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Communicating With Distant Others: The Functional Use of Abstraction

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Abstract

We introduce the construct of relational scope to refer to the degree to which an individual engages in communication with a more or less distant audience, with a contractive relational scope indicating a near audience and an expansive relational scope indicating a distant audience. Drawing on construal level theory, we argue that speakers use abstract messages strategically when faced with an expansive relational scope in order to be widely relevant and relatable. We show that speakers communicate more abstractly with distant others than near others (Studies 1–3) and experience greater fit when message framing matches audience distance (Study 4). We also demonstrate that framing messages abstractly prompts broader relational scope, with speakers more likely to direct concrete (abstract) messages to near (distal) audiences (Study 5). Finally, we show that when procedural information is critical to communication, communication with distant (vs. proximal) others will increasingly emphasize procedures over end states (Study 6).

Keywords

relational scope, construal level theory, communication, audience characteristics, psychological distance

Until modern times, people's communication was limited to those who were close by. Today, we can communicate at the click of a button with people thousands of miles away, and indeed, may use the same technological tools to communicate with someone next door, as we do to communicate with someone on another continent. Given the seamlessness of communicating across large spans of geographical distance, it may seem unlikely that distance exerts a strong impact on communication (cf. Cairncross, 2001). Prior research, however, suggests that communicators' preferences for different types of media may be influenced by an audience's distance—people generally prefer to use more text-based media as opposed to pictorial media to communicate with faraway individuals (Amit, Wakslak, & Trope, 2013), and sometimes prefer communicating with distant others using e-mail in lieu of face-to-face or phone conversations (Kiesler, Siegel, & McGuire, 1984; Sproull & Kiesler, 1986). In this article, we build on construal level theory to argue that communicators are influenced by the distance of their audience, even when using the same medium to communicate with near and distant others.

Expansive Versus Contractive Relational Scope

We use the term *relational scope* to refer to the distance across which a communicator addresses his or her communication. An *expansive relational scope* implies a wide communication horizon, where one is communicating with those who are psychologically distant. A *contractive relational scope*, in contrast, involves constraining the communication to those who are psychologically close. Drawing on construal level theory, we argue that speakers strategically use abstract messages and higher level construals to overcome their distance from their audience and effectively communicate with distant others. Although several different dimensions of psychological distance may be relevant to the expansiveness of one's relational scope, including spatial distance (communicating with geographically near or far others), social distance (communicating with others more or less like oneself), and temporal distance (communicating a message to be read immediately or at a delayed time point), we focus here on spatial distance, which has become an issue of particular practical importance in our personal and professional lives as technology has enabled us to easily communicate across greater geographical distances.

Prior research on construal level theory has examined how an object's distance influences its mental representation, and implications of this shift for judgment and behavior (Trope & Liberman, 2010; Trope, Liberman, & Wakslak, 2007). Objects

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and events that are distal are represented by higher level construals—abstract mental representations that emphasize schematic and decontextualized aspects, capturing the essence or gist of an item. Objects and events that are proximal, in contrast, are represented using lower level construals that focus on contextualized, concrete information, capturing secondary aspects of the object. This relation is seen as functional because higher level representations preserve the essential aspects of an item or event, aspects that are more likely to retain their meaning across distance. For example, it is useful to mentally represent a telephone as a ''communication device'' when considering a phone from a distal perspective, because while the details of the phone's appearance may change, the representation of the item as a ''communication device'' remains relatively stable across distance.

Although most construal level theory research has had an *intrapersonal* focus, illustrating that an object's distance influences mental representation of that object, we aim to extend the theory to better understand the *interpersonal* consequences of psychological distance. Arguably, the issue of how to best connect across distance is in many ways most directly relevant to the issue of interacting and relating in the here and now with those who are distant from us. Much like it is useful to mentally represent a distant object using a higher level of construal, it is likely to be particularly useful to shift one's communication in a similar fashion—that is, to use higher level statements to communicate with a distal recipient. This is because the social and physical context of distant others is likely to vary substantially from ours, and we are less likely to be aware of the norms, daily behavior, and idiosyncrasies that are relevant to this distant other. Messages that rely on high-level construals convey the situationally stable elements of the message without focusing on aspects that may be context-dependent; as such, they enable a communicator to more effectively relate to a distal audience by emphasizing the aspects of a message that are most likely to translate across distance.

