

THE EFFECT OF HYPOTHETICAL DISTANCE ON THE CONSISTENCY OF MORAL BEHAVIOR

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## The Effect of Hypothetical Distance on The Consistency of Moral Behavior

Real life is rarely as tidy and predictable as fiction: it is difficult to reliably speculate whether a person will act morally based on their past actions. Consider Robert Downey Jr., who overcame his drug addiction to rebuild his life and later became a successful actor. And this kind of unpredictability often sparks human interest and curiosity. In response, moral psychologists have explored and examined a variety of factors, both internal and external, that may influence moral and immoral behavior. One of such factors is hypothetical distance. Despite its potential to explain the consistency of moral behavior, there has yet to be a study testing its effects. Therefore, this study aimed to examine hypothetical distance, a dimension of psychological distance, to better understand the underlying mechanisms determining moral consistency and balancing. The broader objective is to address the existing research gap and promote prosocial behavior.

### **Moral Consistency and Moral Balancing**

#### ***Moral Consistency***

Moral consistency refers to the phenomenon in which people behave in a morally congruent way over time (Mullen & Monin, 2016). A moral act followed by another moral act is called positive consistency, while an immoral act followed by another immoral act is called negative consistency.

A growing body of empirical research has provided evidence to corroborate this phenomenon. For example, Young et al. (2012) found that people who recalled past moral behavior offered more money to charity than those who recalled either past conversations (i.e., neutral) or immoral behavior. Similarly, Leliveld and Risselada (2017), analyzing a longitudinal

dataset of approximately 300,000 real donations, observed that only individuals who had donated before were more likely to donate again. There were few people who switched between donating and not donating. Another longitudinal study by Paz et al. (2023) which measured prosocial behavior of toddlers when they were 18 and 36 months old, also found evidence for moderate consistency over time. Consistency has likewise been observed in environmental research, often referred to as positive spillover, or the tendency to adopt pro-environmental behaviors after engaging in another (Truelove et al., 2014). For instance, Sintov et al. (2019) found a positive association between composting food waste and conserving energy and water.

The notion of cognitive consistency has been supported by many prominent psychologists. For example, Bem's self-perception theory posits that individuals infer their attitudes and identity by observing their own behavior, leading to consistent subsequent actions (Bem, 1967). Supporting this theory, Henderson and Burgoon (2014) examined how an abstract mindset can affect the door-in-the-face-technique. This technique is a persuasion tactic, in which the requester begins with an unreasonably large request, which is very likely to be refused (Cialdini & et al, 1975). The requester then makes a smaller request, which is actually the target, but because it is more reasonable than the first request, people tend to comply with this target request. Henderson and Burgoon (2014) found that it may not work well if people are adopting an abstract mindset that emphasizes inferring one's self-concept from prior behavior. Rejecting the initial prosocial request may send a cue that a person is more pro-self, which causes them to later reject the target request.

In relation to identity, Aquino et al. (2009) proposed a social-cognitive model of moral identity, which helps explain why individuals may act consistently with their moral values. According to this model, moral identity, or a cognitive schema regarding the moral character of oneself, is considered to be one of many components of the working self-concept that can be made more or less accessible depending on situational cues. Upon these cues, moral identity becomes salient and more accessible, which can lead to an increase in motivation and behavior similar to one's values. Aquino et al. also found evidence supporting these premises. Those who were asked to write about ten commandments, thereby having their moral identity activated, later became more willing to act prosocially. In contrast, those who were offered a financial incentive to deceive others, which decreased accessibility to moral identity, were more willing to engage in this deceptive, self-interested behavior. These findings suggest that activation of moral identity can serve as a mechanism leading to consistent moral and immoral actions across different contexts.

### ***Moral Balancing***

Moral balancing refers to the phenomenon in which people alternate between moral and immoral behavior over time (Mullen & Monin, 2016). A moral act followed by an immoral act (or a less moral act) is called moral licensing. An immoral act followed by a moral act (or a less immoral act) is called moral compensation.

The past decade has demonstrated a significant rise in studies that examine licensing effect. Numerous studies have demonstrated this effect across behaviors, from cooperation and donation (Sachdeva et al., 2009; Zhang & Peng, 2022), honesty (Cai & Wu, 2024), to healthy food choice (Weibel et al., 2014). Importantly, licensing can be triggered not only by recalling

past moral actions but also by merely anticipating future moral actions (Cascio & Plant, 2015) and imagining engaging in prosocial activities (Clot et al., 2014a, 2014b; Zhang & Peng, 2022). A meta-analysis by Blanken et al. (2015) yielded a reliable, medium-sized effect of .30 for licensing effect. Regarding moral compensation, there has been fewer efforts investigating this effect, but the few existing studies indicated that those who recalled past immoral acts were more likely to engage in volunteering activities (Ding et al., 2016), report stronger prosocial intentions and more tendencies to engage in moral behavior (Jordan et al., 2011).

While originally developed to explain moral licensing, two theoretical models can also be applied to the broader phenomenon of moral balancing. The moral credits model (Miller & Effron, 2010), developed based on Hollander (1958)'s concept of idiosyncrasy credit, treated past moral behavior as credits in a metaphorical moral bank account. As long as a person has enough moral credits in their "bank account", they may feel permitted to commit immoral behavior, or at the very least, engage in ambiguous and less moral behavior. Conversely, when there is not sufficient credit, they need to engage in moral behavior. These balancing actions are part of moral self-regulation mechanism aimed at maintaining a positive moral self (Zhong et al., 2009).

On the other hand, the moral credential model Monin and Miller (2001) posits that people can establish credentials as a moral person, which can license immoral and morally ambiguous behavior. Monin and Miller sought to examine this model across three studies. The researchers "gave" moral credentials as a nonracist or nonsexist person to participants by giving them the chance to express positive attitudes toward a minority group member. These participants later were more likely to make hiring decisions based on stereotypical information.

