

Too Far to Help: The Effect of Perceived Distance on the Expected Impact and Likelihood of Charitable Action

Maferima Touré-Tillery

Northwestern University

Ayelet Fishbach

University of Chicago

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Abstract

Fact: Holding force constant, a snowball thrown from 10 feet away will hurt more than one thrown from 50 feet away; it will have more impact. We show that people expect charitable donations—much like snowballs—to have more impact on nearby (vs. faraway) targets. Therefore, because making an impact is a powerful motivator of prosocial behavior, people are more willing to take action to help nearby (vs. faraway) causes—independent of social distance. Six studies, including lab and field experiments, and secondary data from fundraising campaigns support this prediction. Specifically, Study 1 shows that people expect charitable donations to have a greater impact on nearby (vs. faraway) recipients, and that these judgments stem from metaphorical thinking. In the context of alumni giving to their alma mater, the next two studies show that donations increase as real (Study 2) or perceived (Study 3) distances decrease. Study 4 extends these findings using a more conservative manipulation of distance perception (Study 4). Finally, Study 5 demonstrates the mediating role of expected impact on the effect of perceived distance on charitable action, whereas Study 6 shows that a motivational focus on making an impact moderates this effect.

Keywords: Spatial Distance; Impact; Prosocial Behavior; Motivation; Metaphorical Thinking

People often engage in behaviors that primarily benefit others, such as donating money or time to charity, purchasing eco-friendly products, and fulfilling certain civic duties. Individuals' prosocial actions can have a profound impact on communities and society overall, but come at a cost to the self, in terms of valuable resources such as time, money, and energy. So why do people do it? The motives of prosocial behavior can be broadly categorized into other-focused and self-focused motives—which are not mutually exclusive (see Bénabou & Tirole, 2006). Self-focused or egoistic motives include any internal or external benefits derived from engaging in a prosocial act, such as alleviating one's own emotional distress or guilt, and boosting one's self-image or social standing (Andreoni, 1989; Lee & Shrum, 2012; Liu & Aaker, 2008; Piff et al., 2010; Williams, 2007; Prelec & Bodner, 2003). Other-focused or altruistic motives stem from a concern for the well-being of others.

When prosocial motives are other-focused, the impact one expects to have on others is an important driver of action. Several factors can influence people's expectations and actual likelihood of making an impact in the prosocial domain (see Cryder, Loewenstein, & Scheines, 2013). We explore one such factor, namely, spatial distance. If you have ever been in a snowball fight—or have had the misfortune of having any other object thrown at you—you will agree with this simple fact: holding force constant, a snowball, rubber ball, book, or shoe thrown from 10 feet away will hurt more than the same object thrown from 50 feet away; so, if you want to have more impact on your “opponent,” you get closer to him or her. The present article proposes that the forces of physics that govern the human experience might be applied metaphorically to more abstract forms of judgments and behaviors. Specifically, we investigate the possibility that people will expect social actions—much like snowballs, rubber balls, books, or shoes—to have

more impact on nearby (vs. faraway) targets, and hence will be more willing to take action to help these nearby (vs. faraway) targets.

Impact Matters

Although many factors influence motivation (see Touré-Tillery & Fishbach, 2011, 2014), goal research has identified perceived impact as a central driver of many if not most everyday actions (Brehm & Self, 1989; Locke & Latham, 1990; Powers, 1973). In particular, researchers of the goal-gradient effect have advanced that motivation increases with proximity to a goal's end state, because the perceived marginal impact of actions increases with each consecutive action (Heath, Larrick, & Wu, 1999; Higgins & Brendl, 1995). For example, the last action accomplishes 100% of the remaining progress, which is twice the impact of the second-to-last action (i.e., 50%). Thus, people (and mice) exert more effort as they get closer to the goal's end state (Hull, 1932; Kivetz, Urminsky, & Zheng, 2006). Furthermore, revisions to the goal-gradient hypothesis have suggested the reference point individuals use to monitor their progress (i.e., end vs. start of goal pursuit) influences perceptions of marginal impact and thus motivation (Bonezzi, Brendl, & De Angelis, 2011; Koo & Fishbach, 2012). Specifically, when individuals focus on distance from the starting point, the perceived marginal impact of actions is also higher at the beginning of goal pursuit. For example, the first action accomplishes 100% of the progress to date, whereas the second action accomplishes only 50% of the progress. In these cases, motivation to act toward the goal is greater at the early stages of goal pursuit.

In the context of prosocial goals, the perceived impact of charitable acts also has an important influence on behavior (Duncan, 2004). For example, research shows people are more responsive to a charitable solicitation, and willing to donate more money, when informed that a third party will match their gift amount. This effect can be explained in terms of the matching

mechanism increasing the perceived impact of each donation (Karlan & List, 2007). Similarly, charitable interventions that are specific (e.g., provide clean water to West African villagers) rather than general (e.g., provide a broad range of aid to people across the globe) appear to have more impact, and thus attract more donations because they give potential donors a sense that their donation will be more effective (Cryder, Loewenstein, & Scheines, 2013). Finally, several researchers have documented a “proportion dominance” effect, whereby people prefer to contribute to interventions that help a large (vs. small) proportion of individuals—even if the absolute number of people helped is smaller (Bartels, 2006; Fetherstonhaugh, Slovic, Johnson, & Friedrich, 1997; Jenni & Loewenstein, 1997). Helping a small proportion of a large at-risk population (e.g., a program that can save 230 of the 920 people at risk of death) might feel like a “drop in the bucket,” whereas helping a large proportion of a small at-risk population (e.g., a program that can save 225 of the 300 at risk of death) might feel like making an impact.

In the present article, we propose the expectation of making an impact can stem not only from features of a charitable appeal (as discussed above), but also from the perceived spatial distance between donors and recipients.

Less Impact from Far Away

Linguists maintain the conceptual systems that govern people’s thoughts and actions are fundamentally metaphorical in nature, such that people often understand and experience one thing in terms of another (Lakoff & Johnson, 1980; Fauconnier & Turner, 2002; Williams & Bargh, 2008). For example, Schubert (2005) found that the social concept of power is associated with perceptions of vertical spatial position, such that powerful and powerless groups were identified more quickly when they were in the “correct” spatial positions—spatially higher for powerful and lower for powerless. Similarly, Meier and Robinson (2004) showed valence

representations are linked to perceptions of vertical spatial position, such that good things are vertically higher than bad things. In their study, participants evaluated negative words faster when these words appeared at the bottom (vs. top) of the screen, whereas the opposite was true for positive words. Finally, research suggests the abstract domain of time draws its relational structure from the more concrete domain of space (Boroditsky, 2000; Boroditsky & Ramscar, 2002; Gentner, Imai, & Boroditsky, 2002; Jaynes, 1976). For example, because English-speaking Westerners tend to understand time in terms of a horizontal line, they make quicker judgments about temporal facts after horizontal primes than after vertical ones (Boroditsky, 2001).

Within a similar perspective, we propose that abstract judgments of impact (i.e., influence, effect) are understood in terms of concrete forms of physical impact (i.e., the striking of one object against another). Most people have internalized the basic notion that an object thrown at the same initial force will have more impact from 10 feet away than from 50 feet away because, in most cases, speed decreases over distance. Furthermore, many languages, such as English, have the metaphor of “closeness equals strength of effect” from both a semantic and a syntactic perspective (Lakoff & Johnson, 1980). Semantically, for example, the phrase “the people *closest to* President Obama” means “the people *who have the strongest effect on* President Obama.” Applied to the syntactic form of a sentence, the closeness-equals-strength-of-effect metaphor dictates that if the meaning of “word A” influences that of “word B,” then the closer the two words are to one another in the sentence, the stronger the effect of A on B. For example, in the sentence “Al thinks Sanders will *not win* the democratic primaries” the negative word “not” influences the meaning of “win” to a greater extent than in the sentence “Al does *not think* Sanders will *win* the democratic primaries” due to the closer proximity of the two words. We propose that this notion of closeness-equals-strength-of-effect will transfer to abstract

expectations about the influence—or impact—of charitable actions, and we draw the following five hypotheses.

First, we predict people will expect charitable actions to have a greater impact on situations and targets that are spatially closer to (vs. farther from) the sender, whether this distance is real or merely perceived. We argue this pattern of judgment stems from metaphorical thinking, which consists of understanding or experiencing one domain in terms of another. We propose that people understand charitable impact in terms of physical impact using the prevalent metaphor of closeness-equals-strength-of-effect, which relies on the knowledge that closeness increases impact. Thus, our second prediction is that disrupting the metaphor of closeness-equals-strength-of-effect by eliciting contradictory knowledge will attenuate the connection between closeness and the expected impact of charitable actions. For example, the knowledge and experience that the effect of an object dropped or thrown downward on its target might actually increase with distance is inconsistent with the metaphor of closeness-equals-strength-of-effect. We expect that making this metaphor-inconsistent knowledge accessible—for example, by reminding people that a tennis ball hits the ground with greater force if thrown from the first versus 20th floor—will disrupt the default metaphor of closeness-equals-strength-of-effect. As a result, people will no longer rely on this default metaphor when judging the expected impact of charitable actions based on spatial distance.

Third, given the important role of expected impact in motivating behavior, we predict people will be more willing to donate money to those they perceive as close (vs. far)—regardless of social distance. This prediction leads to our fourth hypothesis: expectations about the impact of charitable actions will mediate the relationship between perceived distance and willingness to take action.

Fifth, a key moderator emerges from our theorizing: whether or not people's motivation is to make an impact on helping others (other-focused). We predict that the effect of distance on charitable action will occur only for actions that are primarily motivated by the desire to make an impact on helping others. Indeed, outcome-focused motivation refers to the desire to attain a goal or produce outcomes related to that goal—in this case, make a difference in the lives of others in need. This motivation increases as the perceived impact of actions increases, such that the greater the expected impact of a contribution, the more motivated one will be to take action (Touré-Tillery & Fishbach, 2011). Therefore, when people focus on the outcome of their actions (i.e., making a difference, helping others), they will be more likely to help close (vs. far) causes—on which they expect to have a greater impact. By contrast, when charitable donations have other primary motives—for example, self- or social-signaling (Koo & Fishbach, 2016)—expected impact, and hence perceived distance, will have no influence on prosocial motivation.

Alternative Explanations for the Effect of Distance

We propose that spatial closeness promotes prosocial action because people perceive actions originating from nearby (vs. far away) as more influential. One alternative proposition is that distance influences prosocial action because people care more about those who are spatially close to them. In this case, proximity would not increase the expectancy (impact) of charitable actions, but rather the value of these actions: helping those we hold dear is more important. Indeed, spatial proximity often corresponds to social similarity—for example, people from the same neighborhood or country tend to have more in common than people from different countries—and research shows people are more likely to help those they perceive as similar to themselves (Dovidio, 1984; Dovidio et al., 1997; Krebs, 1975; Levine et al., 2002; Levine & Thompson, 2004; Stotland & Dunn, 1963). The present research explores whether, beyond value,

distance influences expectancy (impact), and whether expected impact moderates and mediates the relationship between distance and prosocial actions. Notably, spatial distance does not necessarily match social distance, because one can think about almost any two places as relatively close or far. Moreover, we expect that spatial distance will not influence perceived impact if we disrupt the distance-impact metaphor, for example, by having people imagine objects falling down instead of being thrown horizontally.