Imagine, for example, persuading someone far from you to recycle. You may choose to emphasize a low-level issue, such as the relative ease of recycling, or a high-level issue, such as the benefits of recycling (cf. Liberman & Trope, 1998). However, concrete information relevant to the ease of recycling (e.g., the proximity of recycling bins, the use of recyclable items in the location) is relatively unlikely to be relevant across distance, as these concrete details are likely to be different for a person located at a distal geographical distance. Moreover, connecting with the other person on these low-level issues per se is not required for effective communication. Higher level construal messages, in contrast, convey the elements of the message that are likely to be situationally stable. For instance, one can persuade another individual to recycle by emphasizing the benefits to the environment in terms of conserving natural resources and benefitting future generations—benefits that are decontextualized and applicable across contexts.

Similarly, another way that people can communicate in a higher level fashion is by using adjectives instead of verbs (Semin & Fiedler, 1988). Adjectives provide decontextualized information whereas verbs provide contextualized information about people, objects, and events. For example, one can describe a person using an adjective such as ''caring,'' or, alternatively, by focusing on specific actions and events such as ''he mailed a holiday gift to a friend.'' The trait description is decontextualized and can account for a wide array of actions performed by the target individual; it captures the essence of the message and is easily understood across distance. In contrast, the second, more concrete description depicts a particular behavior that is more useful for a nearby audience but less readily understandable across distance (e.g., mailing a gift may not signify ''caring'' in all locations; indeed, in some areas, it is considered insulting to mail a gift instead of hand-delivering it). In this way, abstract messages functionally support expansive social relations and concrete messages functionally support contractive social relations.

Across six studies, we explore this hypothesized relationship between message abstractness and the recipient's distance. In Studies 1–3, we test the idea that people communicate concretely with near others and abstractly with distant others using different communication tasks. In Study 4, we explore whether communicators experience greater subjective fluency when message framing matches audience distance. In Study 5, we examine whether message abstractness influences selection of a message recipient, arguing that crafting an abstract message will lead individuals to adopt a more expansive relational scope. Finally, in Study 6, we examine a context in which shared understanding of procedures is important and explore the way this shifts distal communication toward procedural information.

Study 1

We begin by examining how people communicate information about themselves to proximal and distal others. Describing oneself with traits or adjectives does not take into account situation-specific characteristics. We predict that participants communicating with a distant other, relative to participants communicating with a near other, are more likely to describe their self in terms of stable traits.

Method

Participants

Sixty-six MTurk workers (38 female) participated for US$0.50.[1]

Materials and Procedure

Distance from the audience. Participants were asked to describe themselves to another MTurk user who was located either in their own neighborhood (same zip code) or far away from them (zip code more than 1,000 miles away). Participants provided their zip code and were told to wait for 20 s while they were matched to another MTurk user they would be communicating with. Participants then completed a measure of self-trait

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ascription (Nisbett, Caputo, Legant, & Marecek, 1973; Pronin & Ross, 2006), which they used to communicate information about themselves to the other user.

Self-trait ascription measure. Participants saw a list of 11 items representing opposing trait characteristics (e.g., serious–carefree and subjective–analytic) and were asked to describe themselves to the other MTurk user by choosing one of the two traits or a third option, ''It is variable/depends on the situation.'' The number of times the participants chose one of the two trait options was used as a measure of self-trait ascription.[2]

Results and Discussion

As hypothesized, participants who described themselves to a faraway individual showed greater self-trait ascription ($M = 8.47$, $SD = 1.93$) than participants who described themselves to a nearby individual ($M = 7.06$, $SD = 2.60$), $t(65) = 2.48$, $p = .02$, $d = .61$. Thus, when communicating with a distal audience, participants were more likely to use abstraction, describing themselves in terms of situationally consistent traits, than when communicating with a proximal audience. In Study 2, we examine whether participants communicating with distant others use higher level construals in a task involving spontaneous language production.

Study 2

Participants were asked to describe a day in their life at school to an incoming student who was located near them (in their own state) or far away from them (in a state located on another coast). We coded the written descriptions provided by the participants for construal using the Linguistic Categorization Model (Coenen, Hedebuow, & Semin, 2006), a validated measure for coding level of abstraction.

Method

Participants

Seventy-one students (37 female) from a West Coast University participated for course credit.

Materials and Procedure

Distance from the audience. Under the cover story that the school's office of admissions was designing a program to connect current students with prospective students for the upcoming school year, participants were asked to describe ''A day in my life at [school name]'' to a prospective student from the nearby city of San Diego or the faraway city of Dallas.

