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Subtle linguistic cues influence perceived blame and financial liability

Caitlin M. Fausey and Lera Boroditsky
Stanford University, Stanford, California

When bad things happen, how do we decide who is to blame and how much they should be punished? In the present studies, we examined whether subtly different linguistic descriptions of accidents influence how much people blame and punish those involved. In three studies, participants judged how much people involved in particular accidents should be blamed and how much they should have to pay for the resulting damage. The language used to describe the accidents differed subtly across conditions: Either agentive (transitive) or nonagentive (intransitive) verb forms were used. Agentive descriptions led participants to attribute more blame and request higher financial penalties than did nonagentive descriptions. Further, linguistic framing influenced judgments, even when participants reasoned about a well-known event, such as the "wardrobe malfunction" of Super Bowl 2004. Importantly, this effect of language held, even when people were able to see a video of the event. These results demonstrate that even when people have rich established knowledge and visual information about events, linguistic framing can shape event construal, with important real-world consequences. Subtle differences in linguistic descriptions can change how people construe what happened, attribute blame, and dole out punishment. Supplemental results and analyses may be downloaded from http://pbr.psychonomic-journals.org/content/supplemental.

When bad things happen, how do we decide who is to blame and how much they should be punished? Linguistic and contextual framing has been shown to affect people's reasoning in a variety of domains (e.g., Lee, Frederick, & Ariely, 2006; Levin, 1987; Levin & Gaeth, 1988; Loftus, Miller, & Burns, 1978; Loftus & Palmer, 1974; Shiv, Carmon, & Ariely, 2005; Tversky & Kahneman, 1973, 1981), including causal attribution (see Pickering & Majid, 2007, for a recent review). In the present article, we build on this work by exploring the effects of linguistic framing in a domain of paramount real-world importance—blame and punishment.

Linguistic descriptions are of course ubiquitous in legal disputes. People linguistically frame incidents from the very moment they occur and later in police reports, legal statements, court testimony, and public discourse. Could the linguistic descriptions of an event influence how much we blame the people involved? Could language also influence how financially liable we think a person is for any resulting damage? Could linguistic framing shape construal even for well-known events (ones for which we already have rich knowledge and established mental representations) and even when we can witness the event with our own eyes?

The particular linguistic contrast of interest in the present article is between transitive agentive descriptions and intransitive nonagentive descriptions. A canonical agentive description (e.g., *Timberlake ripped the costume*) includes a person as the subject in a transitive expression describing a change of state (in this case, ripping). A canonical nonagentive description (e.g., *The costume ripped*) is intransitive and does not place the person as the subject for the change-of-state event.[1] Previous work has shown that people are sensitive to this distinction between agentive and nonagentive frames. For example, people are more likely to remember the agent of an event when primed with agentive language than when primed with nonagentive language (e.g., Fausey, Long, Inamori, & Boroditsky, in press). The attributional consequences of these linguistic frames, however, are not well understood.

The linguistic contrast between agentive and nonagentive frames has the potential to have serious real-world consequences, especially in legal contexts. For example, in the 197,745 trials held between 1674 and 1913 at London's central criminal court (Old Bailey Proceedings Online, 2009), cases with the agentive phrase "broke it" in the court records resulted in a guilty verdict more often than did cases with the nonagentive phrase "it broke" (76% and 70% guilty, respectively), with similar patterns for other consequential actions such as "burned it" versus "it burned" [77% and 57% guilty, respectively; $\chi^2(1, N = 2{,}748) = 11.04$, $p < .05$]. In the most serious of cases (when the charge was "killing"), the transitive/intransitive contrast as marked by different verbs also predicted verdicts. Saying "killed" resulted in more guilty verdicts than did saying "died" [65% and 56% guilty, respectively; $\chi^2(1,$

C. M. Fausey, cfausey@indiana.edu

$N = 3{,}814) = 21.34$, $p < .05$]. These examples suggest that agentivity may be part of a suite of linguistic cues that are influential in legal reasoning.

