The Language of an Empathy-Inducing Narrative

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Abstract

While ample work has examined how to increase empathy within situational contexts, little research has focused on how the language used to communicate with others may elicit empathy. Here, we investigate how (Study 1) the degree of a narrator's culpability and (Study 2) narrative framing of personal narratives (focusing on experienced sensations, emotions, or neither) affects feelings of empathy reported by listeners. Across our two studies, 901 participants read narratives describing common life events, rated their empathy towards the narrator, and were given an option to write a response to the narrator. Our findings indicate that people report less empathy towards narrators that caused their misfortune, although their written responses were more focused on the narrator. By contrast, however, highlighting sensory or emotional details in a narrative did not significantly impact the degree of empathy reported by listeners, yet still affected the language of responses produced by listeners.

Keywords: Empathy, emotion, language, narrative, perceived responsibility

Introduction

As innately social beings, we seek out support from others whenever we face challenges. One way we do this is through sharing our personal stories in order to receive advice or comfort. These narratives can detail positive or negative events and emotions, and ultimately are told with an aim to elicit an empathic response from those we are speaking to. Empathy—broadly defined as the ability to accurately understand another person's feelings in a given situation (Kalisch, 1973; Smith, 2017)—inspires connection with others and serves as an important motivator of altruism and other prosocial behaviors (Chung et al., 2021; De Waal, 2008; Eisenberg & Miller, 1987; Klimecki et al., 2016).

Empathy plays a fundamental role in the development, strengthening, and maintenance of a variety of interpersonal relationships. It is also comprised of multiple components (Cuff et al., 2016; C. M. Davis, 1990; Zaki & Ochsner, 2012), including experience sharing ("feeling" what someone else is feeling) (Decety & Meyer, 2008; Shamay-Tsoory et al., 2009) and perspective-taking (Galinsky et al., 2008; Lamm et al., 2007). These different components all contribute to motivating one to show empathic concern for another in distress (Zaki, 2014), resulting in both empathic feelings as well as prosocial behaviors like writing a written response (Fig. 1). In this paper we investigate how the *language* of an empathy-inducing or empathy-eliciting appeal affects a reader's reported empathy and behavior.

Persuasive Appeals. Much of the research surrounding the factors that affect empathy has examined situational contexts (Chen et al., 2018; Romosiou et al., 2019) rather than how language affects empathy. The little previous work examining language and empathy that exists has predominantly focused on the impact of empathy on second language learning or identifying empathy through psychoanalytic linguistic measures (Aragno, 2008; Guiora et al., 1972; Herlin & Visapää, 2016; Mercer, 2016; Zhou et al., 2021). In order to contextualize how language use may elicit empathy from a reader, we examined how culpability might impact empathy.

Research has shown that attributions of responsibility for an individual's situation can impact emotional responses (Crandall & Martinez, 1996; Decety et al., 2010), thus impacting feelings of empathy. People tend to find it easier to empathize with someone who's had something happen to them that was out of their control, compared with someone who played a part in the cause of their misfortune (Wei & Liu, 2020). This relates to the significant degree in which our perception of others modulates how we respond to them (Szanto & Krueger, 2019). Like framing, perceived responsibility plays a role in our perception of others and thus influences the way we choose to respond.

We also turned to literature on persuasive techniques to explore the link between language use and empathy. People's emotions influence their behavior — for instance, appeals to one's guilt are relatively common in advertisements aimed at motivating charitable action. Additionally, emotional versus factual approaches to arguments have been found to resonate with different personality types (Lukin et al., 2017), underscoring the importance of framing for the intended audience. Hoover et al. (2018) also highlighted the importance of framing in the context of motivating charitable sentiment, but was unable to establish a strong link between framing and subsequent charitable action. Overall, however, there is substantial evidence which supports that framing can impact an audience's attitudes and thus the success of a persuasive appeal (Teeny et al., 2021).

