistent with a stronger effect at the incremental end of the scale: there may be a threshold beyond which unrestrained incrementalism begins especially to foster blame attributions.

6. General discussion

Across empathy, aggression, and motivation, adopting an incremental theory of the trait was associated with greater blame of those showing a continually maladaptive level of the trait. Consistent with theories of moral judgment, greater blame was mediated by increased perceived control over behavior. Thus, the same lay theory mechanism that leads people to exert more effort in the face of challenges can lead people to ascribe more blame to others who are continually unable to surmount these challenges.

The seeming inconsistency between implicit theory findings and theories of moral responsibility regarding moral judgment may be resolved when lay theories regarding the specific attribute are measured, rather than the fixedness of morality or personality more generally, and, more importantly, when chronic behaviors are compared to acute ones. Growth mindset interventions often target specific traits rather than global meaning systems through which one interprets the self and others—our results confirm the necessity of not only exploring morality in relation to implicit theory of morality or personality, but also morality in relation to implicit theory of the specific trait itself. Consistent failures reveal a negative character that has failed to improve oneself, and result in greater blame attributions than entity theorists would make, an effect that is not apparent with a single failure.

There is a certain irony to the finding that teaching an incremental view of empathy can result in decreased empathy towards others behaving unempathically. Perhaps the most difficult form of empathy involves empathizing with others not feeling empathy—our results suggest that incrementalism can move people away from being able to do so. Results on aggression extend this relationship to another domain, suggesting that incrementalists’ increased judgmental harshness of undesirable trait levels is not unique to empathy. The malleability of motivation offers an interesting possibility, since a key aspect of the general incremental position, or even more broadly the self-help stance, is that with enough effort, great things can be achieved. But it is possible to see the amount of effort that people are capable of exerting as fixed. Thus, one could be incremental about various traits, thinking that with enough effort trait levels could be perfected, but maintain an entity view of effort itself, and so regard a failure to perfect a particular trait as not in itself blameworthy. Perhaps this mixed view would decrease blame attributions towards those with certain undesirable trait levels and maintain one’s own motivation to improve.

There are certainly significant benefits to an incremental mindset. However, the same increased perceived control that causes one to work to improve trait levels also contributes to increased judgmental harshness of others’ failures, particularly at the extremes of incrementalism. Increased blame attributions for those with maladaptive trait levels could have societal consequences: The same mechanism that suggests that those in underprivileged communities can overcome adversity through effort and determination could deleteriously lead to the avoidance of addressing the structural inequity that contributes to collective disadvantage, by shifting control away from situational factors, to the victim of the situation. Focusing on individual resilience and perseverance implies increased personal control over outcomes, and
this may be accompanied by decreased perceived societal responsibility for providing a supportive environment in the first place. In domains such as economics, the propensity to ignore base rates of failure and instead focus on examples of success has been labeled the survivorship bias (Brown, Goetzmann, Ibbotson, & Ross, 1992). Positioning people as nearly-ininitely perfectable, the outer limit of an incremental theory, may, by focusing on survivors that overcome the odds, amplify a neglect of what those odds actually are. Further exploration may yield a teachable psychological flexibility in implicit theory, which confers the benefits of the theory to the self without detriment to treatment of others. Future research should also explore growth mindsets in older populations, who, after exposure to a culture that does not entirely fit their worldview, may develop system-justifying associated meanings for their lay theories that, at the surface level, conveyed infinite potential and inspired greater effort. It could also be that, rather than truly blaming the actor more, incrementalists are misattributing or displacing their own frustration at witnessing a theory-violating pattern of behavior (Plaks et al., 2005; Plaks & Stecher, 2007; Xu & Plaks, 2015). This would not be inconsistent with our approach, but could be an additional factor contributing to incrementalist condemnation that could be explored in further studies.

As has increasingly been found throughout positive psychology, one-dimensional representations of adaptive traits often obscure the reality that these same mechanisms can be coopted for detrimental processes (McNulty & Fincham, 2012). Thus, teaching an adaptive flexibility, one that views certain traits as uncontrollable in certain situations, may prove most advantageous. A more situated incrementalism may confer benefits to the self, without attributing greater blame to others, and perhaps excuse oneself and others of blame over aspects of the self that are in actuality beyond individual control. This worldview could resemble Helen Keller’s perspective, who, after overcoming the limitations of both deafness and blindness to become one of America’s most celebrated figures, said, “I had once believed that we are all masters of our fate—that we could mould our lives into any form we pleased... But as I went more and more about the country I learned that I had spoken with assurance on a subject I knew little about. I forgot that I owed my success partly to the advantages of my birth and environment. Now, however, I learned that the power to rise in the world is not within the reach of everyone” (Dreier, 2012).

Open practices

The experiments in this article earned Open Materials and Open Data badges for transparent practices.

Appendix A. Supplementary data

Supplementary data to this article can be found online at https://doi.org/10.1016/j.jspes.2017.12.003.

References