In a correlational analysis such as this, however, it is impossible to determine whether different linguistic forms actually caused a difference in verdicts. It could be that agentive descriptions indeed led the court more often to guilty verdicts. But it is also possible that people were simply more likely to use agentive language in cases in which the defendant was actually more guilty. Although the attributional consequences of transitivity have not been directly explored in the empirical literature, the question has been debated—and adjudicated—in court. For example, in a case petitioning to change the title of a ballot measure (California's high-profile Proposition 8 in the 2008 election titled "Eliminates right of same-sex couples to marry"), the judge rejected the petitioners' claim, ruling that "There is nothing inherently argumentative or prejudicial about transitive verbs" (*Jansson v. Bowen*, 2008). Few other questions in psycholinguistics have risen to a sufficient level of civic importance to be ruled on in high court.

With the high stakes of guilt, innocence, and the legality of constitutional amendments on the line, it is important to empirically establish whether agentive and nonagentive frames indeed have any attributional consequences. In the present article, we examine the effects of agentive and nonagentive linguistic frames on important real-world decisions about blame and punishment.

STUDY 1

In Study 1, participants read about an accidental restaurant fire that resulted in property damage. They then made judgments about the person involved in the accident. The survey was one of many unrelated surveys in a packet presented to participants.

Method

Participants. In partial fulfillment of a course requirement, 236 Stanford University students (96 male; mean age = 19.22 years) completed one survey: 116 read the agentive and 120 read the nonagentive version of the story.

Materials. Participants read either the agentive or the nonagentive account about an individual (Mrs. Smith) who was involved in a restaurant fire. They then answered two questions (Table 1). The two accounts contain all of the same content words (all of the same nouns, verbs, and adjectives are used), involve the same individual, and describe the same outcomes. The accounts differ only in the frames used to describe the accidental events (underlined sections of Table 1): Transitive frames are used in the agentive account and intransitive frames in the nonagentive account.

Results and Discussion

Linguistic framing influenced people's judgments of both blame and financial liability. Participants who read the agentive account ($M = 4.83$, $SE = 0.14$) blamed Mrs. Smith more than did participants who read the nonagentive account ($M = 4.01$, $SE = 0.15$) [$t(234) = 4.04$, $p < .001$, $d = .53$]. A subtle difference in language caused a big difference in dollars: Participants who got the agentive report ruled that Mrs. Smith should pay $247 (36%) more in fines ($M = \$935.17$, $SE = \$43.48$) than did participants who got the nonagentive report ($M = \$688.75$, $SE = \$43.64$) [$t(234) = 3.99$, $p < .001$, $d = .52$].

In Study 1, linguistic framing influenced people's judgments of financial liability. One explanation for this result could be that Mrs. Smith was punished more harshly because she had also been blamed more harshly. That is, the effect of language on financial liability might be indirect, such that language influences blame, which then determines punishment. Could language *directly* impact

Table 1
Studies 1 and 2, Reports and Questions

Agentive Report	Nonagentive Report
Mrs. Smith and her friends were finishing a lovely dinner at their favorite restaurant. After they settled the bill, they decided to head to a nearby café for coffee and dessert. Mrs. Smith followed her friends and as she stood up, she flopped her napkin on the centerpiece candle. She had ignited the napkin! As Mrs. Smith reached to grab the napkin, she toppled the candle and ignited the whole tablecloth too! As she jumped back, she overturned the table and ignited the carpet, as well. Hearing her desperate cries, the restaurant staff hurried over and heroically managed to put the fire out before anyone got hurt.	Mrs. Smith and her friends were finishing a lovely dinner at their favorite restaurant. After they settled the bill, they decided to head to a nearby café for coffee and dessert. Mrs. Smith followed her friends and as she stood up, her napkin flopped on the centerpiece candle. The napkin had ignited! As Mrs. Smith reached to grab the napkin, the candle toppled and the whole tablecloth ignited too! As she jumped back, the table overturned and the carpet ignited, as well. Hearing her desperate cries, the restaurant staff hurried over and heroically managed to put the fire out before anyone got hurt.

Questions for Study 1

Blame. Mrs. Smith is discussing the damage with the restaurant. How much should she be blamed for the fire?
(Likert scale from 1 to 7, anchored by *Not at all to blame* and *Completely to blame*)

Financial liability. The restaurant's insurance policy does not cover minor fires. The restaurant has sought legal action to require Mrs. Smith to pay for the damage. Total costs to the restaurant were $1,500. How much should Mrs. Smith be required to pay?