Another proposition stems from research showing spatial distance influences emotional intensity, such that negative events that appear to be far away (vs. nearby) elicit lower negativity and weaker emotional arousal (Muhlberger, Neumann, Wieser, & Pauli, 2008; De Cesarei & Codispoti, 2008; Williams & Bargh, 2008). Although studies on this topic did not specifically test for the effect of proximity on prosocial behavior, their findings suggest people should experience stronger emotional responses (e.g., more empathy, more sympathy), and hence behave more charitably toward spatially close (vs. far) causes and events. However, this emotions-based proposition makes no predictions about the role of expected impact in motivating prosocial behavior. The present research explores the unique effects of distance on expected impact, and the resulting prosocial tendencies, and proposes that these effects are particularly likely to occur when donors' motivational focus is on helping others.

Yet a third alternative is based on construal level theory (CLT; Trope & Liberman, 2010; Trope, Liberman, & Wakslak, 2007), which posits that psychologically distant objects are construed more abstractly and at a higher level, whereas psychologically close objects are construed more concretely and at a lower level. CLT proposes that intentions for psychologically distant (vs. proximal) situations are more likely to stem from morals and values, because the abstract nature of these concepts matches the level of abstraction inherent to psychologically

distant objects. Because helping is an abstract value, it follows that people should behave more charitably toward psychologically distant (vs. proximal) situations. Importantly, this proposition implies people should behave more charitably toward spatially distant (vs. proximal) targets and situations. Indeed, studies suggest that increasing temporal distance increases prosocial judgment and intentions (Choi, Park, & Oh, 2012; Eyal, Liberman, & Trope, 2008), which seems opposite to the effect of social distance, and to our hypothesized effect of spatial distance on social action.

Against these alternatives, we focus on spatial distance and propose that, as distance decreases, charitable behavior will increase. We also predict that these patterns for behavior occur due to higher expectations about the impact of actions aimed at close (vs. faraway) recipients.

Overview of Studies

In six studies, we test our hypotheses about the effect of perceived distance on the expected impact and likelihood of social actions. These studies used a variety of research paradigms including: primary data from scenarios, laboratory and field experiments, and secondary data from fundraising campaigns.

We designed our studies to systematically test our five hypotheses. First, we investigated the effect of perceived (framed) distance on the expected impact of social actions and the role of metaphorical thinking in this process (Study 1). In the next two studies, we explored the effect of real (Study 2) and perceived (Study 3) distance on charitable giving in the context of alumni donations to their alma mater. In studies 1 and 3, we altered perceptions of distance by describing the target location either as “near,” “nearby,” “close,” or as “far,” “far away,” “distant.” Study 4 sought to extend our findings on the effect of distance on charitable giving, using an experimental manipulation of distance meant to alter general perceptions of earthly

distances, without changing the description of the target location across conditions. The last two studies tested our proposed underlying mechanism in two different ways. Study 5 looked at the mediating role of expected impact on the relationship between perceived distance and social action, whereas Study 6 investigated the moderating role of motivational focus (making impact on others vs. signaling) on the relationship between distance and charitable giving.

Study 1: The Closeness-Equals-Strength-of-Effect Metaphor

In this first study, we tested the role of the closeness-equals-strength-of-effect metaphor on judgments of charitable impact. Specifically, we investigated whether encouraging the use of the metaphor by eliciting metaphor-consistent knowledge in the physical domain (i.e., impact increases with closeness) would translate into expectations that charitable donations to close (vs. far) recipients would have more impact. By contrast, disrupting the use of the metaphor by eliciting contradictory knowledge (i.e., impact increases with distance) would attenuate these differences in expected impact.

Notably, we predicted that the object-moving-downward prime would not reverse the hypothesized effect of distance on expected impact because people's most common experience is that impact increases with closeness, and hence that experience should be more salient than the experience of impact increasing with distance—as would be the case for an object moving downward. Although most people might “know” impact increases distance for an object moving downward (e.g., they might have learned it in a physics class), they rarely “feel” such an increase. This asymmetry in experiences might explain why the metaphor of closeness-equals-strength-of-effect—rather than that of distance-equals-strength of effect—is firmly entrenched in language.

Participants explained the relationship between distance and impact for an object moving either horizontally (metaphor-consistent knowledge: impact increases with closeness), or vertically downward (metaphor-inconsistent knowledge: impact increases with distance). Next, participants read two charitable appeals requesting a donation to help children in two adjacent South American countries, one described as “far away” and the other as “nearby.” We predicted that when participants were reminded of the metaphor-consistent notion that impact increases with closeness (object moving horizontally), they would expect their donation to have more impact in the near (vs. far) country. By contrast, disrupting the metaphor of closeness-equals-strength-of-effect by highlighting the metaphor-inconsistent knowledge that impact increases with distance (object moving downward) would attenuate the effect of distance on the expected impact of donations.

Participants

Two hundred and one US-based participants (82 male; *Modal Range*_{age}: 25 to 34) recruited through Amazon’s Mechanical Turk (mTurk) completed this online study in return for monetary compensation (\$0.75). We opened the study to 200 participants, but we (inexplicably) ended up with an extra one. No one dropped out. Because the messages used in this study referred to locations in South America, we excluded seven participants who reported being from that region, because they might have specific pre-existing notions about the distance between the United States and countries in South America.

We determined sample sizes across our studies based on rules of thumb, taking into account the nature of the subject pool (e.g., online, field, or controlled laboratory setting) and that of our main dependent variables, and the type of statistical analysis we expected to conduct. Specifically, for online studies using two-sample tests on continuous dependent variables, we

aimed for per-cell sample sizes of roughly 50. For categorical dependent variables such as choice to donate (yes, no), we aimed for larger samples of roughly 80 responses per cell—due also to the typically low rate of donation such charitable appeals tend to produce across our subject pools.

Method

The study employed a 2 (elicited knowledge: metaphor-consistent vs. metaphor-inconsistent) \times 2 (perceived distance: nearby vs. far away) mixed design, with elicited knowledge between subjects and perceived distance within subjects.

We manipulated whether participants' accessible knowledge from the physical domain was consistent or inconsistent with the metaphor of closeness-equals-strength-of-effect, using a procedure adapted from Faro, McGill, and Hastie (2010). We started the experiment with a task titled "Everyday Physics." Participants read the following introduction to the task: "Physics is part of our everyday life. In this study, we are interested in how people experience and explain various physical phenomena." Next, participants moved to a screen on which they saw two pictures: one depicting a person throwing an object at another person located close to the thrower, and another depicting a person throwing an object at another person located farther away. In one condition, the movement of the object was horizontal (arrow pointing to the right), in which case we could expect the object to have a stronger effect from nearby (vs. far away)—consistent with the closeness-equals-strength-of-effect metaphor. In the other condition, the object appeared to move vertically downward (arrow pointing down), in which case we could expect the object to have a stronger effect from far away (vs. nearby)—inconsistent with the closeness-equals-strength-of-effect metaphor (see Figure 1).

The following instructions were displayed below the pictures in the metaphor-consistent/horizontal movement [metaphor-inconsistent/vertical movement] condition: “Pictures (A) and (B) above depict scenarios in which the same object is thrown [down] at a target located far away or nearby with the same initial force (F). Please use the space below to discuss how much impact you would expect the object to have on the target in each of the two scenarios (A) and (B). Why? Explain your answer and provide as much detail as possible.” Participants’ answers to this question were generally consistent with what we expected. For example, one participant in the horizontal condition wrote, “Because the target is farther away in scenario A, the object will hit the target with less force because of gravity and drag having a greater impact on the object traveling at the target.” Another participant in the vertical-movement condition answered, “In picture A, the object would gain speed due to gravity and would make a harder impact.”

After this task, participants read two charitable appeals soliciting \$10 to help children in need in Guatemala and Honduras. Guatemala and Honduras are neighboring countries in South America, and hence equidistant from the United States. We manipulated perceived distance from these countries by describing them as nearby or far away, such that participants were randomly assigned to read one country was nearby and the other was far away (the order of the presentation was also randomized). As an example, the message about Guatemala was titled “Help improve lives in nearby [faraway] Guatemala,” and read as follows:

The researchers on this project are collaborating with OSAF, a charitable organization reaching out to you from Guatemala, right near you [all the way from Guatemala]. We are contacting you from this short [long] distance because we need your help. Many children in Guatemala still die each day from preventable causes. OSAF Guatemala provides

children with health care, nutrition, education, emergency relief, and more. The organization works tirelessly with children from birth to young adulthood, and with their families and communities to create the environments all children need to thrive. By sending \$10, you can help improve lives in nearby [faraway] Guatemala. Please consider a donation that stays close to you [travels far away].

Below the message, a picture displayed an arrow pointing from the word “USA” to the word “Guatemala” or “Honduras.” To reinforce the previous manipulation of accessible knowledge from physics, depending on the condition, the arrow pointed vertically down or horizontally to the right from the USA to Guatemala or Honduras (Figure 2).

After each message, participants answered three questions meant to measure the extent to which they would expect a \$10 donation to have an impact on the recipients. Specifically, we asked participants to indicate how much impact they would expect to make with a \$10 donation to the organization (1 = *Not much*; 9 = *Very much*), the extent to which they would expect such a donation to advance the work of this organization (1 = *Not at all*; 9 = *Very much*), and how much they would expect such a donation to benefit the cause (1 = *Not at all*; 9 = *Very much*).

We note that OSAF is a real but very small non-governmental agency operating in Ivory Coast (West Africa). Therefore, it should be unfamiliar to our participants, thus eliminating possible reactions to the appeal due to pre-existing attitudes about the organization. OSAF does not conduct any work in South America. Nonetheless, as a short filler questionnaire, we assessed participants’ attitudes toward OSAF, by asking them to indicate the extent to which they viewed the organization as (a) kind, (b) efficient, (c) reliable, (d) competent, (e) trustworthy, (f) caring, and (g) familiar (1 = *Not at all*; 7 = *Very much*). As an attention check, we asked participants to

indicate the main differences between the two messages they had just read (open-ended-response format).

Recent research suggests individual differences exist in people's tendencies for metaphorical thinking and behavior (Fetterman, Bair, Werth, Landkammer, & Robinson, 2016). The Metaphor Usage Measure (MUM) is intended to capture these differences, by measuring the extent to which a person uses specific metaphors in language. Thus, at the end of the study, we included the MUM as an exploratory individual-difference measure—followed by a basic demographic questionnaire. The MUM neither interacted with any other factor, nor produced any main effects ($F_s < 1$), and hence we do not discuss it further.

Results and Discussion

We combined the three impact measures ($\alpha_{\text{near}} = .95$; $\alpha_{\text{far}} = .94$). A repeated-measures ANOVA of elicited physics knowledge (metaphor-consistent/horizontal movement vs. metaphor-inconsistent/vertical movement) \times distance (nearby vs. far away) within subject showed a main effect of distance, $F(1, 192) = 8.17, p = .005$, indicating a greater perceived impact for the nearby (vs. faraway) country. Importantly, this analysis also revealed the predicted interaction of elicited physics knowledge \times distance, $F(1, 192) = 3.92, p = .049$. Specifically, a within-subject test showed that participants who were reminded that impact increases with closeness in the physical domain (object moving horizontally) expected a charitable donation to have more impact on the South American location described as nearby ($M = 4.58, SD = 2.22$) than on the one described as far away ($M = 4.30, SD = 2.13, F(1, 99) = 8.66, p = .004, d = .59$). By contrast, we found no differences in judgments of impact on nearby versus faraway locations

for participants who were reminded that impact increases with distance in the physical domain (object moving vertically downward; $M_{\text{near}} = 4.21$, $SD_{\text{near}} = 2.33$; $M_{\text{far}} = 4.17$, $SD_{\text{far}} = 2.31$, $F < 1$).