Personal Narratives. Much like empathy, storytelling is universally foundational for connecting with others (B. Boyd, 2018; Brown, 2004). Sharing stories or narratives can influence emotions, elicit empathy, and positively impact both the storyteller and listener (Brockington et al., 2021;

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Figure 1: Study logic: On each trial, participants read a narrative, self-report their empathic response for the narrator, and are prompted to leave an optional written response. Different conditions are anticipated to affect empathic self-report and written responses.

Green & Brock, 2000; Roshanaei et al., 2019). In addition to reading them, writing narratives has also been shown to increase empathy and perspective-taking (Shaffer et al., 2019). When listening to stories, we formulate our reactions based on our appraisals of sincerity, emotional response, and overall context. This is important to note because research has shown that one's feelings and empathic responses can be impacted by one's appraisal of others' emotions, particularly if they deem those reactions inappropriate within a given circumstance (Wondra & Ellsworth, 2015). Furthermore, higher perceived similarity between individuals or emotional experiences have been linked to greater empathic response (Krebs, 1975; Shen et al., 2023). Overall, building a common "bond" between narrator and listener—established through the medium of storytelling—is a key component for eliciting empathic responses.

The Present Study. Given that narrative storytelling can impact empathic responses through a variety of dimensions, we sought to test whether emphasizing certain dimensions of a narrative—specifically, the attribution of responsibility and the narrative framing—would impact a reader's self-reported feelings of empathy toward the story's narrator, as well as prosocial behavior (measured by writing empathic responses). We were particularly interested in examining which, if any, dimensions might induce greater empathic response from readers. To do this, we conducted two studies where we manipulated various aspects of a narrative, specifically, (1) a narrator's level of (perceived) responsibility for an event and (2) the narrative framing used to describe that event. Our focus on the association between language use and empathic responses contributes a previously unexplored perspective to the link between language and empathy.

Study 1: Degree of Responsibility

In this study, we examined how a narrator's level of responsibility for a negative event impacts a reader's empathic response, in a one-factor (narrator responsibility), within-subjects design.

Stimuli. We created a set of narratives spanning nine topics. These were based on realistically plausible negative events, as well as narratives adapted from various Reddit posts (10 of the 27 narratives were adapted from Reddit). The list of nine topics were: *relapse, car crash, personal injury, loss of a pet, financial loss, job loss, heartbreak, illness*, and *failure*. Each topic was written in one of three conditions: "None" (No Fault), "Ambiguous Fault" and "Direct Fault".

Fault Conditions. Participants were presented with three stories drawn from the total pool of nine stories, with one story from each of the three fault conditions (See Fig. 2). The first "No Fault" condition served as our control group and encapsulated narrative descriptions of events that were perceived to happen by chance to the narrator, with no (perceived) responsibility for the occurrence of the event falling on the narrator. The "Ambiguous Fault" condition encapsulated descriptions of events that the narrator arguably could or could not have been (and felt) responsible for. These events described occurrences that the narrator contributed to in some capacity, but the level of fault could vary in the eyes of different readers. In the "Direct Fault" condition, the descriptions included events that were directly caused by (and acknowledged by) the narrator.

Participants We recruited 451 participants on Prolific. No participants failed all 3 attention checks, which asked about the topic of the narratives. The final sample (N = 451) included 228 women (51.4%), 205 men (46.3%), and 15 non-binary individuals (2.1%), with 3 (0.2%) not disclosed. The mean age was 37.0 years old (SD = 12.99; range: 19-75).

Procedure. Participants saw three trials. On each trial, they read one of the nine topics, written in one of the three conditions. Each participant read one topic in each of the three conditions, presented in a random order.

Following the presentation of each narrative, participants were asked how much empathy they felt toward the narrator, using a 5-point Likert scale (1 for "none at all" to 5 for "a great deal"), our main dependent variable. Participants were also given the option to provide a written response to the narrator. Participants who chose not to write a response were scored as zero for the linguistic analysis.