Questions for Study 2

Financial liability. The restaurant's insurance policy does not cover minor fires and so the restaurant has sought legal action to require Mrs. Smith to pay for the damage. An independent review panel used their standard blame assessment scale in reviewing this case. On this scale, 0 means *not at all to blame* and 8 means *completely to blame*. The panel gave Mrs. Smith a {1,4,7}. The total costs to the restaurant were $1,500.

How much should Mrs. Smith be required to pay?

judgments of financial liability? This question is important because of the somewhat flexible sentencing process that occurs after guilt judgments in legal decision making. A direct impact of language on sentencing would be an important applied result. Study 2 was designed to address this question.

STUDY 2

In Study 2, participants got an agentive or nonagentive accident description and also learned of a blame attribution generated by an independent review panel. This panel attributed low, middle, or high blame to the person involved in the accident. After learning how blameworthy other people judged the person to be, participants determined the person's financial liability for the property damage. This paradigm allows us to target the independent role of language on financial liability sentences. People's decisions about financial liability may be guided by blameworthiness, language, or both.

Method

Participants. In partial fulfillment of a course requirement, 179 Stanford University students (59 male; mean age = 19.01 years) completed one survey: 91 read the agentive account of the restaurant fire accident (33 low, 30 middle, and 28 high blame), and 88 read the nonagentive account (33 low, 28 middle, and 27 high blame).

Materials. As in Study 1, participants read either the agentive or the nonagentive narrative and then answered the financial liability question shown in Table 1. Thus, participants in Study 2 answered only the financial liability question, after learning that an independent panel judged the person to be either a 1 (*low*), a 4 (*middle*), or a 7 (*high*) in terms of blame.

Results

The level of blame assigned by the independent panel influenced participants' judgments of financial liability (Figure 1). Overall, people judged that Mrs. Smith should pay more in damages when the independent panel ruled her to be highly to blame (M = \$974.19, SE = \$61.97) than when the panel assigned her a middle level of blame (M = \$615.00, SE = \$56.27) and then when she was ruled to be of low blame (M = \$425.63, SE = \$50.89).

Interestingly, language also influenced financial liability judgments. As in Study 1, a subtle change in language led to a substantial change in financial liability: Mrs. Smith was held responsible for \$153 (or 26%) more in damages by people who got the agentive report (M = \$730.75, SE = \$49.57) than by those who got the nonagentive report (M = \$577.77, SE = \$52.35).

A 3 (blame: low, middle, high) × 2 (language: agentive, nonagentive) factorial ANOVA revealed reliable main effects of assigned blame level [$F(2,173) = 25.23$, $p < .001$, $\eta^2 = .22$] and of language [$F(1,173) = 5.53$, $p = .02$, $\eta^2 = .03$]. Assigned blame level and language did not interact [$F(2,173) = 1.40$, n.s.].

Discussion

Guilt and linguistic framing independently influenced how much someone was required to pay for accidental property damage. Increasing assigned blame led to greater financial liability and agentive framing led to greater financial liability than did nonagentive framing. This finding replicates the result from Study 1. Further, sentencing itself appears to be susceptible to linguistic framing effects.

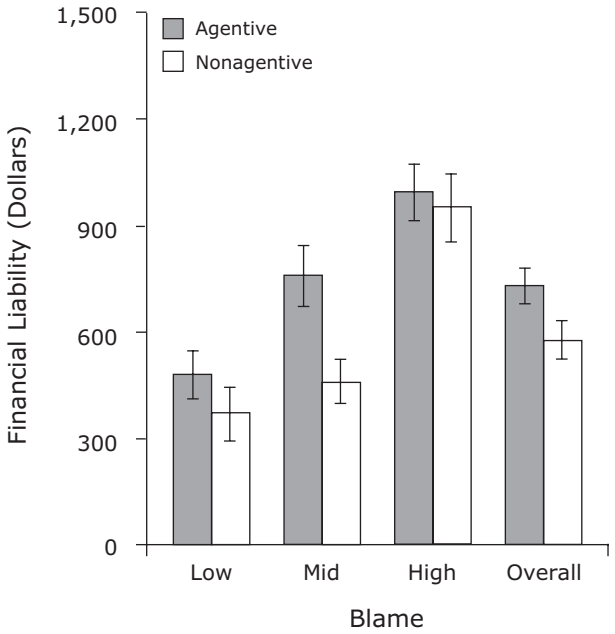

Figure 1. Independent contributions of guilt and linguistic framing to financial liability sentences (Study 2). Mean values are plotted on the *y*-axis, with whiskers representing ±1 *SEM*.