Moral credentials can be established through many means, such as freely choosing to write about a positive experience with a minority group member (compared to being forced to write by researchers) (Bradley-Geist et al., 2010) or having high social status (Polman et al., 2013).

In summary, while moral consistency and balancing seem contradictory, they are both theoretically and empirically supported. This paradox suggests the presence of moderating factors influencing if moral behavior will lead to similar or dissimilar subsequent behavior. Previous research has identified several such moderators, including moral identity (Vecina & Marzana, 2016), financial rewards (Clot et al., 2014a), and ambiguity of subsequent behavior (Brown et al., 2011). One promising moderator is psychological distance.

### **Hypothetical Distance and Moral Consistency/Balancing**

#### ***Construal Level Theory***

Construal Level Theory (CLT), developed by Trope and Liberman (2003), aimed to integrate the current findings on decision making for the near versus the distant future. At its core, this theory revolves around the concepts of construal level and psychological distance (Trope & Liberman, 2010, 2012).

In regard to construal level, CLT contends that the mental representation of an object can be categorized into two types: high-level construal and low-level construal. High-level construal refers to general, schematic, and summarized information about an object. Meanwhile, low-level construal refers to specific, concrete, contextualized information about the object. For example, consider the activity “completing a thesis” as the target object. At a high level of construal, this activity can be thought of in regard to its meaning or purpose to a person (e.g., “fulfilling academic requirements”, “satisfying intellectual curiosity”). Meanwhile,

at a low level of construal, it can be referred to as specific actions (e.g., “analyzing data”, “editing a paper”). Depending on the context, an object’s high-level construal may be more salient than its low-level construal, making abstract information more easily retrieved. Conversely, when low-level construal is more salient, specific information is more easily retrieved.

In regard to psychological distance, it is the subjective distance from a reference point to an object. The reference point is always the self, here, at the current location, and now, at the present moment. The object can be a person, a place, or an event. This construct includes four dimensions:

- Temporal distance is the perceived distance between the present and a point in time. For example, five minutes in the future feels closer to the present than ten years in the future.
- Spatial distance is the perceived distance between one’s current physical location and another place. For example, 50 kilometers from where a person is standing is closer to them than 100 kilometers from where they are standing.
- Social distance is the perceived relational distance between oneself and other people. For example, people tend to feel closer to their ingroups than their outgroups.
- Hypothetical distance refers to the perceived likelihood of an event occurring. Real or realistic scenarios are likely to be experienced as closer to oneself than hypothetical events. For example, seeing snow in the Midwestern United States seems more closer to the self, here-and-now than seeing snow in Vietnam.

### ***Psychological Distance and General Judgment***

Considering the above concepts, CLT also proposes a close relationship between construal level and psychological distance. More specifically, as psychological distance increases, high-level construal become more salient and likely to dominate. And vice versa, when people think at a high-construal level, distant objects become more salient than near objects. Liberman and Trope (1987) examined these propositions and found an effect of temporal distance on construal levels. More specifically, people tend to put more weight on desirability features of an event (a high-level feature, e.g., whether one likes the event) more than its feasibility features (a low-level feature, e.g., whether it is convenient to attend the event) when planning for the distant future compared to the near future.

Other research has shown that increased psychological distance not only affects planning but also perception. For instance, Liberman et al. (2002) found that people tend to group objects based on broader categories and have more schematic and extreme representations of events if they are primed to think about distant events. Additionally, time perception may also be affected: Kantan (2011) found that greater temporal and hypothetical distance led people to estimate longer task durations.

On a more implicit level, people are likely to associate words reflecting distant psychological distance with words relating to high construal level (Bar-Anan et al., 2006). In a business context, Chen et al. (2018) found that small social and hypothetical distance could lead to low-level construal and prompt concrete actions (e.g., hiring employees) rather than abstract actions (e.g., thinking about reasons to start a new venture). Soderberg et al. (2015) conducted two meta-analyses and found a medium-sized effect of psychological distance. These results

suggest that psychological distance has an important effect not only on a person's mental representation of an object, but also their judgment and decision-making.

### ***Psychological Distance and Moral Judgment***

In moral psychology, recent attempts have been made to examine how psychological distance can influence moral judgment and decision-making. Results indicate that as psychological distance increases, people tend to act more prosocially (Agerström & Björklund, 2009; Rogers & Bazerman, 2008), support environmental policy more strongly (Sparkman et al., 2021), judge moral transgression more harshly (Eyal et al., 2008; Kahn & Björklund, 2017), and evaluate good deeds more positively (Eyal et al., 2008).

Additionally, psychological distance also appears to moderate the relationship between moral values and behavior. For example, Eyal et al. (2009) found that values predicted behavioral intentions better when the behavior was in the distant future. In contrast, near future intentions are more influenced by feasibility features, i.e., low-level construal.

Along the same lines, Giacomantonio et al. (2010) found that greater temporal distance can make people follow their social motivation more. In other words, in the large temporal distance condition, participants who were primed to adopt pro-social motivation were significantly more cooperative than those who adopted pro-self motivation. Meanwhile, there was no difference in the small distance condition. Finally, Henderson and Burgoon (2014) found that adopting a more abstract mindset may reduce the effectiveness of the door-in-the-face technique. Initial rejection of a request can be interpreted as a signal of a pro-self identity, which is likely to be more salient when people think in high-level construal. Thus, they may act in accordance with their current view of self, causing the technique to fail in certain situations.

Having similar ideas, Conway and Peetz (2012) suggested that temporal distance can explain the discrepancy in findings between moral consistency and balancing. The authors offered the same arguments as Henderson and Burgoon: Past behavior may serve as evidence reflecting their values and identity when high-level construal is made more salient, leading them to act in accordance with their past behavior. They found that those recalling their temporally distant behavior exhibited more consistency and those recalling their temporally near behavior exhibited more balancing. Additionally, people who were asked to think about traits (i.e., high-level construal) engaged more in consistency than those who were asked to think about actions (i.e., low-level construal). Supporting these results, Zhang and Peng (2022) found that recalling concrete details of past moral behavior promoted licensing more than recalling abstract goals of that behavior.