Linguistic Analysis. As part of our exploratory analyses, we analyzed the language of the optional written responses addressed to the "narrators" of each story. We used the Linguistic Inquiry and Word Count (LIWC-22) (Pennebaker et al., 2022), a text analysis software that has been shown to detect meaning in a variety of psychological (e.g., emotion, perception), topical (e.g., temporal, social), and linguistic (e.g., function, punctuation) word categories (R. L. Boyd et al., 2022; Tausczik & Pennebaker, 2010). While we examined LIWC-22 scores across all dictionaries, we discuss only the dictionaries with the most significant scores in this paper. One dictionary dimension of note is Clout.

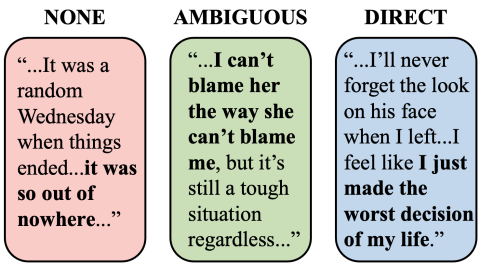

Figure 2: Sample excerpts from Study 1 "*heartbreak*" stimuli by condition: "None" (or No Fault), "Ambiguous fault", and "Direct fault". Text is bolded here to show the main manipulation (narrator's perception of fault), but was not bolded in the experiment.

Clout is a summary variable comprised of multiple LIWC-22 dictionaries and indicates leadership and high status in language, which is strongly linked to pronoun use (Kacewicz et al., 2014). Other dictionaries we discuss include Anger Words, Negative Tone, Auditory Words, Causation Words, and Insight Words. We will also discuss results regarding Moralization words, which includes language where a speaker makes a judgment about another's actions or character (R. L. Boyd et al., 2022). Due to a low word count ($\sim$8) per individual participant in both Study 1 and Study 2, we concatenated written responses by story topic in each condition to examine broad trends in language use by fault/framing condition at the story level, rather than at the participant level.

Results

Primary Analysis. We used a mixed-effects linear model to examine whether a narrator's responsibility for an event in a given story predicts the level of empathy readers reportedly feel toward the narrator. We ran our linear model using the `lmerTest` package in `R`, with empathy scores as the dependent variable and fault condition as the fixed effect. We included subject and story topic as random effects, with the following model specification:

Empathy $\sim$ Condition + (1 | ParticipantID) + (1 | StoryID)

We hypothesized that empathy scores would be highest in the "No Fault" condition and lowest in the "Direct Fault" condition—that is, that people would tend to empathize more with narrators who (perceived that they) had uncontrollable events happen to them, and empathize least with narrators who (perceived that they) "caused" the situation. Our results were consistent with this hypothesis.

Comparing with the "No Fault" condition, there was a significant main effect of condition on empathy for both "Ambiguous Fault" (β = -0.67; *95% CI:* [-0.79, -0.55]; t = -10.89; $p < 0.001$) and "Direct Fault" (β = -0.89 [-1.01, -0.77]; t = -14.57; $p < 0.001$) (See Fig. 3). There was also a significant difference between the "Ambiguous Fault" and the "Direct Fault" (β = -0.22 [-0.34, -0.1]; t = -3.67; $p < 0.001$) condition. These results indicate that higher

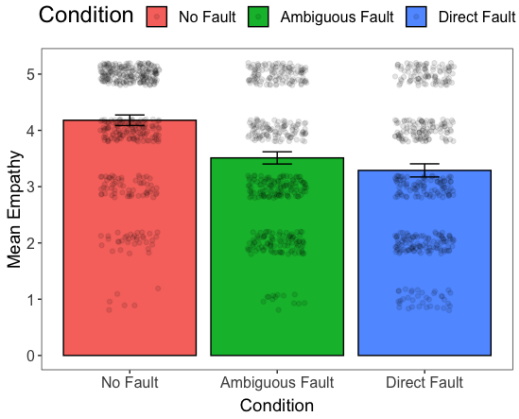

Figure 3: Study 1 Results. Mean reported empathy scores by narrative framing condition ("No Fault", "Ambiguous Fault" and "Direct Fault").