Measure of construal level. Descriptions were coded for abstraction using the Linguistic Categorization Model (Coenen et al., 2006), by two independent coders blind to condition ($\alpha = .93$). The coders identified the number of adjectives, state verbs, interpretive action verbs, and descriptive action verbs in the descriptions to compute an abstraction score (1 to 4, higher numbers meaning more abstract), with adjectives representing the most abstract form of speech and descriptive action verbs representing the least abstract form.[3]

Results and Discussion

Participants communicating with a distal prospective student used greater abstraction when describing their daily activities ($M = 2.76$, $SD = 0.53$) relative to participants communicating with a nearby prospective student ($M = 2.41$, $SD = 0.59$), $t(70) = 2.53$, $p = .01$, $d = .61$. In Study 3, we examine whether people use more abstraction when communicating about objects and events beyond the self.

Study 3

One of the ways in which individuals can communicate in a more high-level fashion is by emphasizing the desirability rather than feasibility of actions (Liberman & Trope, 1998). Features associated with desirability of actions direct attention toward the abstract end or purpose for why an action may be undertaken. In contrast, characteristics associated with feasibility direct attention to the more subordinate, concrete means by which an action is performed. In this study, participants chose between desirability and feasibility items in persuading a proximal or distal individual to recycle.

Method

Participants

Sixty-one MTurk workers (31 female) participated for US$0.40.

Material and Procedure

Participants were asked to persuade a near (same zip code) or distant (zip code 1,000 miles away) MTurk user to recycle by selecting 6 arguments from a provided list of 14 arguments (7 desirability and 7 feasibility) supporting recycling.[3] The number of desirability-related arguments selected by the participants to persuade the MTurk user to recycle was used as our measure of abstraction.

Results and Discussion

As expected, participants who persuaded a distal MTurk user were more likely to use desirability-related arguments ($M = 3.62$, $SD = 1.21$) than participants persuading a proximal MTurk user ($M = 3.03$, $SD = 1.03$), $t(60) = 2.08$, $p = .04$, $d = .53$. Thus, when speaking with a distal individual, participants used higher level construal messages than when communicating to a proximal individual.

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Study 4

In Study 4, we sought to extend our research by examining whether participants experience greater subjective fluency (e.g., Vallacher, Wegner, & Somoza, 1989) when communicating abstractly with a distal audience and concretely with a proximal audience. If people tend to use higher level construals to communicate with more distal others and lower level construals to communicate with more proximal others, than doing the opposite may feel less natural. We thus examined effects of message construal and distance on subjective fluency or naturalness of communication.

Method

Participants

One hundred and fifty MTurk workers (57 female) participated for US$0.40.

Materials and Procedure

As in Studies 1 and 3, participants were asked to communicate with another MTurk user who was located nearby or faraway. Adapting a task that has been used in prior construal-level research (Fujita, Trope, Liberman, & Levin-Sagi, 2006), participants in the abstract message condition were instructed to provide superordinate categories (e.g., Wine is an example of what?) whereas participants in the concrete message construal condition were instructed to provide subordinate exemplars (e.g., an example of wine is what?) for various objects (e.g., wine, pen, and tree) in order to describe these to their fellow group members. At the task's end, participants' feelings of fluency was measured using 2 items: "When I was communicating with the MTurk user it felt right" and "It felt natural to communicate with the MTurk user" (1 = *strongly disagree* and 7 = *strongly agree*), $\alpha = .68$.

Results and Discussion

Data of four participants who did not follow instructions were excluded from analysis. As hypothesized, a 2 (audience distance: near vs. far) × 2 (message description: concrete vs. abstract) analysis of variance yielded a significant interaction, $F(1, 145) = 4.73$, $p = .03$, $\eta_p^2 = .03$ (see Figure 1). The pattern of means was consistent with our predictions—subjective fluency was greater when participants used subordinate categories or lower level construal to describe objects to a near audience ($M = 4.42$, $SD = 1.36$) and superordinate categories or higher level construal to describe objects to a distal audience ($M = 4.53$, $SD = 1.07$), than when describing objects using higher level construal to a proximal audience ($M = 3.98$, $SD = 1.52$) or lower level construal to a distant audience ($M = 4.02$, $SD = 1.21$), $t(145) = 2.02$, $p = .03$. Thus, when message construal matches audience distance, speakers reported greater subjective fluency in communication.