These results support our first and second hypotheses that people expect charitable actions to have a greater impact on nearby (vs. faraway) recipients, and that these judgments stem from metaphorical thinking, that is, the application of knowledge from one domain (physical) to the other (charitable). Indeed, the accessibility of knowledge consistent with the closeness-equals-strength-of-effect metaphor produced the hypothesized effect of distance on the expected impact of charitable giving, whereas the accessibility of knowledge inconsistent with this metaphor attenuated this effect. In the next study, we build on these findings to test our third hypothesis about the effect of distance on charitable action.

Study 2: Nearby Alumni Give More to Their Alma Mater

This study tested the link between distance and willingness to help in the context of alumni giving. We wanted to demonstrate that physical proximity is positively associated with giving, a relationship that is consistent with the notions that proximity increases the expected impact of donations, and that expected impact motivates prosocial behavior. Using secondary archival data from a large private university in the United States, we investigated the relationship between distance (between alumni's place of residence and the university) and donations to the university in the fiscal year 2014. We note that this study did not test for the role of perceived impact, because donors did not answer any questions. Furthermore, the correlational nature of this study did not allow us to rule out alternative explanations such as the role of social distance in the relationship between spatial distance and giving (Batson et al., 2003; Ratner & Miller, 2001; Small, Loewenstein, & Slovic, 2007). However, we believe that using the context of alumni giving to a large university gave us one of the best possible opportunities to minimize the

role of social distance. Indeed, all alumni have a pre-existing relationship with their university, such that a request for a donation from their alma mater should not seem too foreign—at least not in the way that a request to donate to struggling children in a distant country would.

Moreover, because requests for alumni donations tend to emphasize the university or school as the recipient—rather than a person or persons—the role of social distance to this non-human entity should be attenuated. We expected alumni who live closer to their alma mater to give more money than those who live farther away.

Participants

We obtained a data set from the alumni relations and development office at a large private university in the United States. The data set consisted of anonymized person-level information of alumni based in the United States with an active/valid mailing address in the database ($N = 172,441$). The archival data included an additional sample of alumni residing outside the United States ($N = 12,355$). However, we chose to restrict our analysis to US-based alumni because most countries outside of the United States do not have a culture of donating to their alma mater. We note that including or excluding international alumni does not change the results reported here. Excluding alumni based outside of the United States is a more conservative approach because their inclusion in the analysis would only inflate our results, because these alumni both live farther away and give less—for cultural reasons. The data set included alumni who completed a degree at the university (certificate holders were not included), whether they were frequent donors, or had never donated money to the university. Furthermore, the data set excluded (a) current and former trustees as well as their spouses, (b) prospects and donors of over \$100,000, (c) managed prospects, (d) people who cannot be solicited for gifts

(e.g., because they have asked not to be contacted), and (e) people with “do not release” and “invoked FERPA (Family Educational Rights and Privacy Act)” special-handling codes.

Method

For each alumnus/alumna, the data set provided the total amount donated to the university (gift amount) during the fiscal year 2014. Multiple gifts throughout the year were summed up into a total gift amount for the fiscal year. New commitments with payments into the future (i.e., pledges) and matching gifts were not included. Matching gifts are charitable donations made to an organization by a matching donor (e.g., an employer) under the provision that an original donor (e.g., an employee) first makes a gift to that organization. Only outright gifts and payments on existing pledges were included.

The data also included the alumni’s current place of residence: city, state, 5-digit zip code, as well as the longitude and latitude associated with their zip code. From longitude and latitude information, we calculated the exact distance (in miles) between each alumnus/alumna and the university. We predicted that as the distance between an alumnus’s/alumna’s place of residence and the university decreased, the amount donated would increase. Because a wide variety of demographic factors can affect alumni donations, we requested that the data set also include the alumni’s age based on birthdate. Exact age information was missing for 14.23% of donors; therefore, we estimated the age of these donors by assuming age 21 at undergraduate degree or age 23 at graduate degree (for both Masters and PhD holders), which paralleled ages for alumni with exact age information. The data set also included per-capita income in the alumni’s zip codes, which we used as a proxy for income. Finally, the data set indicated degree-specific information such as the alumnus’s/alumna’s graduation year (year of first degree for those with multiple degrees from the university), the type of degree the alumnus/alumna obtained

(undergraduate degree: 0 = *No*, 1 = *Yes*; graduate degree: 0 = *No*, 1 = *Yes*), whether the alumnus's/alumna's spouse is also an alumnus/alumna or a student (0 = *No*, 1 = *Yes*) at the university, and the specific school from which the degree was obtained, that is, whether the alumnus/alumna graduated from each of 11 specific schools, for example, arts and science (0 = *No*, 1 = *Yes*), business (0 = *No*, 1 = *Yes*), and engineering (0 = *No*, 1 = *Yes*).

Results and Discussion

To control for demographic variables that might naturally affect alumni's tendency to donate to their alma mater, we ran a regression of alumni donation (gift amount for the fiscal year 2014) on distance between the alumnus's/alumna's place of residence and the university, using the following variables as covariates: (a) age, (b) income proxy, (c) graduation year, (d) type of degree, (e) whether the alumnus's/alumna's spouse is a current or former student of the university, (f) whether the alumnus/alumna graduated from each of 11 specific schools (e.g., business school graduate: 0 = *No*, 1 = *Yes*), and (g) gift amount for the previous fiscal year (2013). We controlled for gift amount for the previous fiscal year because having donated in the previous year might influence a person's likelihood to donate again. For example, it might be an indication of commitment to the school, such that those who donated last year would be more likely to donate again. This regression yielded the predicted effect of distance on gift amount ($\beta = -.007$, $t(158,294) = -2.89$, $p = .004$; $R^2 = .14$; $F(19, 158,294) = 1364.29$, $p < .001$; $f^2 = .16$). As the distance between an alumnus's/alumna's place of residence and the university decreased, his/her annual giving increased. We note that this relationship held even when we removed all covariates from the regression ($\beta = -.008$, $t(172,439) = -3.21$, $p = .001$; $R^2 = .0001$; $F(1, 172,439) = 10.33$, $p = .001$; $f^2 = .0001$).

We find that alumni located closer to their alma mater tended to give more than those located farther away. We argue this effect occurs at least in part because people feel they can have more impact on targets that are closer to (vs. farther from) them. Although the use of secondary data in this study precluded us from testing the role of perceived impact, the context of alumni giving allowed us to control—to some extent—for the potential effects of social connectedness and caring.

We note, however, that given the correlational nature of the present results, we could not control for other factors. For example, those who live closer to their alma mater might be more emotionally invested than those who live farther away, because the school or university would be more relevant to them in various ways. The social network of nearby (vs. faraway) alumni might be more closely tied to the school, and the school might be more top of mind for them, because they might be more frequently exposed to it. These factors might in turn increase giving among nearby (vs. faraway) alumni. To address these concerns, the studies that follow moved beyond mere correlations, and sought to demonstrate the causal link between distance and giving, using experimental manipulations of distance. Specifically, in the next study, we sought to replicate the patterns of alumni giving in a field experiment, in which we framed alumni's alma mater as close to or far from them.

Study 3: Increasing Alumni Giving by Shrinking Distances – A Field Experiment

In this field experiment, we tested the effect of perceived distance on alumni giving in the context of an annual university fund-raising campaign. We worked with university administrators to send a letter to alumni from their alma mater soliciting a gift for the school. Depending on the condition, we described the school as “nearby” or “far away.” By framing distance, this study sought to control more rigorously for the degree of social connectedness

between alumni and their alma mater. We predicted that alumni would be more willing to give to their school when it was described as nearby (vs. far away).

Participants

US-based alumni of the business school ($N = 19731$, 15480 male; $M_{\text{age}} = 51.85$) of a large university in the United States—a different university from the one in the previous study—unknowingly took part in this field experiment.

Method

The experiment employed a 2 (perceived distance: nearby vs. far away) between-subjects design. Alumni received a letter from their alma mater as part of an annual fundraising campaign soliciting donations to the business school. Depending on the condition, the letter described the school as nearby or far away and read the following:

I'm writing to you from <<The School>> right near you [all the way from <<The School>>]. I'm reaching out to you from this short distance [this long distance] because we could use your help. <<The School>> is a business school with few peers. <<The School's>> approach to business education has shaped the school so that it is among the elite few where research and ideas are paramount. In nearby [faraway] <<The City>>, we produce first rate ideas and educate leaders who create real change. <<The Dean's>> vision for the campaign is to build upon the school's two most significant advantages. One strength lies in its flexibility—the freedom to enroll in any combination of courses or to take risks in research and experimentation. Another benefit is its academically rigorous culture which has produced incredible thought leaders among the faculty and students who are drawn to solving problems by challenging conventional wisdom. You are an important part of << The School >> and have contributed to its success. Thank you. This

campaign seeks to invest in the very people that embody the business school—its students, faculty, and alumni. If you are planning to give to the school, now is the time to make an impact. Please consider a gift of <<specific ask>> that stays close to you [that travels far away].

Our measure of social action was the alumni's actual donations to the school in response to the fundraising letter. Because a wide variety of demographic factors can affect alumni donations, we obtained the following additional information for each alumnus/alumna: (a) age, (b) amount donated in the previous year, (c) graduation year, and (d) whether their spouse was also an alumnus or alumna of the school or university. Unlike in Study 3, we did not have an income proxy in our data set.

Results and Discussion

Donation amounts ranged from \$0 to \$25,000 ($M = 2.47$, $SD = 180.98$) and were heavily skewed toward zero values, such that we obtained a 0.45% response rate—which is not uncommon for this type of campaign. Because 99.55% gave \$0, analyzing giving amount as a continuous variable through an ordinary least squares regression would not be appropriate. Thus, we analyzed the data in two different ways, which yielded the same result.

For the first analysis, we transformed the donation variable into a binary measure indicating whether alumni chose to make a gift to their school (0 = *did not donate*; 1 = *donated*). To control for demographic variables that might affect alumni's tendency to donate to their alma mater, we ran a logistic regression of choice to donate on manipulated perceived distance, using the following variables as covariates: (a) age, (b) amount donated in the previous year, (c) graduation year, and (d) whether their spouse was also an alumnus/alumnae of the school or university (unlike in study 3, we did not have an income proxy in our data set). This analysis

supported our hypothesis ($Wald = 8.61, p = 0.003$): a greater proportion of alumni donated when their alma mater was framed as nearby (0.57%) than when it was framed as far away (0.33%; $z = 3.1, p = .002; d = 0.30$). Removing all covariates from the analysis did not change this pattern of results ($Wald = 5.85, p = .016$).

For the second analysis, we ran a Poisson regression to model count variables such as our willingness-to-donate measure. For this analysis, we kept the giving-amount variable in its original form. We regressed giving on perceived distance and set up the analysis to obtain robust standard errors for the parameter estimates to control for mild violation of underlying assumptions (Cameron and Trivedi 2009). The results were consistent with the previous analysis ($Wald = 7.06, p = 0.008$). Giving amount increased as perceived distance decreased ($B = 1.76, S.E. = .66; z = 2.66, p = .008, r = .02$). These results provide additional support for our hypothesis about the effect of perceived distance on social action in this applied setting.