Results from the first two studies suggest that agentive and nonagentive language can shape how people attribute blame and financial liability to individuals involved in accidents. Of course, in these two studies, the only information that reasoners had about the accident was linguistic. Were people inevitably swayed by language because it was the only thing that guided what they imagined about the event? Perhaps people who received differently phrased reports imagined substantially different scenarios of what happened? In many real-life situations, the information we have about an event is purely linguistic (e.g., in court arguments, insurance claims, and news accounts). But, in other situations, we may also have visual evidence, either by being eyewitnesses or by viewing videotape. Would linguistic framing still have an effect even if people were able to see the event? Further, the restaurant fire described in Studies 1 and 2 was a novel event, one for which participants had no other previous information. Would people be so easily influenced by linguistic framing if they were reasoning about an event that they already knew something about, for which they already had a rich set of mental representations?

To address these questions, we capitalized on a widely known, much discussed, well-publicized, and video-recorded event: the "wardrobe malfunction" of Super Bowl 2004, when a performance by Justin Timberlake and Janet Jackson ended with Janet Jackson's breast being exposed on national television. Postexperiment questioning confirmed that this is indeed a well-known

event: Nearly all of our participants (96.9%) had heard about it, and many had also seen the video (67.9%) before the experiment. With prior knowledge, and current visual evidence, could linguistic framing still influence blame and punishment?

STUDY 3

In Study 3, participants reasoned about the wardrobe malfunction incident under one of three conditions: They read about the incident, or they first read about the incident and then watched the video, or they first watched the video and then read about it. In each condition, people read either an agentive or a nonagentive account of the incident.

METHOD

Participants. Five hundred eighty-nine participants (188 male; mean age = 31.17 years) were paid for completing one survey online. Participants were recruited from the pool of English speakers who use Amazon's Mechanical Turk (www.mturk.com). Three hundred six read the agentive account of the event (116 read only, 88 read then watch, and 102 watch then read) and 283 read the nonagentive account of the event (93 read only, 106 read then watch, and 84 watch then read).

Materials and Design. Participants read either the agentive or nonagentive account of the "wardrobe malfunction" incident (Table 2). In two conditions, participants viewed a video of the final 6 sec of the performance, which included the infamous malfunction (www.youtube.com/watch?v=O6j-OKvydPI).

After reading about the incident (and also watching it on video, in two of the conditions), participants answered the questions shown in Table 2. The order of the three response options was randomized, and the particular order presented to each participant was the same for the blame and financial liability judgments. Because Timberlake initiated movement right before the "wardrobe malfunction" and also because of his prominent apology to Super Bowl viewers (in which he coined the phrase "wardrobe malfunction"; Timberlake, 2004), our narratives focused on the actions of Timberlake. As a result, we expected that any effects of linguistic framing should be strongest for judging the guilt and financial liability of Timberlake. Also, because the FCC tried to fine CBS for broadcasting the incident, CBS was included among the possible targets for financial liability.

Results

In brief, linguistic framing affected people's judgments of blame and financial liability in all conditions: Language mattered, whether it was presented before, after, or without video evidence. The main results of interest are shown in Figure 2.

Conclusions from these data are the same, whether all three framing contexts are considered (as reported below) or whether only the two multimodal contexts are considered. Conclusions are also supported by nonparametric analyses (see the supplementary materials).

Effects of language on blame and financial liability. Blame and financial liability attributions were analyzed using a 2 (language: agentive, nonagentive) × 3 (task context: read only, read then watch, watch then read) factorial ANOVA for each dependent measure. For clarity of presentation, we focus on effects of language here (see the supplementary materials for effects of task context). Language and task context never interacted.