In summary, there seems to be a pattern in the relationship between psychological distance and moral behavior. Low psychological distance is linked to balancing, whereas large psychological distance is linked to consistency. This pattern may arise because increased psychological distance can lead to salient abstract thinking, prompting individuals to focus on broader meanings of their actions. This interpretation aligns with the self-perception theory, in which these meanings can be interpreted as cues to their core values or identity, leading them to further act in alignment with their past actions. Moreover, it also aligns with the social-cognitive model of moral identity, in which a focus on meanings can make one's moral, or immoral, identity more accessible, thereby influencing subsequent behavior. Therefore, both theories seem to suggest that increased psychological distance can result in moral consistency. Conversely, concrete details of one's actions can feel situational and less connected to their

identity. In such cases, moral credits and credentials may become a preferred approach and be used as a rationale for moral balancing.

### ***Hypothetical Distance and Moral Judgment***

Hypothetical distance is one of the four dimensions of psychological distance. Despite being not as well-studied as the other dimensions (Soderberg et al., 2015), Wakslak et al. (2006) found evidence for its effect of construal level. Participants who were primed to think about unlikely events (e.g., having low chance of receiving a voucher for a product) were more likely to categorize objects based on their general features, prefer tasks with abstract description, be liberal with their identification of an action, perform better on abstract description tests, and perform worse on tests requiring identification of a specific missing item.

However, subsequent replication attempts have not been successful (Calderon et al., 2020). Grinfeld et al. (2024) argued that the issue may lie in the hypothetical distance, rather than the validity of the dimension itself. More specifically, they examined the effect of this hypothetical distance using within-persons, between-persons with no comparison, and between-persons designs with explicit comparison. The results show that hypothetical distance only had an effect in within-persons and between-persons with explicit comparison conditions, implying that it is necessary for participants to be aware of the hypothetical distance for it to have robust effect. Therefore, hypothetical distance may still be a valuable construct to study, both in terms of its influence on general cognition and, more specifically, on moral behavior.

A substantial body of research on hypothetical distance and moral behavior has centered around health and environmental contexts. In these studies, participants typically read informational texts about issues in these domains, with hypothetical distance manipulated

through the probabilities of events described in these texts. For example, participants read “it is 80% likely that global warming of 2C will cause abrupt and severe changes to regional weather...” (Morton et al., 2011), or ““80% infection risk for catching COVID-19 without wearing a mask” (Huang et al., 2021). Outcome measures often included belief in the texts or intentions to engage in pro-environmental, healthy behavior. Findings generally suggest that smaller hypothetical distance, or perceiving an event to be more likely, is positively linked with moral behavior. For instance, Večkalov et al. (2025) found that participants who perceived genetically modified food technology to be more likely to be applied later showed more trust towards it. Similar effects have been observed in other studies, though often moderated by additional factors. Morton et al. (2011) reported that hypothetical distance reduced pro-environmental intentions, but only when texts were negatively framed and focused more on losses. Huang et al. (2021) found that hypothetically close COVID-19 messages triggered greater persuasiveness, but primarily among individuals high in Machiavellianism (i.e., a personality trait marked by manipulateness and self-interest). Beyond these areas, little research has investigated hypothetical distance in moral contexts. One exception is Hung and Lo (2024), who examined evaluations of organizations that were either moral but incompetent or competent but immoral. They, however, found no significant effect of hypothetical distance on these evaluations. In sum, while hypothetical distance appears to shape moral responses, its influence on the consistency of moral behavior remains largely unexplored.

### **The Current Study**

Even though hypothetical distance has the potential as a predictor of moral behavior, akin to other dimensions of psychological distance, it remains understudied. To my knowledge,

no prior research has specifically examined the role of hypothetical distance in the context of moral consistency and moral balancing. Therefore, the purpose of this study was to examine the influence of hypothetical distance on the consistency of moral behavior. Based on prior literature on CLT and moral behavior, I proposed the following hypotheses:

H1: People in the imaginary action (i.e., hypothetically distant) group would exhibit moral consistency. More specifically, those who wrote about a moral action would later behave more morally than those who wrote about an immoral action.

H2: People in the real action (i.e., hypothetically close) group would exhibit moral balancing. More specifically, those who wrote about a moral action would later behave less morally than those who wrote about an immoral action.

## **Method**

### **Participants**

Participants were recruited online through Prolific. A standard sample located in the United States was selected. To be eligible, participants had to be at least 18 years old and were able to read and write in English. Initially, 178 responses were recorded. I excluded a total of 23 responses for the following reasons: Ten participants did not fully complete the survey; three did not provide consent to use their data; one completed the survey twice, so only the first response was retained; one refused to complete the writing task; one described someone else's actions rather than their own; two were ambiguous and could not be clearly classified as moral or immoral; and eight did not follow the instructions for the writing task (e.g., writing about an immoral action despite being instructed to describe a moral one). Therefore, the final sample included 153 people who were located in the United States and aged from 19 to 81 ( $M = 36.29$ ,

*SD* = 12.38). Most of participants identified as White, and slightly more than half identified as women. All demographic characteristics of the sample are presented in Table 1.