In this study—as in Study 1—we manipulated perceived distance by describing the location of the recipients as far/far away or close/nearby throughout the charitable appeal. This direct approach has distinct practical advantages because it can be readily applied to requests for social action benefiting recipients in places that can be reasonably described as both nearby and far away. Indeed, relative to the United States, Guatemala, Honduras, other locations in the Caribbean, and Central and South America, fall into this category. But what about places that are much more distant from the United States, such as Europe, Africa, or even Australia? For such places, changing perceptions of distance by simply referring to them as “nearby” might be more challenging. Furthermore, referring to a target location as nearby or far away might alter perceptions of that place in ways that go beyond spatial distance. For example, one might feel more socially connected to people in “nearby Guatemala” than to those in “faraway Guatemala.”

Thus, in the next study, we devised another manipulation of distance meant to keep the description of the target location identical across conditions, by instead making participants think more generally about earthly distances as short or long. From a theoretical standpoint, using different types of manipulations also helps expand the scope and generalizability of our findings.

Study 4: Shrinking Distances, Expanding Giving

This study tested the effect of perceived distance on prosocial action using a different manipulation of distance. Participants copied (retyped) a short passage as part of a “typing task,” and then read a charitable appeal from an organization working to improve lives in Ivory Coast (West Africa). For roughly half the participants, the passage they copied was about globalization and shrinking distances, whereas the other half retyped a message about long distances and long-haul flights. We predicted participants would be more likely to donate after reading/writing about shrinking (vs. long) distances.

Participants

One hundred and sixty US-based participants (83 male; $M_{\text{age}} = 34.23$) recruited through mTurk completed this study in return for monetary compensation (\$0.50) and a chance to win a \$20 bonus through a raffle. No one dropped out of the study.

Method

The Study employed a 2 (perceived distance: nearby vs. far away) between-subjects design. Participants signed up for a task presumably about “typing accuracy under various conditions.” Participants were instructed to copy (re-type) a short paragraph. In the near condition, participants saw and copied the following passage titled “Shrinking distances”:

Globalization has tremendously reduced distances worldwide. Technological advances in transportation and telecommunications have been major factors in this process. The world

is shrinking, distances are getting shorter, and things and people are moving closer to each other. With great ease, somebody on one side of the world can now interact with somebody on the other side of the world. No country, city, town or village is too far away: people are now only minutes or even seconds from each other.

In the far condition, the passage was titled “Long Distances,” and read as follows:

Flights over long distances to faraway places typically follow a great circle along the diameter of the Earth. For example, aircraft travelling westward between continents in the northern hemisphere often follow paths extending far into the Arctic region. A long-haul flight going east often takes a longer more southerly route than the great circle in order to take advantage of the jet stream, a high-altitude wind that can allow an aircraft to cover a longer absolute distance using less fuel.

After the typing task, participants saw a screen, ostensibly unrelated to the typing task, and titled “HIT FOR A CAUSE: Help improve lives in Ivory Coast (West Africa),” which informed them that:

The researchers on this project are collaborating with OSAF, a charitable organization working to improve lives in Ivory Coast (West Africa). Many children in Ivory Coast still die each day from preventable causes. OSAF provides children with health care, nutrition, education, emergency relief, and more. The organization works tirelessly with children from birth to young adulthood, and with their families and communities to create the environments all children need to thrive.

The appeal ended by soliciting a \$10 donation to “help improve lives in Ivory Coast.” As previously noted, OSAF is a real but very small non-governmental agency operating in Ivory Coast, and hence should be unknown to our participants.

Next, to measure prosocial behavior, we asked participant to indicate whether they would be willing to donate \$10 to OSAF, if they won the \$20 bonus raffle (*Yes, No*). Making the donation conditional on winning the raffle allowed us to control—to some extent—for factors that might influence availability of funds (e.g., employment or socioeconomic status). We note that *after* this willingness-to-donate measure, we assessed expected impact using the same 3-item measure as in Study 1 (see Appendix). We did not find an effect of perceived distance on expected impact, likely because making the decision to donate (or not to donate) changed how participants understood and responded to questions about the expected impact of donating. We return to this measure in the meta-analysis (Study 6).

At the end of the survey, participants answered a few additional questions followed by a demographic questionnaire. The additional questions included manipulation checks for spatial distance, which also did not produce any significant effect, likely due to the order in which they appeared in the questionnaire (see Appendix for all additional questions).

Therefore, as a manipulation check, we conducted a posttest to confirm our manipulation of physical distance does indeed alter perceptions of physical distance. The posttest employed the same 2 (perceived distance: nearby vs. far away) between-subjects design as the main study. Participants ($N = 110$ mTurkers, $M_{\text{age}} = 35.30$) completed the same typing-task manipulation of physical distance followed by the same charitable appeal as in the main study. We measured perceptions of spatial distance by asking participants to indicate how close or far away the Ivory Coast is (1 = *Very close*; 9 = *Very far*), how much time it would take to fly there (1 = *A very short time*; 9 = *A very long time*), and the extent to which the Ivory Coast seems nearby or far away (1 = *Nearby*; 9 = *Far away*). We averaged these three questions into a spatial distance index ($\alpha = .86$). Results confirmed participants perceived Ivory Coast as farther away when they

had previously retyped a passage about long distances ($M = 7.95$, $SD = 1.16$) than when they had retyped a passage about shrinking distances ($M = 7.36$, $SD = 1.31$; $t(108) = 2.48$, $p = .015$; $d = .48$).

Results and Discussion

The pattern of donation supported our hypothesis, $\chi^2(1, N = 160) = 4.82$, $p = .028$. Specifically, more participants who read/wrote about shrinking distances chose to donate to the charity (48.72 %) than did participants who read/wrote about long distances (31.71 %; $z = 2.2$, $p = .028$, $r = .17$).

These results provide further evidence for our hypothesis about the effect of distance on charitable action. This manipulation of distance offers both practical and theoretical advantages. From a practical standpoint, this manipulation can make even the most objectively remote places seem closer, by changing general perceptions of earthly distances. From a theoretical perspective, another advantage of this manipulation is that in both the near and far conditions, participants read the same charitable appeal describing the target locations in identical ways, thereby reducing the concern that they might be making different inferences about the target location when it is described as far away (vs. nearby).

We argue, in our fourth hypothesis, that this pattern of behavior occurs at least in part due to differential expectations of impact: people feel they can have more impact on the outcome of charitable efforts for nearby (vs. faraway) causes, and therefore are more likely to contribute.

The next study tests this mediation hypothesis.

Study 5: Mediation by Expected Impact

In Study 5, we tested the mediating role of expected impact on the relationship between perceived distance (between oneself and the recipients of a charitable act) and willingness to

donate. Participants read a charitable appeal requesting monetary donations to support sanitation efforts in Haiti. Depending on the condition, Haiti was described as nearby or far away. We predicted that when Haiti was framed as nearby, participants would expect their donation to have more impact than when Haiti was framed as far away. We also predicted participants would be more willing to donate money when Haiti was framed as nearby (vs. far away). Finally, we predicted that expectations about the impact of their donations would mediate the relationship between perceived distance and donation intentions.

Participants

Ninety-nine US-based participants (30 male; $M_{\text{age}} = 28.68$) recruited through mTurk completed this study in return for monetary compensation (\$0.25). We aimed for a sample size of 100, but one participant dropped out after being assigned to the “nearby” condition.

Method

The experiment employed a 2 (perceived distance: nearby vs. far away) between-subjects design. Participants read a message from a fictitious organization called Action for Total Sanitation. The appeal was modeled after those from Toilet Hackers, a real organization working to improve sanitation and hygiene worldwide. Depending on the condition, Haiti was described as “far away” or “nearby.” The message was titled “ACTION FOR TOTAL SANITATION: SUPPORT OUR CAMPAIGN IN HAITI!” and read as follows:

Around the world, poor sanitation remains a major threat to development. Nearly 40% of the world does not have access to toilets and clean water. Open defecation and its public health, social and economic impacts can create a vicious cycle of illness, high health care cost, lost work and school hours, and poverty. In the past 10 years, diarrhea has killed more children than all the people lost to armed conflict since World War II, mostly due to

unsafe water and inadequate sanitation. At Action for Total Sanitation, we work to eliminate the world's toilet crisis. We believe every child should live past their first birthday, every person should have clean water to drink, and 100% of humanity should have access to improved sanitation and good hygiene. This week, we are launching a Campaign in nearby [faraway] Haiti to raise awareness about the country's sanitation crisis and accelerate our ongoing efforts to provide clean water and improved sanitation.

The appeal ended by asking for "a \$10 donation to Action for Total Sanitation today."

Below this message, we displayed a map of the world with an arrow pointing toward Haiti. The first question and accompanying scale after the message further strengthened this experimental manipulation of perceived distance. In the far-away condition, we asked participants to indicate how far away Haiti is (1 = *Somewhat far*, 2 = *Quite far*, 3 = *Far*, 4 = *Very far*), whereas participants in the nearby condition indicated how close Haiti is (1 = *Somewhat close*, 2 = *Quite close*, 3 = *Close*, 4 = *Very close*). Using these scales, participants in the far-away (vs. close) condition always selected a response that emphasizes Haiti was far away (vs. nearby).

Next, participants answered three questions meant to measure the extent to which they felt they could have an influence on the issue by making a \$10 donation. Specifically, we asked them to indicate how much impact they would expect to make with a \$10 donation to this organization (1 = *Small impact*, 7 = *Big impact*), to what extent they would expect their donation to advance the work of this organization (1 = *Not at all*, 7 = *Very much*), and how much they would expect their donation to benefit the people in Haiti (1 = *Not at all*, 7 = *Very much*). Furthermore, to obtain more tangible measures of expected impact, we asked participants to indicate how many people they would expect a \$10 donation to help (sliding scales from 1 to 10

people), and how many toilets they would expect the \$10 donation to provide (sliding scales from 1 to 10 toilets).

We then measured prosocial intention by asking participants how much they would be willing to donate to Action for Total Sanitation to support the campaign in Haiti (1 = \$0; 2 = \$5; 3 = \$10; 4 = \$15; 5 = \$20; 6 = \$25). Participants did not expect to make a donation within the context of the study. Immediately following these two key dependent variables, we included manipulation checks of perceptions of spatial distance: we asked participants to indicate the extent to which Haiti seem nearby or far away (1 = *Nearby*; 7 = *Far away*), how much time it would take to fly to Haiti (1 = *A very short time*; 7 = *A very long time*), how far Haiti is from the United States in miles (1 = *under 499*; 2 = *500 to 999*; 3 = *1000 to 1499*; 4 = *1500 to 1999*; 5 = *2000 to 2499*; 6 = *2500 to 3000*; 7 = *over 3000*), and to what extent they feel close to the people in Haiti (1 = *Not at all*; 7 = *Very much*). The survey ended with additional measures (see Appendix) and demographic questions.

Results and Discussion

We standardized and combined the four questions about perceptions of physical distance from Haiti to form a manipulation check of spatial distance ($\alpha = .49$). This index confirmed participants perceived Haiti as farther away when it was described as “far away” ($M = .12$, $SD = .57$) than when it was described as “nearby” ($M = -.13$, $SD = .66$; $t(94.45) = -1.99$, $p = .049$, equal variance not assumed; $d = .41$). We then turned our attention to our main dependent variables.