(perceived) narrator culpability negatively impacts a reader's empathic response, which is consistent with current literature. We found some variation between story topics (mostly in whether the "Ambiguous" ratings were closer to "No Fault" or closer to "Direct"), but the pattern of results was consistent across all topics.

Exploratory Analyses of Language. As an exploratory analysis, we used LIWC-22 to examine the language composition of responses participants optionally wrote to the narrator after reading each of their given stories. 441 (97.8%) participants responded to narrators in the "No Fault" condition, 436 (96.7%) participants responded to narrators in the "Ambiguous" condition, and 433 (96.0%) participants responded to narrators in the "Direct" condition. (There were no significant differences in response rates.)

Using a mixed-effects linear model, we explored whether narrator fault predicted various language dimensions (function words, emotion words, etc.) in readers' written responses. We included a LIWC-22 dimension as the dependent variable, fault condition as the fixed effect, and story topic as a random effect:

LIWC-22 Dimension $\sim$ Condition + (1 | StoryID)

The most significant effects (Table 1) we observed of fault condition on language use were for Clout ("Direct" and "Ambiguous" conditions, compared to "No Fault") and Causation Words ("Direct" condition). Higher usage of Clout words indicates confidence and higher status (R. L. Boyd et al., 2022; Kacewicz et al., 2014), or alternatively, writing more assertively, and this may be due to participants having a downward social comparison after reading that the narrator (self-perceived to have) caused their negative event. But other work suggests that Clout Words may also be associated with compassion through high levels of other-oriented language use (Mascaro et al., 2023), which is also corroborated by a greater use of second-person pronouns.

Participants used less first-person pronouns in the "Direct"

LIWC-22 Dimension	Contrast *(> No Fault)*	Beta	95% CI	*t*	*p*	Example Words
Clout	Direct	11.91	[4.62, 19.19]	3.20	0.006	*we, know, our, help*
Cause words	Direct	0.50	[0.19, 0.79]	3.20	0.006	*how, because, make, why*
I words	Direct	-1.03	[-1.81, -0.24]	-2.86	0.021	*I, me, my, myself*
You words	Direct	1.00	[0.18, 1.83]	2.38	0.03	*you, your, u, yourself*
Insight words	Direct	0.77	[0.21, 1.33]	2.68	0.016	*know, how, think, feel*
Clout	Ambiguous	14.50	[7.22, 21.79]	3.90	0.001	*we, know, our, help*
You words	Ambiguous	1.19	[0.36, 2.01]	2.82	0.012	*you, your, u, yourself*

Table 1: Study 1 exploratory results. Significant LIWC-22 dimensions by perceived responsibility condition, compared to the "No Fault" condition.

condition (compared to "No Fault), and participants in both "Direct" and "Ambiguous" conditions used *more* second-person pronouns. This indicates that participants more often addressed narrators directly ("you") when narrators were perceived at least some level of responsibility for the event—example responses include "at least *you*..." or "*you* did what *you* could", which were relatively common as a means of making the narrator feel better about what happened. First-person pronoun use has been linked with higher self-focus (D. Davis & Brock, 1975), so using less first-person and more second-person pronouns is also consistent with the idea of focusing more on the narrator. Participants also used more Insight Words in the "Direct" condition, suggesting that readers were communicating understanding with the narrator. Statements like "I *know how* you *feel*", were common themes in participants' responses to narrators that (perceived that they) directly caused the negative event described.

Overall, our analysis suggests an interesting picture: while self-reported empathy towards narrators was lowest in the "Direct" fault condition (they caused their misfortune), the language analyses indicate that participants were actually putting more focus on the narrator (less first-person, more second-person pronouns; more Causal and Insight words), and writing with more Clout (which might be interpreted as more assertiveness or maybe more compassion).