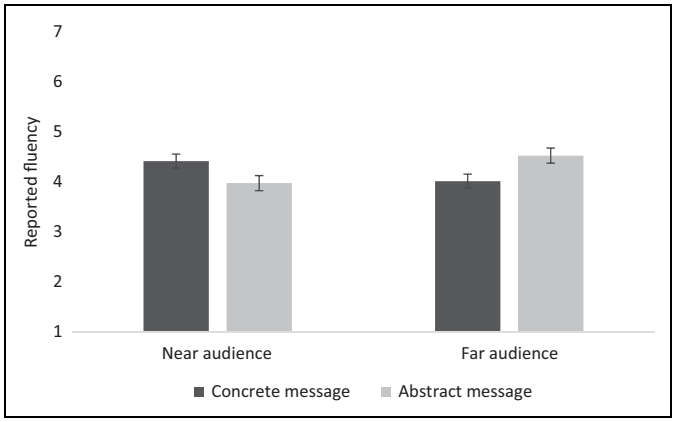

Figure 1. Speakers experience of fluency when communicating concretely or abstractly with a near or distant audience (Study 4).

Study 5

If a recipient's geographical distance prompts message abstraction (Studies 1–3), and subjective fluency is enhanced when there is a fit between recipient distance and communication abstraction (Study 4), it seems plausible that framing a message abstractly will prompt individuals to communicate with more distal others—that is, encourage expansive communication. We tested this possibility in Study 5 by asking participants to describe either an event by emphasizing the central aspects of the event in the high abstraction condition or the secondary aspects of the event in the low abstraction condition. Participants then picked an audience to send the description to. We expected participants who wrote an abstract version of an event to be more likely to send the message to a distant audience relative to participants who wrote a concrete version of an event.

Method

Participants

Fifty students (23 female, 1 unreported) from a West Coast University participated in the study in exchange for course credit.

Materials and Procedure

Participants were asked to identify an event that happened to them the same day. They were then given specific instructions to describe either the central aspects of the event (abstract condition) or the peripheral (i.e., secondary) aspects of the event (concrete condition; cf. Trope & Liberman, 2000). Participants in the abstract condition were instructed to write about the event in a focused manner, whereas participants in the concrete condition were instructed to write about the event including tangential information and details that may not be important.[3]

After completing the writing task, participants choose to whom to send the description. Specifically, they read: "For

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this research project, we are recruiting students from several different universities located in different parts of the country. You can either have a student who is located somewhere very close by read your description, or you can have a student located all the way across the country read your description. Having written your description, it may seem more natural to send it to one of these two choices.'' Participants were then asked to pick one of two options: (a) send it to a student located nearby or (b) send it to a student located far away.[4]

Results and Discussion

Data of one participant who did not complete the dependent variable were excluded from analysis. Participants who were asked to write an abstract description ($n = 24$) of an event were more likely to send it to a student located far away ($n = 15$, 62% of participants in the abstract condition) than a student located nearby ($n = 9$, 38%). In contrast, participants who were asked to write a concrete description ($n = 25$) were more likely to send it to student located nearby ($n = 17$, 68% of participants in the concrete condition) than a student located far away ($n = 8$, 32%), $\chi^2(1, n = 49) = 4.57$, $p = .03$, suggesting that the abstraction of a message can impact relational scope.

Study 6

Studies 1–5 support a relationship between message-recipient distance and communicative construal. Conceptually, we have argued that these effects occur because high-level construals allow people to relate to geographically distant others, whose physical and social contexts are likely to differ in many ways from that of the communicator. In our final study, we explore what happens when the decision to engage in a task has already been made and one must develop a shared understanding of how to engage in the task. In this situation, end-related information (why engage in the task) is less central to communication than means-related information (how to perform the task). Our overarching argument is that people will increasingly focus on the essential and defining information when communicating with distant others; from this perspective, in cases where the central communicative agenda involves developing a shared understanding of procedures, people should increasingly focus on procedures when communicating with someone distant. Indeed, this should take precedence over more end-related statements, which in this context are in fact less essential and would therefore be less functional to focus on across distance.

We explore this prediction by asking participants to either persuade another MTurk user to use a new software product called Slack (mirroring the context employed in Study 3) or to describe the software to another MTurk user who would work with them using the new software. The message recipient was described as either located nearby or far away. We expected to replicate the pattern of findings seen in our earlier studies when participants were persuading the MTurk user to use the software. However, when participants were told they would be working with the other person using the software (a context that prioritizes communication of procedural information over end-related information), we expected those communicating with a distal other to emphasize procedural information.