**Table 1**

*Demographic Characteristics of Participants (N = 153)*

Characteristic	Imaginary immoral action		Imaginary moral action		Real immoral action		Real moral action		Full sample	
	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%
Gender										
Female	17	51.52	23	58.97	16	37.21	22	57.89	78	50.98
Male	15	45.45	15	38.46	27	62.79	15	39.47	72	47.06
Non-binary /Third gender	0	0	0	0	0	0	1	2.63	1	0.65
Prefer not to say	1	3.03	1	2.56	0	0	0	0	2	1.31
Race/Ethnicity										
American Indian or Alaska Native	1	3.03	0	0	0	0	0	0	1	0.65
Asian	2	6.06	1	2.56	2	4.65	2	5.26	7	4.58
Black or African American	9	27.27	10	25.64	7	16.28	8	21.05	34	22.22
Native Hawaiian or Pacific Islander	0	0	0	0	0	0	0	0	0	0
White	21	63.64	26	66.67	34	79.07	27	71.05	108	70.59
Other	0	0	1	2.56	0	0	1	2.63	2	1.31
Prefer not to say	0	0	1	2.56	0	0	0	0	1	0.65

Ethics approval was obtained from the university Institutional Review Board before recruitment. Participants were compensated a total of \$3 upon full completion of the study.

**Design**

This study employed a 2x2 between-subjects design. The independent variables were hypothetical distance (imaginary action, real action) and moral valence (moral action, immoral action). The dependent variable was moral behavior, measured by participants’ self-reported prosocial behavior intentions and their actual charity donation.

Considering that this was a study on moral behavior, this study also used deception to minimize the effect of social desirability. Participants were informed that this study examined the relationship between writing about their experiences and social activities. Measures of moral behavior were adapted accordingly to align with this cover story.

### **Experimental Manipulations**

Manipulations of the independent variables were implemented through a writing task at the beginning of the study, in which participants described an action of their own. See Appendix A for the full instructions of the writing task.

#### ***Hypothetical Distance Manipulation***

Participants described an action that either might occur in the following week (an imaginary future event) or had occurred in the previous week (a real past event), depending on their assigned condition. This manipulation was guided by three key considerations. First, hypothetical distance was operationalized as real versus imaginary, rather than high versus low probability. This is because it could be challenging to have people believe in the probability of an event, especially in moral contexts. Second, instructions were designed to make the contrast between reality and imagination more explicit, potentially amplifying the effect of hypothetical, as suggested by Grinfeld et al. (2024). Third, in the imaginary action group, participants were asked to write about possible future actions rather than past ones which is a method previously used by other studies on moral licensing. Imaginary past actions in a moral context could be interpreted ambiguously. For example, moral action that could have occurred may be construed as immoral (e.g., promising a friend something and failing to follow through). Furthermore, this change could also be beneficial to hypothetical distance manipulation as

recalling past experiences are likely to yield more concrete, low-level construals than imagining future scenarios (D'Argembeau & Van Der Linden, 2004). Regardless, one potential limitation is that future events could be perceived as subjectively closer to the present than past events (Caruso et al., 2013). To mitigate this, I limited all actions to one week in the past or future, ensuring comparable temporal proximity.

### ***Moral Valence Manipulation***

Participants described either a moral or an immoral action, depending on their assigned group.

### **Materials**

#### ***Manipulation Checks***

**Hypothetical Distance Manipulation Check.** Hypothetical distance manipulation was assessed using a single-item Likert scale. Participants rated their stories on a scale from 1 (*all details in my story are real*) to 7 (*all details in my story are imaginary*). The manipulation would be considered effective if the imaginary action group had higher scores than the real action group.

**Moral Valence Manipulation Check.** Moral valence manipulation was assessed using a manipulation check adapted from Reed et al. (2007). Participants rated the extent to which the stories they had written reflected them being a student, a moral person, a member of an organization, and safety conscious on a scale from 1 (*not at all*) to 7 (*to great extent*). The manipulation would be considered effective if the moral action group had higher scores on the "a moral person" item than the immoral action group. Scores on the other items should not differ significantly between conditions.

### **Outcome Measures**

**Prosocial Behavior Intentions.** Intentions to engage in prosocial behavior were measured using the Prosocial Behavioral Intentions Scale (PBIS) (Baumsteiger & Siegel, 2019). This Likert scale includes four prosocial actions, such as “comfort an acquaintance”. Participants rated their willingness to perform each action on a scale from 1 (*definitely would not do this*) to 7 (*definitely would do this*). Final scores were computed by calculating the means of those four items, with higher scores indicating higher moral behavior. The original internal consistency of this instrument ranged from .81 to .83 (Baumsteiger & Siegel, 2019). In the current study, the scale demonstrated good reliability (Cronbach’s alpha = .81). Four filler items concerning general social activities (e.g., “travel in groups”) were added to support the cover story. All items were presented in random order. See Appendix A for the full scale.

**Charity Donation.** Charity donation was measured via a modified version of the donation task from (Sachdeva et al., 2009). At the end of the study, participants were informed that they would receive a bonus of \$0.50 and that they had the option to donate any part of this bonus to a preferred charity. A list of donation organizations was provided. Non-donations were coded as \$0. Higher donation indicated higher moral behavior. See Appendix A for the full instructions of the donation task.

### **Procedure**

Data collection occurred during April 2025 and was conducted via Qualtrics. Participants took an average of roughly 7 to 8 minutes to complete the study. The survey consisted of the writing task, manipulation checks, the PBIS, and the donation task.

After providing informed consent, participants were randomly assigned to one of four groups: (1) imaginary immoral action, (2) imaginary moral action, (3) real immoral action, or (4) real moral action. All then completed the writing task, in which they wrote about an action in detail. For instance, a participant in imaginary moral action wrote about a moral action they may do in the upcoming week. Definitions and examples of moral and immoral actions were included to aid comprehension.

Following the writing task, all completed two manipulation checks and the PBIS. Then, they were informed that the study had ended and completed the donation task.

Finally, participants indicated their age, gender, and race/ethnicity. They were then debriefed and asked if their data could be used in the study. No actual donations were made. Those who had reached the end of the study received a total of \$3 (\$2.50 base payment plus a bonus of \$0.50) as compensation and were thanked for their participation.

### **Analyses**

All analyses were performed using R (version 4.4.1) via RStudio (version 2024.04.2+764). Descriptive statistics and analyses were carried out using relevant base functions and other packages such as tidyverse, psych, car, and lsr.