Study 2: Narrative Framing

In Study 1, we found that readers' self-reported empathy scores—as well as the language that they used when writing an empathic response—were affected by the narrator's (perceived) degree of responsibility for causing their situation. We turned next in Study 2 to investigate whether the narrative framing of the narrative can similarly affect readers' empathy. We operationalize narrative framing here as whether the narrative is written using more sensory or emotion words (more below). We used a similar one-factor (type of narrative framing), within-subjects design.

Stimuli. Narrative stimuli for Study 2 were fictional and written by us but based on realistically plausible events. There were nine topics, most of which overlapped with Study 1: *relapse, car crash, death of a loved one, loss of a pet, natural disaster, getting fired, heartbreak, near-death experience,* and *terminal illness*. Each topic was written in one of three conditions, described below: "Control", "Sensory", and "Emotion".

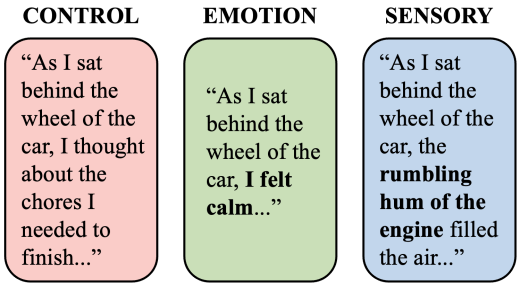

Figure 4: Sample excerpts of Study 2 "*car crash*" stimuli by condition: "Control", "Emotion", and "Sensory". Text is bolded here to show the main manipulation (narrative framing), but was not bolded in the experiment.

Narrative Framing Conditions. Participants were presented with three narratives drawn from the total pool of nine, with one narrative from each of the three framing conditions (See Fig. 4). In the first condition, "Sensory", stories were explicitly written using sensory details (i.e., touch, taste, smell, hearing, and sight) that described the narrator's sensations as they experienced the event. This condition was designed to increase the reader's ability to perspective-take the narrator's experience. In the second condition, "Emotion", stories were written through explicitly named feelings that the narrator was experiencing at the time of the event. This condition was designed to increase the reader's ability to emotionally resonate with the narrator. (Stories in the "Sensory" condition did not have emotion words, and stories in the "Emotion" condition did not have sensory words) Finally, in the "Control" condition, stories were written without any details regarding the sensations or emotions that the narrator experienced.

Participants. Like Study 1, we recruited 450 participants on Prolific. No participants failed all 3 of our attention checks, which asked about the topic of the narratives. 12 ($\sim$3%) participants' data were lost due to a technical error in Qualtrics, and were thus excluded from final data analysis. The final sample (N = 438) included 225 women (51.4%),

203 men (46.3%), and 9 non-binary individuals (2.1%), with 1 (0.2%) not disclosed. The mean age was 37.5 years old (SD = 12.0; range: 18-79). While all 438 participants were exposed to each of the three narrative conditions, story topics were randomly assigned. The procedure and analytic approach was identical to that of Study 1.

Results

Primary Analysis. We used a mixed-effects linear model to examine whether the narrative framing condition in a given story predicts the level of empathy participants reported toward the narrator. We initially hypothesized that mean empathy levels would be highest in the "Sensory" condition and lowest in the "Control" condition.

Surprisingly, our results were not consistent with this hypothesis; we instead found that the effect of narrative framing on elicited empathy was negligible (See Fig. 5). There were no significant effects of narrative framing condition on reported empathy scores for the "Sensory" (β = 0.04 [-0.06 , 0.15]; t = 0.845; p = 0.398) and "Emotion" (β = 0.003 [-0.10 , 0.11]; t = 0.059; p = 0.953) conditions compared to the "Control" condition, or between "Sensory" and "Emotion" (β = -0.04 [-0.14, 0.06]; t = -0.79; p = 0.432). These results suggest that changing the framing of a negative experience by focusing more on one's feelings or on one's perceptions of the events, did not seem to affect readers' self-reported empathy towards the narrator.