Expected impact. To form an index of perceived impact, we combined the three measures of the extent to which participants felt they could have an influence on the issue ($\alpha = .87$). Results showed participants believed a \$10 donation would have more impact when Haiti was

framed as nearby ($M = 3.46$, $SD = 1.21$) versus far away ($M = 2.87$, $SD = 1.46$, $t(94.43) = 2.20$, $p = .030$, equal variance not assumed; $d = .44$). These results provide further evidence for our first hypothesis about the effect of distance (real or perceived) on the expected impact of social actions.

We then examined the two tangible measures of expected impact: number of people helped (0 to 10) and number of toilets provided (0 to 10). We note that these two variables were skewed toward smaller values, such that 57.58% of participants expected to help two or fewer people, whereas 89.90% expected to provide two or fewer toilets. When analyzed as continuous variables, these measures did not yield any significant results ($F_s < 1$). Thus, we transformed these measures into binary variables indicating whether participants expected a donation to the organization to help at least one person (0 = no one helped, 1 = one person or more helped) and provide at least one toilet (0 = no toilet provided, 1 = one toilet or more provided). The results, using these transformed measures, were consistent with our hypothesis. For expectations of helping at least one person, we found a significant relationship with perceived distance ($\chi^2(1, N = 99) = 4.85$, $p = .028$): a greater proportion of participants expected to help one person or more when Haiti was framed as nearby (95.92%) than when Haiti was framed as far away (82.00%, $z = 2.2$, $p = .026$; $r = .22$). For expectations of providing at least one toilet, we found only a marginal relationship with distance ($\chi^2(1, N = 99) = 2.83$, $p = .092$): a marginally greater proportion of participants expected to provide one toilet or more when Haiti was framed as nearby (77.55%) than when Haiti was framed as far away (62.00%, $z = 1.7$, $p = .083$; $r = .17$).

Charitable action. Next, we looked at participants' willingness to donate to Action for Total Sanitation. This measure was also skewed toward smaller values, with 69.70% of participants intending to donate \$0, \$5 or \$10. When analyzed as a continuous variable, this

measure did not yield any significant results ($F_s < 1$). Thus, as in the previous analyses, we transformed this measure into a binary variable indicating participants' willingness to donate money (0 = *donate nothing or \$0*; 1 = *donate something > \$0*). The results supported our hypothesis about the effect of distance on social action ($\chi^2(1, N = 99) = 4.35, p = .037$): a larger proportion of participants intended to donate something to the organization when Haiti was described as nearby (85.71 %) than when Haiti was described as far away (68.00 %, $z = 2.1, p = 0.034, r = .21$).

Mediation analysis. We predicted perceived distance would influence social action, at least in part, through differential expectations of impact. To test this proposed underlying mechanism, we explored the mediating role of the expected impact of social actions on the effect of perceived distance on donation intentions (binary version of the variable). We used the bootstrap test of the indirect effect $a \times b$ (Zhao, Lynch, & Chen, 2010; Preacher & Hayes, 2014), where "a" represents the effect of perceived distance on expected impact, and "b" represents the effect of expected impact on donation intentions. We found the mean indirect effect from the bootstrap analysis was negative and significant ($a \times b = -.4278$), with a 95% confidence interval excluding zero (-1.30 to -.026). In the indirect path, perceiving Haiti as far away (vs. nearby) decreased expected impact by $a = -.60$ units. Additionally, $b = .72$, so holding constant perceived distance, increasing expected impact had a positive effect on the probability of donating something to the organization ($z = 2.91, p = .0037$). The direct effect c (-.66) of perceived distance on willingness to donate was not significant ($z = -1.20, p = .23$). Thus, expected impact mediated the relationship between perceived distance and prosocial intention.

In the next study, we sought to conduct another test of our proposed underlying mechanism. Specifically, we investigated the moderating role of motivational focus (making impact on others vs. signaling) on the relationship between distance and charitable giving.

Study 6: Moderation by Motivational Focus

In this study, we tested the moderating role of motivational focus (making an impact on others vs. signaling to the self and/or to others that one cares) on the relationship between perceived distance and prosocial behavior. When people focus on the outcome of their actions for a goal (in this case, helping others), high (vs. low) expectations of impact are more motivating. Thus, if distance influences perceptions of impact, it should also influence motivation to take social action. By contrast, when people focus on other aspects of a charitable transactions (e.g., signaling to the self and/or to others that one cares), expectations of impact should be less relevant, such that perceived distance should not affect prosocial behavior.

Participants read a charitable appeal from Habitat for Humanity, working in Haiti. For roughly half the participants, the message emphasized the outcome of a donation (helping, making a difference), whereas the other half read a message emphasizing signals that can be generated from the donation (expressing support, showing you care). In addition, Haiti was described as either “far away” or “nearby.” We predicted that focusing on helping others would produce the same pattern of prosocial action documented so far: participants would be more likely to donate when Haiti is described as nearby (vs. far away). By contrast, perceived distance would not affect willingness to donate when the focus is on signaling something positive about the self—to the self or others.

Participants

Three hundred and thirty-two US-based participants (195 male; $M_{\text{age}} = 34.30$) recruited through mTurk completed this only study in return for monetary compensation (\$0.50) and a chance to win a \$20 bonus through a raffle. We opened the study to 340 participants, but one participant opted out of the study and seven participants dropped out of the study: two participants dropped out after being assigned to the “signaling/near” condition, one after being assigned to the “signaling/far” condition, two after being assigned to the “impact/near” condition, and two after being assigned to the “impact/far” condition. Of the 332 participants who completed the study, we excluded two participants who expressed a strong preference for helping local causes rather than international ones, and seven participants who completed the survey on a mobile device—because we realized post-hoc that the survey was not mobile-compatible.

Method

The study employed a 2 (motivational focus: making an impact on others vs. signaling) \times 2 (perceived distance: near vs. far) between-subjects design. Participants read a charitable appeal from Habitat for Humanity Haiti—similar to the one in Study 5—soliciting a \$10 donation. For roughly half the participants, the appeal focused on donating to “show support for Haiti” (signaling), whereas for the other half, the appeal aimed to “make a difference” (making an impact on others). Each type of appeal described Haiti as either “far away” or “nearby,” depending on the condition.

In the signaling condition, the appeal was titled “Show that you care for nearby [faraway] Haiti,” and read as follows:

The researchers on this project are collaborating with Habitat for Humanity in nearby [faraway] Haiti to show support for the cause. Today, over 80,000 people remain

homeless in Haiti, five years after a devastating earthquake struck the capital city of Port-au-Prince. Habitat for Humanity works in nearby [faraway] Haiti to build homes, build communities, and break the cycle of poverty. By making a \$10 donation, you can show that you care for nearby [faraway] Haiti.

In the impact condition, the message, titled “Help improve lives in nearby [faraway] Haiti,” read as follows:

The researchers on this project are collaborating with Habitat for Humanity in nearby [faraway] Haiti to make a difference for the cause. Today, over 80,000 people remain homeless in Haiti, five years after a devastating earthquake struck the capital city of Port-au-Prince. Habitat for Humanity works in nearby [faraway] Haiti to build homes, build communities, and break the cycle of poverty. By making a \$10 donation, you can help improve lives in nearby [faraway] Haiti.

As in Study 5, a map of the world with an arrow pointing toward Haiti was displayed directly under the message, followed by a question meant to reinforce the experimental manipulation of perceived distance: in the far-away condition, participants indicated how far away Haiti is (1 = *Somewhat far*, 2 = *Quite far*, 3 = *far*, 4 = *Very far*), whereas in the nearby condition, they indicated how close Haiti is (1 = *Somewhat close*, 2 = *Quite close*, 3 = *close*, 4 = *Very close*).

Next, to measure prosocial behavior, we asked participant whether they would be willing to donate \$10 to Habitat Haiti if they won the \$20 bonus raffle (*Yes, No*). We note that *after* this willingness-to-donate measure, we assessed expected impact (see Appendix) and did not find an effect of perceived distance on expected impact—likely because those who chose to donate

naturally expected to have more impact than those who chose not to donate. We return to this measure in the meta-analysis.

To assess participants' attitude toward Habitat, we asked them to indicate the extent to which they viewed the organization as (a) kind, (b) efficient, (c) reliable, (d) competent, (e) trustworthy, (f) caring, and (g) familiar (1 = *Not at all*; 7 = *Very much*). Next, the demographic questionnaire included a measure of participants' annual household income in dollars (1 = *Less than 30,000*; 2 = *30,000-39,999*; 3 = *40,000-49,999*; 4 = *50,000-59,999*; 5 = *60,000-69,999*; 6 = *70,000-79,999*; 7 = *80,000-89,999*; 8 = *90,000-99,999*; 9 = *100,000 or more*)—among other questions. Note that these additional questions included manipulation checks for spatial distance, which did not produce any significant effect, likely due to the order in which they appeared in the questionnaire (see Appendix for all additional measures).

Therefore, as a manipulation check, we conducted a posttest to test whether our manipulation of physical distance alters perceptions of physical distance. The posttest employed the same 2 (motivational focus: making an impact on others vs. signaling) \times 2 (perceived distance: nearby vs. far away) between-subjects design as the main study and participants ($N = 201$ MTurkers, $M_{\text{age}} = 35.45$) read the same charitable appeals as in the main study. We measured perceptions of spatial distance using the same manipulation-check questions as the main study. Specifically, we asked participants to indicate how much time it would take to fly to Haiti (1 = *A very short time*; 7 = *A very long time*), the extent to which they feel close to the people in Haiti (1 = *Not at all*; 7 = *Very much*), the extent to which Haiti seem nearby or far away (1 = *Nearby*; 7 = *Far away*), and how far Haiti is from the United States in miles (1 = *under 499*; 2 = *500 to 999*; 3 = *1000 to 1499*; 4 = *1500 to 1999*; 5 = *2000 to 2499*; 6 = *2500 to 3000*; 7 = *over 3000*). We standardized and combined these four questions into a spatial distance

index ($\alpha = .76$). Results confirmed participants perceived Haiti as farther away when it was described as “far away” ($M = .13$, $SD = .80$) than when it was described as “nearby” ($M = -.13$, $SD = .70$; $F(1, 197) = 5.72$, $p = .018$; $d = .35$). We found no effect of motivational focus and no interaction of motivational focus by perceived distance on perceptions of spatial distance.

Results and Discussion

We combined perceptions of Habitat Haiti to form an index of attitude toward the organization ($\alpha = .92$). We then ran a binary logistic regression of choice to donate (1 = *yes*, 0 = *no*) on motivational focus (1 = *impact*; 0 = *signaling*), distance (1 = *far away*; 0 = *nearby*), the interaction of motivational focus by distance, and the following covariates: attitude toward Habitat and income. We controlled for income because preliminary analyses revealed an uneven distribution of income among the experimental conditions ($\chi^2(8, N=323) = 17.66$, $p = .024$), which occurred randomly. Specifically, the impact/nearby condition contained fewer high-income participants (income > \$80,000) than the impact/far-away condition ($\chi^2(1, N = 31) = 3.90$, $p = .048$).