Prior to the main analyses, I examined the effectiveness of the manipulations. A two-way ANOVA was used to assess the effectiveness of the hypothetical distance manipulation. Hypothetical distance and moral valence served as the independent variables; hypothetical distance manipulation check served as the dependent variable. I expected only the main effect of hypothetical distance to be significant, with the imaginary action group having higher scores than the real action group.

Additionally, five two-way ANOVAs were conducted to evaluate the effectiveness of the moral valence manipulation. Hypothetical distance and moral valence served as the independent variables; each item of the moral valence manipulation check served as the dependent variables. I expected the main effect of moral valence to be significant in “a moral person” item only, with the moral action group to having higher scores than the immoral action group.

To answer my research question, I conducted two two-way ANOVAs. Hypothetical distance and moral valence served as the independent variables; prosocial behavior intentions and charity donation served as the dependent variables. I expected the interaction term to be significant.

Afterwards, I conducted planned comparisons to directly test my hypotheses. Specifically, one-tailed independent samples *t*-tests were used. Within the imaginary action group, I expected the prosocial behavior intentions and charity donation of those who wrote about moral actions to be higher than those who wrote about immoral action. In contrast, within the real action group, I expected the prosocial behavior intentions and charity donation of those who wrote about moral actions to be lower than those who wrote about immoral action. I used Bonferroni correction to reduce the likelihood of Type I error. The *p*-value was divided by two, meaning the results were considered statistically significant if  $p < .025$ .

## Results

Sensitivity power analysis using G\*Power version 3.1.9.7 for two-way ANOVA with 80% power, a significance level of .05, and a sample size of 153 yielded a moderate effect size *f* of 0.23.

## Descriptive Statistics

Descriptive statistics for prosocial behavior intentions are presented in Table 2. On average, in the imaginary action group, participants describing moral actions reported higher intentions to engage in prosocial behavior than those describing immoral actions. Meanwhile, in the real action group, on average, participants describing immoral actions reported higher intentions to engage in prosocial behavior than those describing moral actions.

**Table 2**

### *Descriptive Statistics for Prosocial Behavior Intentions*

Group	<i>N</i>	Mean	<i>SD</i>	Median	Range	Skewness	Kurtosis
Imaginary immoral action	33	5.11	1.34	5.25	2–7	-0.62	-0.21
Imaginary moral action	39	5.78	1.26	6.25	1–7	-1.60	3.26
Real immoral action	43	5.56	1.18	6	2.25–7	-0.92	0.09
Real moral action	38	5.41	1.26	5.5	3–7	-0.41	-1.04

For charity donation, 39.87% of participants agreed to donate, resulting in a highly right-skewed distribution. In both imaginary and real action groups, on average, participants describing moral actions donated more than those describing immoral actions. Descriptive statistics for charity donation are presented in Table 3.

**Table 3**

### *Descriptive Statistics for Charity Donation*

Group	<i>N</i>	Mean	<i>SD</i>	Median	Range	Skewness	Kurtosis
Imaginary immoral action	33	0.11	0.18	0	0–0.50	1.17	-0.21
Imaginary moral action	39	0.16	0.19	0	0–0.50	0.68	-1.08
Real immoral action	43	0.11	0.17	0	0–0.50	1.31	0.23
Real moral action	38	0.17	0.22	0	0–0.50	0.68	-1.46

## Manipulation Checks

***Hypothetical Distance Manipulation Check***

Shapiro-Wilk's test of normality indicated a violation of the normality assumption,  $W = .74, p < .001$ . Levene's test indicated unequal variances,  $F(1, 151) = 27.26, p < .001$ .

A two-way ANOVA was performed to analyze the effects of hypothetical distance and moral valence on hypothetical distance manipulation check. There was no significant interaction between the two variables,  $F(1, 149) = 0.74, p = .39, \eta^2 = .01$ . However, the main effects of hypothetical distance,  $F(1, 149) = 30.823, p < .001, \eta^2 = .18$  and moral valence,  $F(1, 149) = 6.876, p = .01, \eta^2 = .04$ , were significant. More specifically, the imaginary action group considered their stories to be significantly more imaginary ( $M = 3.89, SD = 2.45$ ) than the real action group ( $M = 1.99, SD = 1.85$ ). The same pattern was observed in the immoral action group ( $M = 3.26, SD = 2.47$ ), who rated their stories as more imaginary than the moral action group ( $M = 2.51, SD = 2.17$ ).

***Moral Valence Manipulation Check***

Shapiro-Wilk's tests of normality indicated a violation of the normality assumption across all four items,  $Ws > .80, ps < .001$ . Levene's tests indicated unequal variances for "a member of an organization" item,  $F(1, 151) = 4.04, p = .046$ , while other items showed homogeneity ( $Fs < 3.80, ps > .05$ ).

Four two-way ANOVAs were performed to analyze the effects of hypothetical distance and moral valence on each item of the moral valence manipulation check. ANOVA results for all items are presented in Table 4.

**Table 4*****ANOVA Results for Moral Valence Manipulation Check***

Item	Effect	<i>F</i> (1, 149)	<i>p</i>	partial $\eta^2$
A student	Hypothetical distance	0.55	.46	.00
	Moral valence	0.19	.66	.00
	Interaction	0.02	.89	.00
A moral person	Hypothetical distance	0.03	.87	.01
	Moral valence	100.29	< .001	.40
	Interaction	1.28	.26	.01
A member of an organization	Hypothetical distance	2.63	.11	.02
	Moral valence	1.19	.28	.01
	Interaction	3.20	.08	.02
Safety conscious	Hypothetical distance	0.62	.43	.00
	Moral valence	4.91	.03	.03
	Interaction	0.72	.40	.01

There was a main effect of moral valence for the “a moral person” item. The moral action group ( $M = 5.95, SD = 1.28$ ) rated their stories as more reflective of them being a moral person than the immoral action group ( $M = 3.63, SD = 1.58$ ).