These (null) results are surprising for a couple of reasons. First, the "Sensory" and "Emotion" conditions were designed to increase readers' empathy by lowering the threshold for a reader to either (1) perspective-take through the vivid sensory detail or (2) emotionally resonate with the narrator through a detailed account of their feelings. We did not expect that neither condition would elicit more empathy than the control. Second, research (Krebs, 1975; Szanto & Krueger, 2019) suggests that a reader's impression of the narrator would impact their empathic response. Strategic narrative framing for a certain audience can promote a more desired response (Hoover et al., 2018; Lukin et al., 2017; Teeny et al., 2021), which would predict that manipulating the framing would impact elicited empathy. One reason could be that the mean empathy scores, even for the "Control" condition, are already very high (e.g., comparing to Study 1's results in Fig. 3), so our manipulation did not have much of an effect. We return to discussing possible limitations to our study in the Discussion.

Exploratory Analyses of Language. In hopes of better understanding the unexpected null results, we used LIWC-22 to explore the language composition written responses from participants to the story narrators, similar to what we did in Study 1. 424 (96.8%) participants responded to narrators in the "Sensory" condition, 428 (97.7%) participants responded to narrators in the "Emotion" condition, and 430 (98.2%) participants responded to narrators in the "Control" condition. We used a mixed-effects linear model (with the same model specification as Study 1) to explore whether

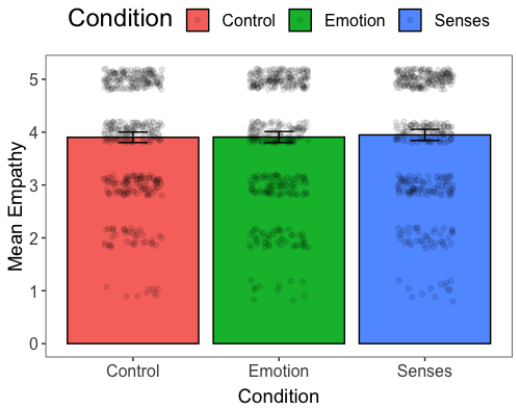

Figure 5: Study 2 results. Mean reported empathy scores by narrative framing condition.

narrative framing condition predicted various language dimensions in a listener's response. We anticipated that the "Sensory" condition would likely impact participants' language use, and did see that for a couple of dimensions; however, our results indicated that the "Emotion" condition more significantly affected participants' language use when responding to the narrator (see Table 2).

Participants used more Negative Tone words in their responses to both "Emotion" and "Sensory" condition narratives compared to "Control". Since Negative Tone is a broad dimension, this could indicate a variety of things, but—generally—it seems to suggest that participants' empathic responses used more negative language when emotional or sensory details were included in a narrative. Perhaps—since these conditions were more negative through the nature of their framing—participants mirrored the language of the narrator when responding to them, which elevated Negative Tone scores compared to "Control".

Participants who read narratives in the "Emotion" condition used more Anger Words compared to those in "Sensory" and "Control". This is interesting because although participants reported high levels of empathy in all conditions, in the "Emotion" conditions, participants also expressed some anger *toward* the narrator in their responses (confirmed by reading a sample of responses). That is, participants seemed to react *negatively* to hearing about the narrator's feelings so explicitly. Maybe participants found narrators in this condition whiny, over-dramatic, or too emotional, which could have added an undertone of aggression to the way they responded. Additionally, participants used more Moralization words in the "Emotion" condition compared to the other conditions. This could indicate that readers seemingly made more moral judgments about the narrator's behavior or character when they (overly) expressed their feelings regarding an event. This seems to connect with the elevated use of Anger words, suggesting that participants were quicker to judge the narrator's character when they over-explained their feelings. We don't see