From the binary logistic regression of choice to donate on motivational focus, distance, their interaction, and the two covariates, the overall model was significant ($\chi^2(12, N = 323) = 71.31$, $p < .001$). The results revealed the predicted interaction of motivational focus by distance on choice to donate ($Wald = 4.71$, $p = .030$). Additionally, the model revealed a main effect of attitude toward Habitat Haiti ($Wald = 46.13$, $p < .001$). We note that this interaction did not reach significance when we removed both covariates from the analysis ($\chi^2(3, N = 323) = 2.45$, $p = .49$; $Wald = 2.14$, $p = .14$), but reached marginal significance when either attitude alone ($\chi^2(4, N = 323) = 60.10$, $p < .001$; $Wald = 3.81$, $p = .051$) or income alone ($\chi^2(11, N = 323) = 10.69$, $p = .47$; $Wald = 2.84$, $p = .092$) was included in the model as a single covariate.

A closer look at the interaction of motivational focus by distance showed that when participants focus on showing their support (signaling), distance has no effect on the probability of making a donation (nearby: 55.37% vs. far away: 60.13%; $Wald = .94, p = .33$). However, when their motivational focus is on helping others (impact), the probability is greater that participants will donate when Haiti is described as nearby (62.14%) than when it is described as far away (44.56%; $Wald = 4.28, p = .039$; see Figure 3). These results support the notion that people are more likely to engage in social actions for nearby (vs. faraway) causes because they expect to make a greater impact.

Meta-Analysis of Expected Impact

In Studies 4 and 6, we asked about expected impact *after* soliciting prosocial behavior, and hence failed to observe a significant effect of perceived distance on expected impact. Thus, to further confirm that our studies support our theoretical framework, we conducted a meta-analysis of the main effect of distance on expected impact across studies 1 (unmoderated subset), 4, 5 and 6 (unmoderated subset), using a statistical tool developed by McShane and Böckenholt (2016) for single-paper meta-analyses. Consistent with our hypothesis, the meta-analysis revealed that, across all four studies, there is a significant difference in expected impact between the near and far conditions ($Estimate = .28, SE = .083; z = 3.34, p < .001$).

General Discussion

The present article proposes people metaphorically apply their knowledge about physical impact to charitable actions, and shows that real and perceived spatial distance negatively influence the expected impact, and hence the likelihood of charitable action. Furthermore, we observe the predicted patterns of judgment of expected impact for real and perceived distances. We first showed that people expect charitable donations from nearby (vs. faraway) donors to

have more impact, and demonstrated the role of metaphorical thinking by testing the notion that people apply knowledge about impact in the physical domain to the charitable domain through the closeness-equals-strength-of-effect metaphor. Specifically, Study 1 finds that the accessibility of knowledge consistent with this metaphor (i.e., thinking of an object thrown horizontally) produces the hypothesized effect that closeness increases the perceived impact of charitable giving. By contrast, the accessibility of knowledge inconsistent with this metaphor (i.e., thinking of an object dropped/thrown down) attenuates this effect.

Second, we demonstrated in three studies that people are more willing to take action for nearby causes than for faraway causes. Study 2 used secondary data from a real university-fundraising campaign to establish the negative correlation between the distance of alumni's places of residence relative to their alma mater and the amount of money they donated to the university over the course of a year. Study 3 tested the causal link between closeness and expected charitable impact in a field experiment, and Study 4 replicated these findings using a more conservative manipulation of distance meant to present participants with the same description of the target location across conditions, by instead changing general perceptions of earthly distance (as short or long). Finally, we tested our underlying mechanism through mediation and moderation. Study 5 demonstrated the mediating role of expected impact on the relationship between perceived distance and social action; whereas Study 6 found that a motivational focus on impacting others was required in order to observe the effect of distance on social action.

Limitations and Alternative Explanations

We note that, beyond expected impact, spatial distance can influence giving through other possible factors. One key factor, which we discuss throughout this article, is social

distance. Our studies attempt to control for the role of social distance in several ways. First, we use different experimental manipulations of distance in which the same target location is framed as nearby or far away, such that the social characteristics of the recipients remain constant. Second, we use a variety of target locations or recipients, some of which are mostly socially distant from the participant (Guatemala, Honduras, Ivory Coast, Haiti) or socially close to the participant (alma mater). We find the effect of spatial distance on giving occurs regardless of pre-existing levels of social connection.

Another way in which distance may affect the expected impact of help is through the assumed scope of other helpers. For example, a person in the United States who helps people in Haiti (far away) might perceive a larger scope or radius of helpers, such that many other helpers are between her and Haiti—because of the longer distance. By contrast, a person trying to help from Haiti (nearby) might feel she is part of a smaller circle of other helpers. A helper among fewer (vs. numerous) other helpers might expect to have a greater individual impact because her contribution represents a more substantial portion of total contributions. Hence, this helper might mistake the proportion of help as the magnitude of help, as work on “proportion dominance” finds (e.g., Bartels, 2006). However, our experimental design controls for this possibility. Indeed, changes in the scope/radius of potential helpers would not explain the results of studies in which the same location is framed as being nearby or far away. For example, in Study 5, participants are presented with the same map of the world featuring an arrow pointing to the location of Haiti. In this case, the scope/radius of the potential helper should remain constant regardless of how Haiti is framed.

Finally, as previously noted, we did not find an effect of perceived distance on expected impact in studies in which we measured expected impact *after* willingness to donate (Studies 4

and 6), which prevented us from looking at the mediating role of expected impact in these studies. We speculated that making the decision to donate or not to donate might have changed how participants understood and responded to questions about the expected impact of their donation, such that perceived distance no longer affected participants' expectations of making an impact. In particular, answering the donation question first might have given participants a more concrete way to assess their potential impact. This explanation suggests that the effect of distance on expected impact might not occur when other, more tangible, cues are available to make judgments about expected impact. Indeed, the charitable appeals we used in our experiments did not provide cues or details such as how a specific donation would be used, or how it would help the beneficiaries. It is possible that for charitable appeals that are more explicit about the use of a given donation (e.g., \$10 will buy 2 books for a child), the effect of perceived distance on expected impact would be attenuated.

Theoretical and Practical Implications

Our findings have implications for the work on psychological distance, in particular for explaining the relationships between psychological distance and prosocial behavior. Psychological distance refers to the spatial, temporal, social, or hypothetical position of objects, people, or events relative to the self. Although the "snowball" metaphor seems less intuitive in the context of temporal and social distance than in that of spatial distance, the language people use to discuss people and events is similar across these different dimensions of psychological distances (e.g., "close friend," "distant relative," "distant future," "near future"). Because language is an important manifestation of the conceptual system (Lakoff & Johnson, 1980), metaphorical applications of the concept of physical impact could extend to other dimensions of psychological distance, because all dimensions of psychological distance are related and should influence

judgment and behavior in similar ways (Lieberman & Förster, 2008; Stephan, Liberman, & Trope, 2011; Trope, Liberman, & Wakslak, 2007). Thus, our findings imply people would expect their actions to have more impact on temporally proximal causes and targets. For example, people might expect a donation that will be used the next day to be more impactful than one that will be used in a month. As a result, people would be more willing to act close to (vs. far in advance of) the time a charitable donation will be used.

We note that theories and empirical findings have linked social and temporal distances to prosocial behavior. However, the extant literature does not make any connections between psychological distance and expectations of impact. Furthermore, studies suggest that social and temporal distance might elicit different patterns of prosocial behavior (see Ein-Gar & Levontin, 2013; Kogut & Ritov, 2007; Fujita, Eyal, Chaiken, Trope, & Liberman, 2008). Indeed, whereas increasing temporal distance seems to increase prosocial judgment and intentions (Choi, Park, & Oh, 2012; Eyal, Liberman, & Trope, 2008), increasing social distance mostly decreases prosocial behavior (Dovidio, 1984; Dovidio et al., 1997; Krebs, 1975; Levine et al., 2002; Levine & Thompson, 2004; Stotland & Dunn, 1963). Our findings suggest that a motivational focus on helping others (vs. signaling) might lead to an increase in prosocial behavior as social or temporal distance decreases.

The findings documented here also have implications for the expected impact of other forms of actions beyond prosocial actions. In particular, in the domain of persuasion, where ideas/words rather than money are the main tools of influence, people might expect to have a greater impact on those they perceive as close to (vs. far from) them and might thus approach them with more confidence. Within a similar perspective, academic communities might be more

impressed by findings originating from nearby (vs. faraway) researchers, and perhaps cite them more often. Future research should explore these hypotheses.

Finally, our findings have practical implications for charitable organizations, most of which work hard to convince potential donors that their generosity will have an impact. Although impact is a key motivator of giving and social action in general, potential donors might tire—or even become skeptical—of hearing every organization emphasize its impact. Our work provides another way to increase donors’ sense of making an impact without using the word “impact.” Indeed, by shrinking distance, charitable appeals can expand donors’ expectations that their actions will have an impact, and thus increase the likelihood of charitable contributions.

Reference

- Andreoni, J. (1989). Giving with impure altruism: Applications to charity and Ricardian equivalence. *Journal of Political Economy*, 97(6), 1447-1458.
- Bartels, D. M. (2006). Proportion dominance: The generality and variability of favoring relative savings over absolute savings. *Organizational Behavior and Human Decision Processes*, 100(1), 76-95.
- Batson, C. D., Lishner, D. A., Carpenter, A., Dulin, L., Harjusola-Webb, S., Stocks, E. L., Gale, S., Hassan, O., & Sampat, B. (2003). '... As you would have them do unto you': Does imagining yourself in the other's place stimulate moral action? *Personality and Social Psychology Bulletin*, 29(9), 1190-1201.
- Bénabou, R. & Tirole, J. (2006). Incentives and prosocial behavior. *American Economic Review*, 96(5), 1652-1678.
- Bonezzi, A., Brendl, C. M., & De Angelis, M. (2011). Stuck in the Middle: The Psychophysics of Goal Pursuit. *Psychological Science*, 22(5), 607-612.
- Boroditsky, L. (2000). Metaphoric structuring: understanding time through spatial metaphors. *Cognition*, 75(1), 1-28.
- Boroditsky, L. (2001). Does language shape thought?: Mandarin and English speakers' conceptions of time. *Cognitive Psychology*, 43(1), 1-22.
- Boroditsky, L., & Ramscar, M. (2002). The roles of body and mind in abstract thought. *Psychological Science*, 13(2), 185-189.
- Brehm, J. W., & Self, E. A. (1989). The intensity of motivation. *Annual Review of Psychology*, 40, 109-131.