For the remaining items, results showed no significant effect, except for “safety conscious” item, in which the effect of moral valence was significant. The moral action group ( $M = 4.45, SD = 2.15$ ) had significantly higher scores in this item than the immoral action group ( $M = 3.71, SD = 1.89$ ). Means and standard deviations of four groups are presented in Table 5.

**Table 5**

*Means and Standard Deviations for Moral Valence Manipulation Check*

Item	Imaginary immoral action		Imaginary moral action		Real immoral action		Real moral action	
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
A student	2.45	1.70	2.64	2.19	2.74	1.80	2.84	2.06
A moral person	3.36	1.67	5.97	1.20	3.84	1.49	5.92	1.36
A member of an organization	3.00	1.79	4.00	2.19	3.09	2.02	2.89	2.19
Safety conscious	3.67	1.83	4.69	2.14	3.74	1.95	4.21	2.16

**Outcome Variables**

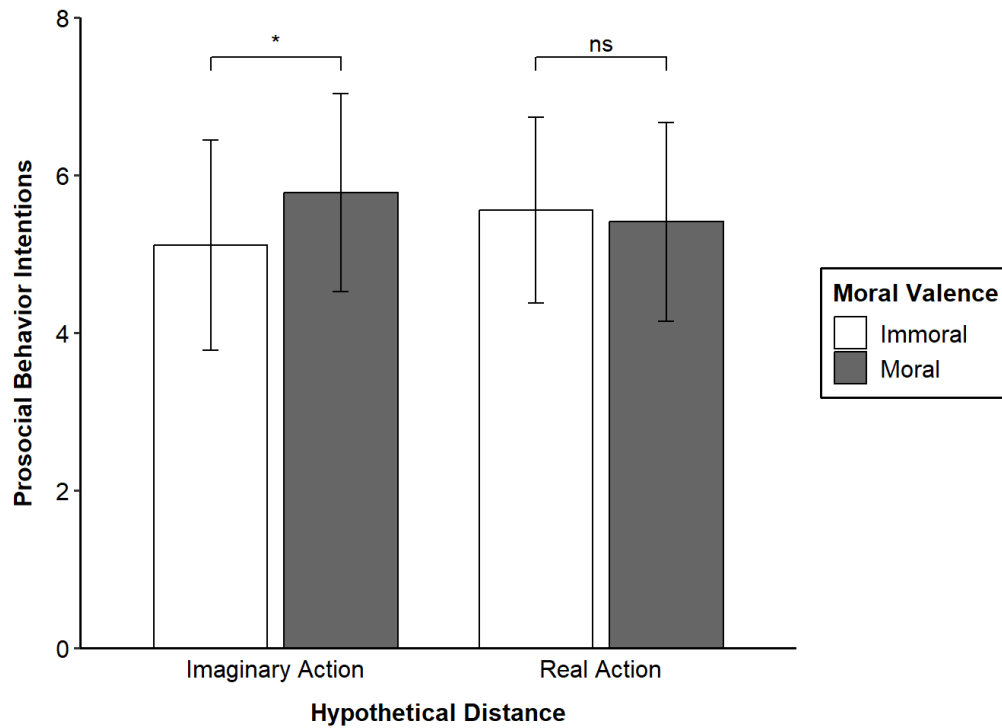
***Prosocial Behavior Intentions***

Shapiro-Wilk's test of normality indicated a violation of the normality assumption,  $W = .92, p < .001$ . Levene's test showed homogeneity,  $F(3, 149) = 0.29, p = .83$ .

A two-way ANOVA was performed to analyze the effects of hypothetical distance and moral valence on prosocial behavior intentions. Results indicated a marginally significant interaction between hypothetical distance and moral valence,  $F(1, 149) = 3.98, p = .048$ , partial  $\eta^2 = .03$ . No significant main effect was found for hypothetical distance,  $F(1, 149) = 0.03, p = .88$ , partial  $\eta^2 = .000$ , or moral valence,  $F(1, 149) = 1.28, p = .26$ , partial  $\eta^2 = .009$ .

To test a priori hypotheses, two one-tailed independent samples  $t$ -tests were performed. Results showed a significant effect of hypothetical distance on moral consistency,  $t(70) = -2.16, p = .02, d = 0.51$ , as the imaginary moral action group had higher prosocial behavior intentions than the imaginary immoral action group, supporting H1. However, there was no significant effect of hypothetical distance on moral balancing,  $t(79) = 0.55, p = .29, d = 0.12$ , indicating that H2 was not supported. Overall, the hypotheses were partially supported for prosocial behavior intentions.