LIWC-22 Dimension	Contrast *(> Control)*	Beta	95% CI	*t*	*p*	Example Words
Anger words	Emotion	0.11	[0.04, 0.19]	2.88	0.011	*hate, mad, angry, frustrated*
Negative tone	Emotion	0.92	[0.26, 1.57]	2.74	0.015	*bad, wrong, too much, hate*
Moralization words	Emotion	0.32	[0.07, 0.57]	2.48	0.025	*wrong, honor, deserve, judge*
Auditory words	Emotion	0.20	[0.05, 0.34]	2.63	0.018	*sound, hear, heard, music*
Negative tone	Sensory	0.80	[0.14, 1.46]	2.39	0.029	*bad, wrong, too much, hate*

Table 2: Study 2 exploratory results. Significant LIWC-22 dimensions by narrative framing condition.

this sort of assessment of the narrator in any of our other manipulations, so we found it a particularly interesting trend that should be further examined in a separate study. Finally, participants also used more Auditory words when responding to "Emotion" condition narratives. This is likely due to a prevalence of statements like "I *hear* what you're saying" or "That *sounds* hard" communicating understanding to the narrator.

Our analyses suggest that while our narrative framing manipulations may not have impacted self-reports of *how much* participants empathized with the narrator, the general language trends indicate that our conditions did impact *how* participants empathized with narrators. This appears consistent with research suggesting that people's responses to others are moderated by their perceptions of the person they're responding to (Hibbert et al., 2007; Wondra & Ellsworth, 2015). Further studies should be conducted to replicate these results and draw more conclusive interpretations.

General Discussion

The present studies examined how the language of a narrative—specifically a narrator's degree of responsibility for a negative event and the narrative framing of a negative event—impacted a reader's empathic response, both in terms of self-reported empathy and behavior (a written response). Overall, our findings indicate that the level of perceived responsibility impacts self-reported feelings of empathy, with lower levels of empathy being reported toward narrators who were responsible for the event they described. Language analyses revealed that though self-reported empathy was lower, written responses seemed to be more focused on the narrator. Our results from Study 2 suggested that narrative framing—at least the way we manipulated it—did not impact self-reported feelings of empathy. However, exploratory language analysis of written responses written did affect behavior: Thus, rather than the level of empathy, however, our manipulations seemed to more notably affect *the way* in which participants empathized with the narrator (reflected in how they wrote empathic replies).

One puzzle is why we did not find main effects on self-reported empathy in Study 2, given that both the literature (Decety & Meyer, 2008; Galinsky et al., 2008; Lamm et al., 2007; Shamay-Tsoory et al., 2009) and our linguistic analyses support the idea that our narrative framing manipulations should have impacted reported empathy more significantly than it did. One possibility is that we ran into a ceiling effect: Participants reported equally high levels of empathy across all conditions in Study 2. In fact, when designing the stimuli for Study 2, we aimed to create story topics where narrators were not at fault, and post-hoc re-coding suggests that at most 3 of the 9 topics might be "Ambiguous" rather than "No Fault". And we observed average empathy levels about the same as in Study 1's "No Fault" condition. Thus, maybe the stimuli were already producing high levels of empathy, and our framing manipulations were not strong enough to further affect this. We believe that redesigning and re-running the experiment may produce different results for the self-report.

In the first two studies of this research program on language and empathy, we manipulated only two possible factors—and even within "framing" we used only one way of manipulating the narrative frame (sensory vs emotional details, based off the perspective-taking and experience sharing components of empathy). There remain many future questions in this space, in varying (i) the content of the situation that narrators experience, (ii) their subjective appraisals (e.g., perceived responsibility; Wondra and Ellsworth, 2015), and (iii) how they write about it. We believe that this research program—hopefully in the future complemented with computational modelling (Cushman, 2023; Ong et al., 2019; Saxe & Houlihan, 2017)—will inform our understanding of social and affective cognition.

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