- Cameron, A. C., & Trivedi, P. K. (2009). *Microeconomics Using Stata*. College Station, TX: Stata Press Publications.
- Choi, S. Y., Park, H. S., & Oh, J. Y. (2012). Temporal distance and blood donation intention. *Journal of Health Psychology, 17*(4), 590-599.
- Cryder, C. E., Loewenstein, G., & Scheines, R. (2013). The donor is in the details. *Organizational Behavior and Human Decision Processes, 120*(1), 15-23.
- De Cesarei, A., & Codispoti, M. (2008). Fuzzy picture processing: Effects of size reduction and blurring on emotional processing. *Emotion, 8*(3), 352-363.
- Dovidio, J. F. (1984). Helping-behavior and altruism: An empirical and conceptual overview. *Advances in Experimental Social Psychology, 17*, 361-427.
- Dovidio, J. F., Gaertner, S. L., Validzic, A., Matoka, K., Johnson, B., & Frazier, S. (1997). Extending the benefits of recategorization: Evaluations, self-disclosure, and helping. *Journal of Experimental Social Psychology, 33*(4), 401-420.
- Duncan, B. (2004). A theory of impact philanthropy. *Journal of Public Economics, 88*(9-10), 2159-2180.
- Ein-Gar, D., & Levontin, L. (2013). Giving from a distance: Putting the charitable organization at the center of the donation appeal. *Journal of Consumer Psychology, 23*(2), 197-211.
- Eyal, T., Liberman, N., & Trope, Y. (2008). Judging near and distant virtue and vice. *Journal of Experimental Social Psychology, 44*(4), 1204-1209.
- Faro, D., McGill, A. L., Hastie, R. (2010). Naive theories of causal force and compression of elapsed time judgments. *Journal of Personality and Social Psychology, 98*(5), 683–701.
- Fauconnier, G., & Turner, M. (2002). *The Way We Think. Conceptual Blending and the Mind's Hidden Complexities*. New York, NY: Basic Books.

- Fetherstonhaugh, D., Slovic, P., Johnson, S. M., & Friedrich, J. (1997). Insensitivity to the value of human life: A study of psychophysical numbing. *Journal of Risk and Uncertainty*, *14*(3), 283-300.
- Fetterman, A. K., Bair, J. L., Werth, M. M., Landkammer, F., Robison, M. D. (2016). The scope and consequences of metaphoric thinking: Using individual differences in metaphor usage to understand how metaphor functions. *Journal of Personality and Social Psychology*, *110*(3), 458-476.
- Fujita, K., Eyal, T., Chaiken, S., Trope, Y., & Liberman, N. (2008). Influencing attitudes toward near and distant objects. *Journal of Experimental Social Psychology*, *44*(3), 562–572.
- Gentner, D., Imai, M., & Boroditsky, L. (2002). As time goes by: Evidence for two systems in processing space -> time metaphors. *Language and Cognitive Processes*, *17*(5), 537-565.
- Heath, C., Larrick, R. P., & Wu, G. (1999). Goals as reference points. *Cognitive Psychology*, *38*(1), 79-109.
- Higgins, E. T., & Brendl, C. M. (1995). Accessibility and applicability: Some activation rules influencing judgment. *Journal of Experimental Social Psychology*, *31*(3), 218-243.
- Hull, C. L. (1932). The goal gradient hypothesis and maze learning. *Psychological Review*, *39*, 25-43.
- Jaynes, J. (1976). Evolution of language in late pleistocene. *Annals of the New York Academy of Sciences*, *280*(October), 312-325.
- Jenni, K. E., & Loewenstein, G. (1997). Explaining the ‘identifiable victim effect.’ *Journal of Risk and Uncertainty*, *14*(3), 235-257.
- Karlan, D., & List, J. A. (2007). Does price matter in charitable giving? Evidence from a large-scale natural field experiment. *American Economic Review*, *97*(5), 1774-1793.

- Kivetz, R., Urminsky, O., & Zheng, Y. (2006). The goal-gradient hypothesis resurrected: Purchase acceleration, illusionary goal progress, and customer retention. *Journal of Marketing Research*, 43(1), 39-58.
- Kogut, T., & Ritov, I. (2005a). The 'Identified victim' effect: An identified group, or just a single individual? *Journal of Behavioral Decision Making*, 18(3), 157-167.
- Koo, M., & Fishbach, A. (2012). The Small-Area Hypothesis: Effects of Progress Monitoring on Goal Adherence. *Journal of Consumer Research*, 39(3), 493-509.
- Koo, M., & Fishbach, A. (2016). Giving the Self: Increasing Commitment and Generosity through Giving Something That Represents One's Essence. *Social Psychological and Personality Science*, 7, 339-348
- Krebs, D. (1975). Empathy and altruism. *Journal of Personality and Social Psychology*, 32(6), 1134-1146.
- Lakoff, G., & Johnson, M. (1980). *Metaphors we live by*. Chicago, IL: The University of Chicago Press.
- Lee, J. & Shrum, L. J. (2012). Conspicuous consumption versus charitable behavior in response to social exclusion: A differential needs explanation. *Journal of Consumer Research*, 39(3), 530-544.
- Levine, M., Cassidy, C., Brazier, G., & Reicher, S. (2002). Self-categorization and bystander non-intervention: Two experimental studies. *Journal of Applied Social Psychology*, 32(7), 1452-1463.
- Levine, M., & Thompson, K. (2004). Identity, place, and bystander intervention: Social categories and helping after natural disasters. *Journal of Social Psychology*, 144(3), 229-245.

- Liberman, N., & Förster, J. (2008). Expectancy, value and psychological distance: A new look at goal gradients. *Social Cognition, 26*(5), 515–533.
- Liu, W. & Aaker, J. (2008). The happiness of giving: The time-task effect. *Journal of Consumer Research, 35*(3), 543-557.
- Locke, E. A., & Latham, G. P. (1990). Work motivation and satisfaction - Light at the end of the tunnel. *Psychological Science, 1*(4), 240-246.
- McShane, B. B., & Böckenholt, U. (2016). Single Paper Meta-analysis: Benefits for Study Summary, Theory-testing, and Replicability, *working paper*.
- Meier, B. P., & Robinson, M. D. (2004). Why the sunny side is up: Associations between affect and vertical position. *Psychological Science, 15*(4), 243-247.
- Muhlberger, A., Neumann, R., Wieser, M. J., & Pauli, P. (2008). The impact of changes in spatial distance on emotional responses. *Emotion, 8*(2), 192-198.
- Piff, P. K., Kraus, M. W., Côté, S., Cheng, B. H., & Keltner, D. (2010). Having Less, Giving More: The Influence of Social Class on Prosocial Behavior. *Journal of Personality and Social Psychology, 99*, 771-784.
- Powers, W. T. (1973). *Behavior: The control of perception*. Oxford, England: Aldine.
- Preacher, K. J., & Hayes, A. F. (2004). SPSS and SAS procedures for estimating indirect effects in simple mediation models. *Behavior Research Methods Instruments & Computers, 36*(4), 717-731.
- Prelec, D. & Bodner, R. (2003). Self-signaling and self-control. In G. Loewenstein, D. Read, & R.F. Baumeister (Eds.), *Time and Decision*. New York: Russell Sage Press.
- Ratner, R. K., & Miller, D. T. (2001). The norm of self-interest and its effects on social action. *Journal of Personality and Social Psychology, 81*(1), 5-16.

- Rothwell, J. (2015). *What colleges do for local economies: A direct measure based on consumption*. Brookings Institution's Metropolitan Policy Program.
- Schubert, T. W. (2005). Your highness: Vertical positions as perceptual symbols of power. *Journal of Personality and Social Psychology*, 89(1), 1-21.
- Small, D. A., Loewenstein, G., & Slovic, P. (2007). Sympathy and callousness: The impact of deliberative thought on donations to identifiable and statistical victims. *Organizational Behavior and Human Decision Processes*, 102(2), 143-153.
- Stephan, E., Liberman, N., & Trope, Y. (2011). The effects of time perspective and level of construal on social distance. *Journal of Experimental Social Psychology*, 47(2), 397-402.
- Stotland, E., & Dunn, R. E. (1963). Empathy, self-esteem, and birth-order. *Journal of Abnormal Psychology*, 66(6), 532-540.
- Touré-Tillery, M., & Fishbach, A. (2011). The course of motivation. *Journal of Consumer Psychology*, 21(4), 414-423.
- Touré-Tillery, M., & Fishbach, A. (2014). How to Measure Motivation: A Guide for the Experimental Social Psychologist. *Social and Personality Psychology Compass*, 8 (7), 328-41
- Trope, Y., & Liberman, N. (2010). Construal-Level Theory of Psychological Distance. *Psychological Review*, 117(2), 440-463.
- Trope, Y., Liberman, N., & Wakslak, C. (2007). Construal levels and psychological distance: Effects on representation, prediction, evaluation, and behavior. *Journal of Consumer Psychology*, 17(2), 83-95.
- Williams, K. D. (2007), Ostracism. *Annual Review of Psychology*, Vol. 58, 425-452.

Williams, L. E., & Bargh, J. A. (2008). Keeping one's distance: The influence of spatial distance cues on affect and evaluation. *Psychological Science, 19*(3), 302-308.

Wispé, L. (1986). The distinction between sympathy and empathy: To call forth a concept, a word is needed. *Journal of Personality and Social Psychology, 50*(2), 314–321.

Zhao, X. S., Lynch, J. G., & Chen, Q. (2010). Reconsidering Baron and Kenny: Myths and Truths about Mediation Analysis. *Journal of Consumer Research, 37*(2), 197-206.

Figure Captions

Figure 1: Pictures used to manipulate accessible knowledge from the physical domain: (1.1) Consistent with the closeness-equals-strength-of-effect metaphor; (1.2) Inconsistent with the closeness-equals-strength-of-effect metaphor (Study 1)

Figure 2: Pictures displayed below charitable appeal, to enhance the manipulations of distance and accessible knowledge from the physical domain: (2.1) Short distance: metaphor-consistent (top) and metaphor-inconsistent (bottom) conditions; (2.2) Long distance: metaphor-consistent (top) and metaphor-inconsistent (bottom) conditions (Study 1).

Figure 3: Probability of Donating to Habitat Haiti as a Function of Motivational Focus (Impact vs. Signaling) and Perceived Distance (Nearby vs. Far Away; Study 6)