**Figure 1*****Prosocial Behavior Intentions Across Groups***



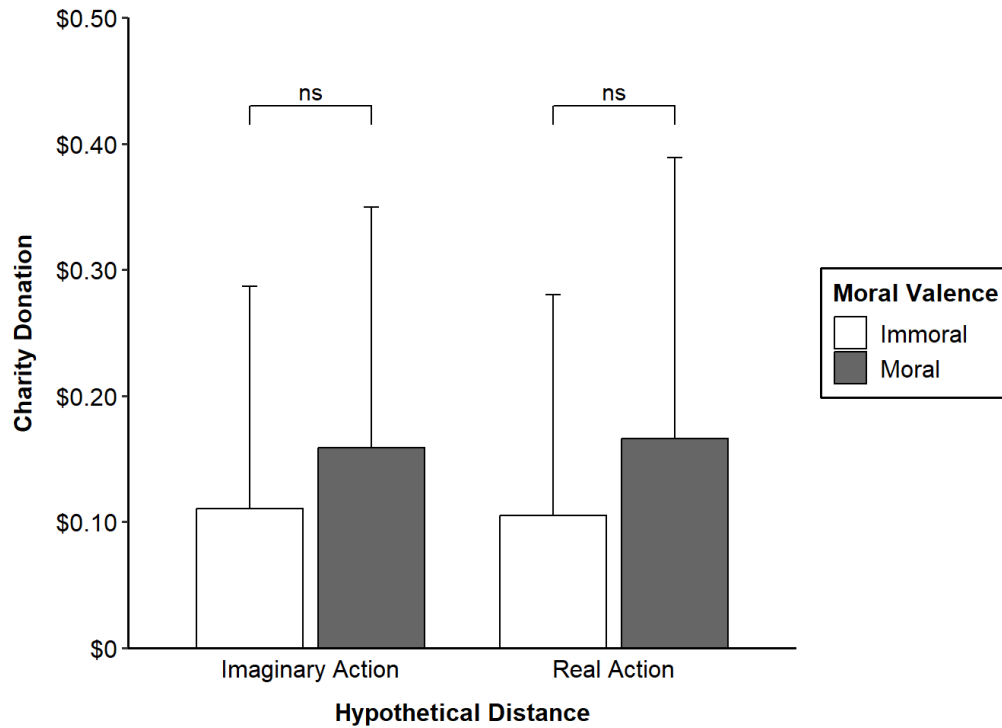
**Charity Donation**

Shapiro-Wilk’s test of normality indicated a violation of the normality assumption,  $W = .69, p < .001$ . Levene’s test showed homogeneity,  $F(3, 149) = 1.06, p = .37$ .

A two-way ANOVA was performed to analyze the effects of hypothetical distance and moral valence on charity donation. Results indicated no significant main effect for hypothetical distance,  $F(1, 149) = 0.00, p = .98$ , partial  $\eta^2 = .00$ , moral valence,  $F(1, 149) = 3.13, p = .08$ , partial  $\eta^2 = .02$ , or interaction effect,  $F(1, 149) = 0.04, p = .84$ , partial  $\eta^2 = .00$ . These results indicated that the hypotheses were not supported for charity donation.

**Figure 2**

*Charity Donation Across Groups*



**Exploratory Analyses**

To complement the main findings and further explore potential underlying patterns, a Chi-square test of independence was performed to examine the association between group and donation decision. There was not a significant relationship between these two variables,  $\chi^2(3, N = 153) = 2.39, p = .50$ . The frequencies of those who donated and did not donate in each group are presented in Table 6.

**Table 6**

*Frequencies of Donation Decision Across Groups*

Group	Did not donate		Donated	
	<i>n</i>	%	<i>n</i>	%
Imaginary immoral action	22	66.67	11	33.33
Imaginary moral action	20	51.28	19	48.72
Real immoral action	28	65.12	15	34.88
Real moral action	22	57.89	16	42.11

### Discussion

This study aimed to investigate the effect of hypothetical distance on the consistency of moral behavior. Based on previous literature, I hypothesized that people who wrote about hypothetical distant, or imaginary, actions would engage in moral consistency, while people who wrote about hypothetical close, or real, actions would engage in moral balancing. The results of this study partially supported these hypotheses. Specifically, consistent with my hypothesis, for prosocial behavior intentions, moral consistency was observed when hypothetical distance was high (imaginary action group). However, contrary to my expectations, no evidence of moral balancing emerged when distances were low (real action group). Additionally, hypothetical distance did not have a significant effect on charity donation across groups.

These findings diverged from those of Conway and Peetz (2012), but aligned more closely with the studies by Martuza and Kim (2024), which attempted to replicate Conway and Peetz's studies with a larger sample and a control condition. Similar to my results, they found evidence of consistency, not balancing.

There are at least two reasons for the absence of moral balancing. First, hypothetical distance may not influence moral behavior in the same way as other psychological distances, such as temporal or social distance. While CLT suggests that these distances are conceptually related, they are not completely identical (Trope & Liberman, 2010). For example, people tend to view socially close entities (e.g., ingroups) more positively than socially distant ones (e.g., outgroups). In contrast, people tend to be more positive about the distant future than the near future. In a moral context, studies have found that different distances have different effects on

moral behavior. Zezelj and Jokic (2014), for instance, found that immoral acts were judged more harshly when assessed from a socially distant (third person) perspective than from a socially close (first person) perspective. No significant effects were observed for temporal distance. These discrepancies may help explain why my study did not find evidence for balancing or negative consistency, unlike the studies by Conway and Peetz (2012). This also means that future research could explore and compare the effects of other psychological distances, beyond temporal and hypothetical distance, on the consistency of moral behavior.

Another possible reason is the lack of social observation in the study settings. Lasarov and Hoffmann (2020) proposed the social moral licensing model, emphasizing the role of the social context in shaping moral behavior. According to this model, moral licensing is more likely to occur when both current and prior moral actions are and have been observable by others. Supporting this theory, a meta-analysis by Rotella et al. (2023) found that moral licensing effects were significantly stronger when participants were explicitly observed. Conversely, Kristofferson et al. (2014) found greater consistency in private contexts: Participants who engaged in moral actions in private later donated more than those who did so in public. Because my study was conducted online, with participants likely having completed the tasks unobserved, this lack of social visibility may have limited the emergence of balancing behavior.

Turning to another aspect of the findings, the study did not find any significant effect on actual donation behavior. This is probably because it is generally easier to predict and influence intentions than actual behavior. According to the theory of planned behavior (Ajzen, 1991), behavioral intentions are shaped by attitudes toward a behavior, subjective norms (i.e., the perceived attitudes of others toward that behavior), and perceived behavioral control (i.e., the

perceived extent to which a person can control their actions). All of these four variables serve as precursors to actual behavior. However, because behavior involves more variables, intentions are typically more predictable than actions. A meta-analysis by Armitage and Conner (2001) found that intentions and perceived behavioral control together explained only 27% of the variance of behavior. In moral psychology, Maki et al. (2019) similarly found that spillover effects were stronger for intentions than for actual pro-environmental behaviors or policy support. Likewise, Smith and McSweeney (2007) found that donation intentions were a significant predictor of actual donations, but they accounted for less than 20% of the variance. In this study, there was a small positive correlation between prosocial behavior intentions and charity donation ( $r = .09$ ), suggesting a weak correlation between intentions and actions. Taken together, these findings suggest that actual behavior is more difficult to influence, which may explain why hypothetical distance affected intentions, but not donations.