Method

Participants

Two hundred MTurk workers (90 female) participated for US$0.80.

Materials and Procedure

Participants first read about Slack, a recently launched office communication software. They were then asked to communicate with another MTurk user about this software. As in our earlier studies, they were supposedly matched with another user, who was either located nearby or far away. In the baseline communication task condition, participants were asked to persuade the MTurk user they were matched with to use Slack. In the ''working together'' condition, participants read, ''In the next part of the study, we are going to have you and the MTurk user you have been matched with do a simple task using Slack. First, however, we would like you to describe Slack to the MTurk user you have been matched with. This person will be using Slack to work on the task with you.'' The purpose of this manipulation was to make a shared understanding of procedural information crucial for effective communication.

Participants were then presented with six end-related (e.g., Slack is perfect for team communication in the 21st century) and six means-related, procedural statements (e.g., To get started with Slack, you can download the app from the company's webpage, www.slack.com) from which they selected six descriptions to share with the MTurk User 3. We counted the number of end-related arguments selected by the participant to communicate with the other MTurk user about Slack.

Results

Data of eight participants who did not complete the communication task were excluded from analyses. A 2 (audience distance: near vs. far) × 2 (communication task: baseline vs. work together with Slack) yielded a significant two-way interaction effect, $F(1, 191) = 10.93$, $p = .001$, $\eta_p^2 = .05$ (see Figure 2). As expected, participants in the baseline condition were more likely to select end-related statements to communicate with a distant audience ($M = 3.79$; $SD = 1.07$) than a near audience ($M = 3.35$; $SD = 1.03$), $t(102) = 2.15$, $p = .03$, replicating the pattern we found in Study 3. In contrast, when participants were informed the other person would use Slack with them, we find that participants in the distant condition used less end-

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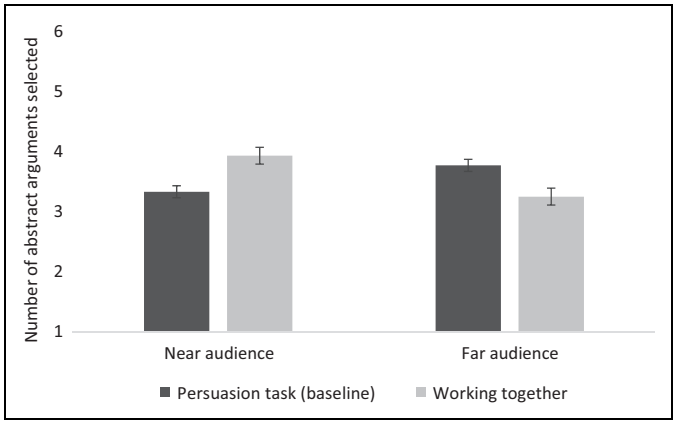

Figure 2. Message abstraction when persuading or working together with another Mturk user.

related statements ($M = 3.26$; $SD = 1.22$) than participants in the near condition ($M = 3.95$, $SD = 1.39$), $t(86) = 2.45$, $p = .01$.

These findings suggest that when a task is set and a shared understanding of procedures is a central requirement of interaction across distance, and end-related statements therefore do not functionally allow one to communicate what is defining and essential to a distal other, individuals communicating with a distal other will increasingly prioritize procedural over end-related information. Note that this is not inconsistent with the general depiction of procedures as subordinate to ends (e.g., Liberman & Trope, 1998). Rather, here we highlight a unique interactive context where procedural understanding is more central to the interaction and find that within this context individuals communicating with a more distal other increasingly emphasize this more central dimension. That is, in this communicative context why aspects have been rendered more secondary than means, and as distance increases we find that why such aspects are de-emphasized. In this way, Study 6 provides a more nuanced understanding of how distance shapes communicative construal.

General Discussion

Across six studies, we find support for a relationship between a communicator's message construal and the message-recipient's distance. In Study 1, we found that participants described themselves using higher level construals when speaking to someone far away than when communicating with someone close by. In Studies 2 and 3, we found a similar pattern—when communicating with a distal audience, participants described a day in their life using more high-level language and increasingly relied on high-level persuasive arguments. In Study 4, we found that fit between message framing and audience distance influenced subjective fluency; speakers who used high-level messages to communicate with faraway audiences and low-level messages to communicate with nearby audiences experienced greater subjective fluency than those in the nonfit conditions. In Study 5, we showed that participants are more likely to send high-level messages to distant audiences and low-level messages to nearby audiences. Finally, in Study 6, we demonstrate that in contexts where end-related information is secondary to means-related information those communicating with a distal (vs. proximal) message recipient will increasingly prioritize procedural over end-related information about the task.