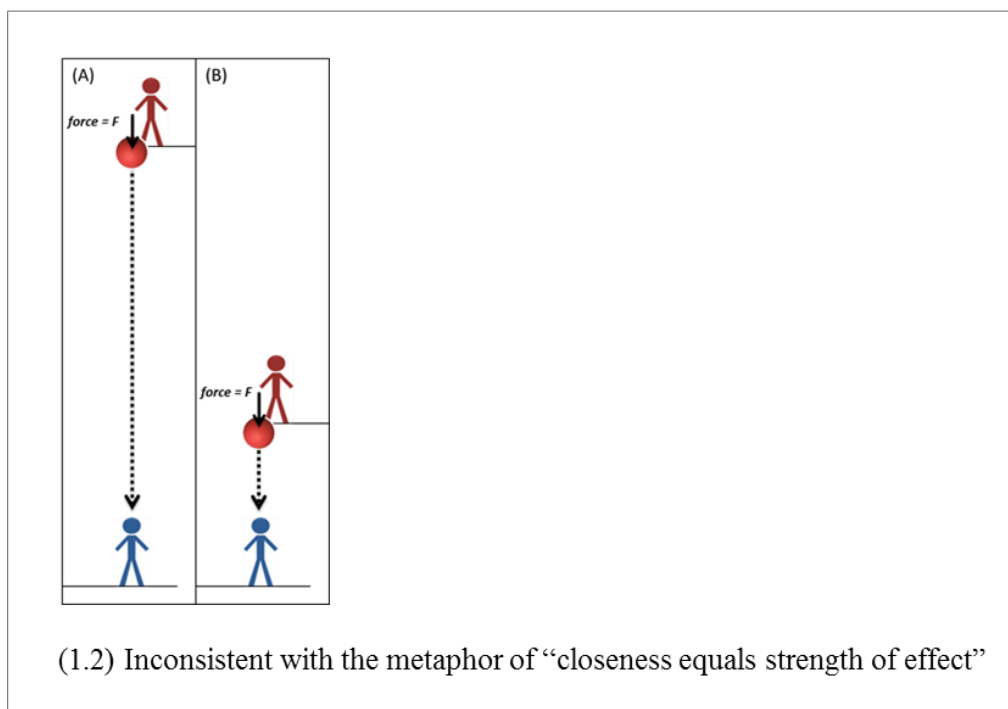
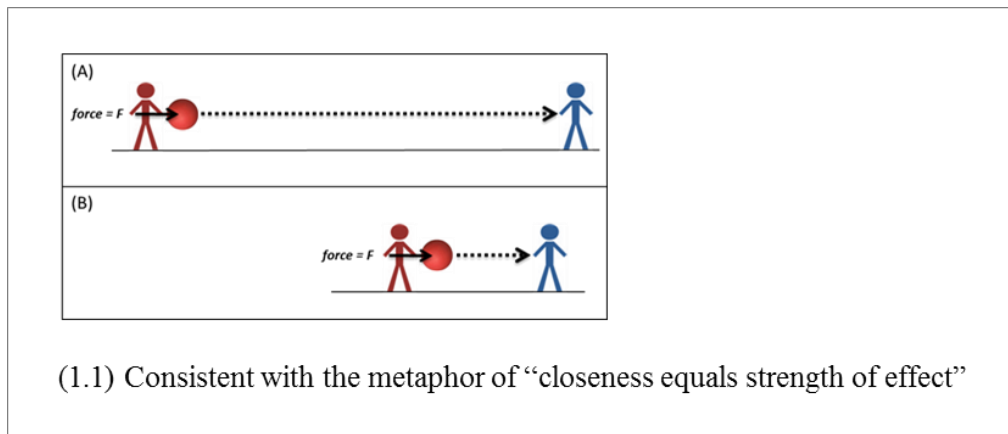
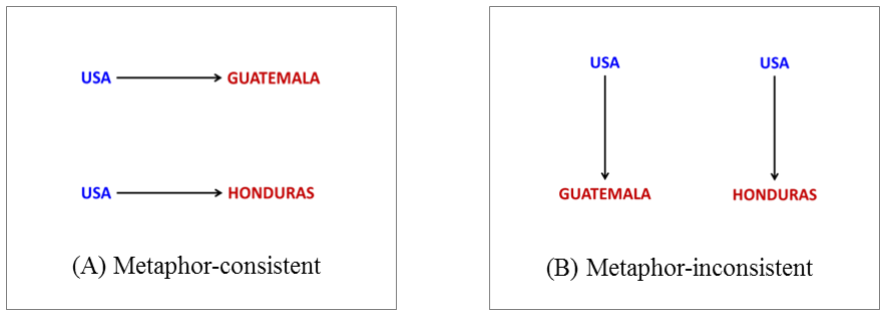
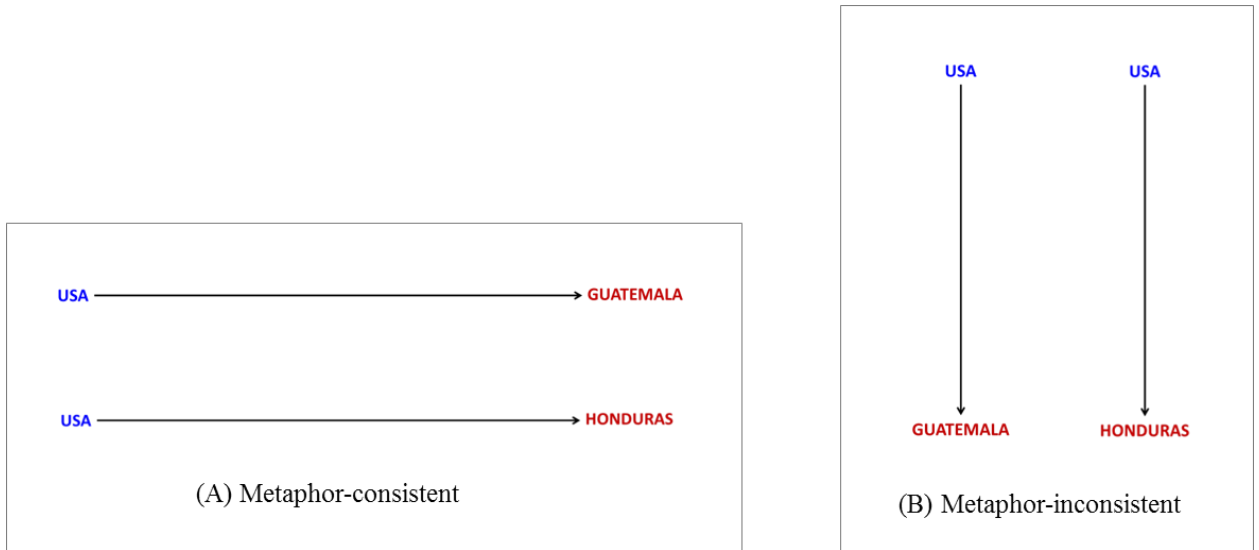


Figure 1: Pictures used to manipulate accessible knowledge from the physical domain:

(1.1) Consistent with the closeness-equals-strength-of-effect metaphor; (1.2) Inconsistent with the closeness-equals-strength-of-effect metaphor (Study 1)



(2.1) Short distance: (A) Metaphor-consistent (horizontal) and (B) Metaphor-inconsistent (vertical) conditions.



(2.2) Long distance: (A) Metaphor-consistent (horizontal) and (B) Metaphor-inconsistent (vertical) conditions.

Figure 2: Pictures displayed below charitable appeal, to enhance the manipulations of distance and accessible knowledge from the physical domain: (2.1) Short distance: (A) Metaphor-consistent and (B) Metaphor-inconsistent conditions; (2.2) Long distance: (A) Metaphor-consistent and (B) Metaphor-inconsistent conditions.

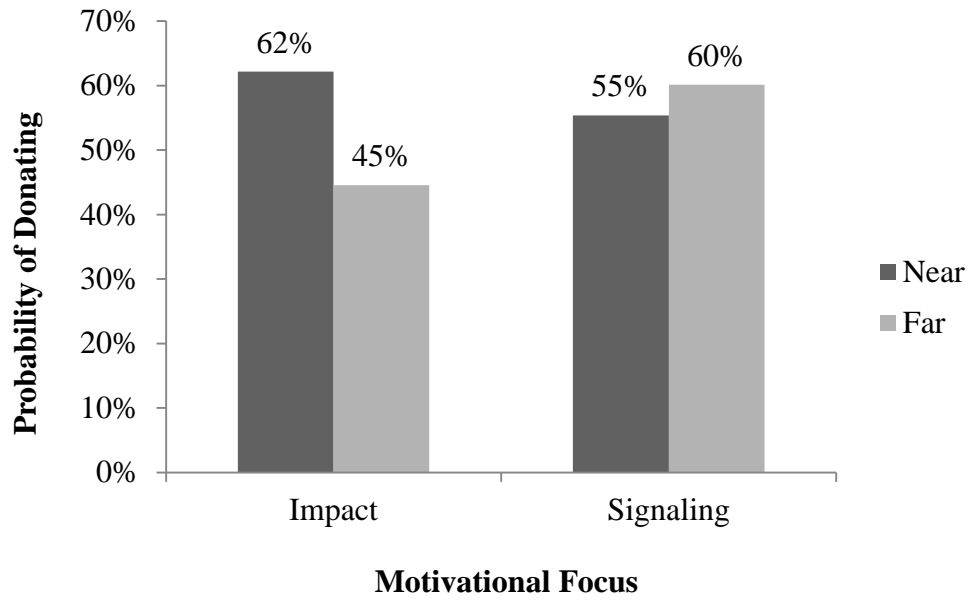


Figure 3: Probability of Donating to Habitat Haiti as a Function of Motivational Focus (Impact vs. Signaling) and Perceived Distance (Nearby vs. Far Away; Study 6)

Appendix: Additional Questions in Studies 4, 5 And 6

In addition to the main dependent variables (reported in the method section), we also measured the following variables for exploratory purposes. We neither predicted nor observed effects on these additional variables. We note that unlike in Study 5, in Studies 4 and 6 we asked about expected impact *after* measuring willingness to donate, which might explain why we did not find an effect of perceived distance on expected impact in these two studies. Specifically, it is likely that making the decision to donate or not to donate changed how people understood and responded to questions about the expected impact of their donation. Indeed, those who decided to donate subsequently believed their donation would have a greater impact than did those who decided not to donate.

(A) Study 4

1. How much impact would you expect to make with a \$10 donation to this organization? (1 = *Small impact*; 7 = *Big impact*)
2. To what extent would you expect your donation to make a difference? (1 = *Not at all*; 7 = *Very much*)
3. How much would you expect your donation to benefit the cause? (1 = *Not at all*; 7 = *Very much*)
4. Different people have different issues that are close to their hearts. To what extent do you care about this cause? (1 = *Not at all*; 7 = *Very much*)
5. To what extent do you feel this cause is important? (1 = *Not at all*; 7 = *Very much*)
6. To what extent does Ivory Coast seem nearby or far away? (1 = *Nearby*; 7 = *Far away*)
7. How much time would it take to fly to Ivory Coast? (1 = *A very short time*; 7 = *A very long time*)

8. To what extent do you feel the children in Ivory Coast are like you or unlike you? (1 = *Like me*; 7 = *Unlike me*)
9. To what extent do you feel connected to the children in Ivory Coast? (1 = *Not at all*; 7 = *Very much*)
10. To what extent do you feel the children in Ivory Coast need help? (1 = *Not at all*; 7 = *Very much*)
11. To what extent do you believe the problems these children face are serious? (1 = *Not at all*; 7 = *Very much*)
12. What are your impressions of the charitable organization (OSAF)? Kind; Efficient; Reliable; Competent; Trustworthy; Caring (1 = *Not at all*; 7 = *Very much*)

(B) Study 5

1. To what extent do you feel the people in Haiti are similar to you or different from you? (1 = *Very similar*; 7 = *Very different*)
2. To what extent do you feel the people in Haiti need help? (1 = *Not at all*; 7 = *Very much*)
3. What are your impressions of this charitable organization (Action for Total Sanitation)? Good; Efficient; Effective; Reliable; Important (1 = *Not at all*; 7 = *Very much*)
4. How familiar are you with this organization? (1 = *Not at all*; 7 = *Very much*)

(C) Study 6

1. How much impact would you expect to make with a donation to this organization? (1 = *Small impact*; 7 = *Big impact*)
2. To what extent would you expect your donation to make a difference? (1 = *Not at all*; 7 = *Very much*)

3. How much would you expect your donation to benefit the cause? (1 = *Not at all*; 7 = *Very much*)
4. Different people have different issues that are close to their hearts. To what extent do you care about this cause? (1 = *Not at all*; 7 = *Very much*)
5. To what extent do you feel this cause is important? (1 = *Not at all*; 7 = *Very much*)
6. To what extent do you feel the people in Haiti are like you or unlike you? (1 = *Like me*; 7 = *Unlike me*)
7. To what extent do you feel the people in Haiti need help? (1 = *Not at all*; 7 = *Very much*)
8. What are your impressions of the charitable organization? Kind; Efficient; Reliable; Competent; Trustworthy; Caring (1 = *Not at all*; 7 = *Very much*)
9. How familiar are you with this organization? (1 = *Not at all*; 7 = *Very much*)