Second, the two dependent variables measured different kinds of moral behavior. The PBIS focused on everyday prosocial behaviors such as offering comfort to others, while the donation task involved contributing money to charity, a behavior that is both less common and potentially more costly. As such, they may differ in susceptibility to hypothetical distance.

### **Limitations**

This study has several limitations worth noting. First, it did not assess whether participants adopted an abstract or concrete mindset, nor did it measure the accessibility of moral identity. A central assumption in this research is that hypothetical distance increases abstraction, prompting people to consider the values behind their actions, which in turn promotes consistency. Hence, the next step from the present study would be to include

measures or manipulate these variables to confirm this underlying mechanism, as well as to see how they would interact with hypothetical distance.

Second, the sample consisted exclusively of participants from the United States recruited through Prolific. Prior research suggests that cultural factors influence the strength of moral licensing effect. For instance, Simbrunner and Schlegelmilch (2017) found stronger licensing in North America compared to Western Europe, while Southeast Asian samples tended to show more consistency than licensing. Future research can consider more diverse samples and alternative recruitment methods.

Third, future studies may explore other types of moral behavior beyond prosocial intentions and charitable giving. For example, behaviors such as volunteering, recycling, or participating in public health initiatives may reveal different patterns of consistency or balancing.

Fourth, even though the manipulation checks suggested that manipulations were effective as intended, participants also reported significantly higher on other dimensions not directly targeted by the manipulation. For instance, the average scores for the hypothetical distance manipulation check were higher for the immoral action group than the moral action group, suggesting that the levels of hypothetical distance may have been different between these two groups. This is possibly due to the hypothetical distance manipulation in the writing task instructions. Even though it was intended for participants to imagine actions regardless of their feasibility, many wrote about plans they were actually considering. Moreover, the real action group produced a wider range of immoral actions, whereas those in the imaginary action group tended to adhere to more closely to the examples of immoral actions that I have

provided in the writing prompt. This suggests that participants may have struggled with generating purely imaginary immoral actions.

On a similar note, the length of the responses in the writing task varied considerably. While some participants wrote only a single word, others wrote as long as two paragraphs. To ensure more consistent engagement in future studies, researchers could set a minimum word or sentence requirement, use different instructions (e.g., “imagine doing an immoral action” instead of “describe an immoral action you may do”), restrict responses to a specific moral and immoral scenario, or employ other strategies to manipulate hypothetical distance. Additionally, if the writing task is used, analyzing the content of these written responses for moral valence and hypothetical distance could yield further and better insight.

### **Conclusion**

In summary, this study found some support for the hypothesis that hypothetical distance influences the consistency of moral behavior. While increased hypothetical distance promoted consistency in intentions, no effects were observed for donations or balancing behavior. These findings add nuances to the understanding of moral behavior and CLT by suggesting that it may strengthen intentions to act morally yet may not extend to actual behavior. This has practical implications for those who are seeking effective ways to promote prosocial decision-making; however, additional research is needed to translate those intentions into real actions.

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**Appendix A****Materials****Writing Task*****Imaginary Immoral Action Group***

**Describe an immoral action that you may do next week.**

*An immoral action is any minor wrongdoing that you deem wrong and/or bad. Examples: breaking a promise, being mean to someone.*

Please include as much detail as you can imagine and do not include any real immoral action that you did.

***Imaginary Moral Action Group***

**Describe a moral action that you may do next week.**

*A moral action is any action that you deem right and/or good. Examples: keeping a promise, volunteering at an animal shelter.*

Please include as much detail as you can imagine and do not include any real moral action that you did.

***Real Immoral Action Group***

**Describe an immoral action that you did last week.**

*An immoral action is any minor wrongdoing that you deem wrong and/or bad. Examples: breaking a promise, being mean to someone.*



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Safety conscious	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
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**Prosocial Behavioral Intentions Scale (PBIS)**

Imagine that you encounter the following opportunities. Please indicate how willing you would be to perform each behavior from 1 (Definitely would not do this) to 7 (Definitely would do this).

If you are more likely to complete one task (e.g., help a stranger find a key) than another (e.g., help a stranger find a missing pet), please respond to the task you would be more likely to perform.

	Definitely would not do this					Definitely would do this	
	1	2	3	4	5	6	7
Comfort someone I know after they experienced a hardship	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Help a stranger find something they lost, like their key or a pet	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Help care for a sick friend or relative	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Assist a stranger with a small task (e.g., help carry groceries or watch their things while they use the restroom)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Attend a party or social gathering	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Engage in conversations with others	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Travel in groups	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Join a club	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

**Donation Task**

You have reached the end of the study. As a token of appreciation for your time and effort, all participants will receive a \$0.50 bonus. Thank you for your participation!

To help raise awareness for important causes, we have included an option to donate any part of your bonus to charitable organization. If you are interested, please indicate “Yes” to the

question below and complete the additional questions. Otherwise, you can indicate “No” and proceed with the survey.

Would you like to make a donation from your bonus?

- Yes
- No

How much would you like to donate? (max: \$0.50)

Where would you like to donate to?

Here are some charitable organizations for you to consider, but feel free to consider others.

American Heart Association

Humane World for Animals

St. Jude Children’s Research  
Hospital

American Red Cross

Mental Health America

The Arc of the United States

Feeding America

Metropolitan Museum of Art

The Nature Conservancy

Good 360

Salvation Army

Habitat For Humanity

Scholarship America

### Demographic Questions

How old are you?

What is your gender?

- Male
- Female
- Non-binary / third gender

Prefer not to say

What is your race/ethnicity?

White

Black or African American

American Indian or Alaska Native

Asian

Native Hawaiian or Pacific Islander

Other

Prefer not to say