Communicating with a distant audience requires an individual to be both relevant and relatable, making decontextualized, high-level messages an effective way to communicate with one's audience. Faced with an expansive relational scope involving a faraway audience, speakers can use high-level messages to transcend the distance separating them and their audience. In contrast, faced with a contractive relational scope involving a proximal audience, communicators can frame their messages in a lower level fashion. As we show in Study 6, however, communicators are sensitive to the purpose of the communication; when a shared understanding of procedures is critical for an interaction and is therefore central to communication, individuals communicated with a distal other with increasing focus on the means, not the ends.

These findings are broadly consistent with the literature on audience tuning (e.g., Echterhoff, Higgins, & Groll, 2005; Fussell & Krauss, 1989), which suggests that speakers are acutely aware of the beliefs and attitudes of their audience and tailor their messages accordingly, as well as previous research that suggests that speakers are aware of surface-level characteristics of their audience including audience size (Joshi & Wakslak, 2014). The current results suggest that one critical audience characteristic that communicators are attuned to is the spatial distance of their audience. Furthermore, our research dovetails well with the functional view of communication (Semin, de Montes, & Valencia, 2003), which suggests that communication is influenced by the motives of the communicator and tailored to the needs of a particular audience. Finally, our findings also speak to construal level theory, the framework that inspired our hypotheses, by exploring the interpersonal (rather than intrapersonal) effects of distance—that is, by examining how the distance of another person can lead people to shift their level of construal when interacting with that person.

Our research provides a number of opportunities for further research. For instance, here we focused only on spatial distance. Future research might explore whether other dimensions of a message recipient's distance have similar effects. Construal level theory suggests that different distance dimensions should have a similar impact; however, it is important to note that some distance dimensions may be more directly confounded with other variables that might have independent effects on message abstraction (e.g., social distance may be more naturally confounded with liking than spatial distance, and liking is likely to have a broad impact on communication). Future research might also explore possible boundary conditions of the effects explored here. For instance, the goal of communication—that is, whether it is informational or

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more relational—may influence effects of message-recipient distance on abstraction. It is feasible that if one is concerned about influencing perceptions of distance for social reasons, one might communicate concretely to foster a sense of proximity (cf. Stephan, Liberman, & Trope, 2011). Thus, if the negative interpersonal connotations of distance are emphasized, one may find that people use concrete communication to try to limit the distance between themselves and remote others.

Another future direction is suggested by the results of Study 6. In the "working together" condition of that study, procedural aspects were rendered more central than end-related aspects, and these were increasingly emphasized when communicating across distance. Future research might explore more nuanced predictions related to this finding: for example, when communicating with a distant other, one might prioritize procedures, yet communicate them using higher level communication, in which one focused more on the procedures' defining characteristics. Although Study 6 was not designed to test this possibility, it would be intriguing to examine this in future research.

In sum, the current findings speak to the broad impact that a message recipient's distance can have on communication. Rather than using the same communication style with proximal and distal others, communicators faced with an expansive relational scope (i.e., a distal audience) frame their message in more high-level and decontextualized ways than communicators with a contractive relational scope (i.e., a proximal audience). These findings extend our understanding of the communication process, as well as the factors that trigger changes in construal, providing inspiration for future work in this area.

Declaration of Conflicting Interests

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Notes

1. Our goal was to reach an $n = 30$ for each study. In our more recent Study 6, we increased the n to about 50 per cell, paying heed to the general call in the field to increase sample sizes. We excluded nonnative speakers of English from our sample.
2. Participants indicated how far away the MTurk user was from them on a 7-point scale (1 = *very near*; 7 = *very far)*. Participants in the far condition indicated that the audience was farther away from them ($M = 5.81$, $SD = 1.34$) than participants in the near condition ($M = 2.44$, $SD = 1.39$), $t(65) = 9.86$, $p < .001$.
3. See supplemental materials section for details.
4. Participants in the abstract and concrete condition did not differ in the extent to which they perceived the writing task as being effortful, $t(48) = 1.04$, $p = .26$, or easy, $t(48) = 0.24$, $p = .8$.

Supplemental Material

The online data supplements are available at http://spps.sagepub.com/supplemental.

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