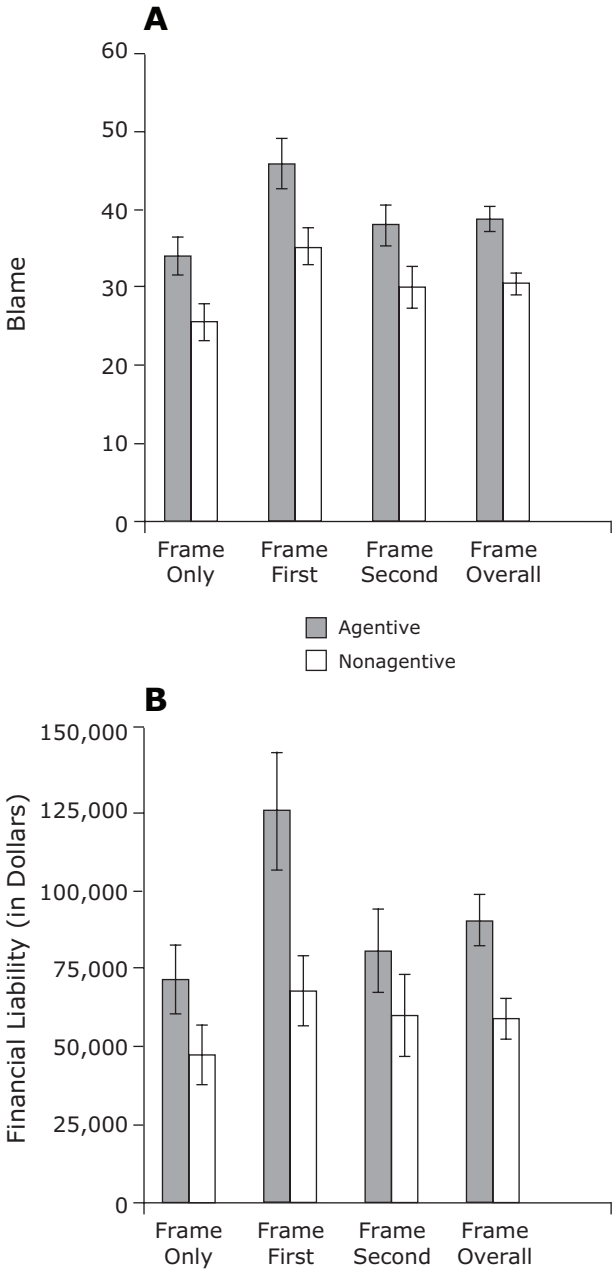

Figure 2. Language changes punishment of an observed individual (Study 3). (A) Blame attribution to Timberlake. (B) Financial liability to Timberlake. Mean values are plotted on the *y*-axis, with whiskers representing ±1 *SEM*.

Blame. Linguistic framing influenced people's blame attributions (Figure 2A). Overall, people blamed Timberlake more after reading agentive (M = 38.76%, SE = 1.59%) than after reading nonagentive (M = 30.49%, SE = 1.43%) language [$F(1,583) = 17.94, p < .001, \eta^2 = .03$]. The effect of language was seen across the three conditions, with no interaction of the effect of language × condition [$F(2,583) = 0.15$, n.s.].

Language also affected attributions to chance. Overall, people attributed the outcome to chance more after

Table 2
Study 3 Reports and Questions

Agentive Report	Nonagentive Report
Justin Timberlake and Janet Jackson performed during the 2004 Super Bowl Half-time Show. Toward the end of the song, Timberlake followed Jackson across the stage and stood beside her. As they sang the last line, Timberlake reached across the front of Jackson's body. In this final dance move, he unfastened a snap and tore part of the bodice! He slid the cover right off Jackson's chest! This incident made for a lot of controversy.	Justin Timberlake and Janet Jackson performed during the 2004 Super Bowl Half-time Show. Toward the end of the song, Timberlake followed Jackson across the stage and stood beside her. As they sang the last line, Timberlake reached across the front of Jackson's body. In this final dance move, a snap unfastened and part of the bodice tore! The cover slid right off Jackson's chest! This incident made for a lot of controversy.

Questions

Blame. In your opinion, was someone to blame or was it just chance?
Please allocate the percentage of blame. Be sure your numbers add up to 100%!
Response options: Justin Timberlake, Janet Jackson, Chance

Financial liability. The FCC (Federal Communications Commission) tried to fine CBS $550,000 for this incident. Eventually the fine was dismissed in court. How much do you think each of the parties below should have been fined for this incident?
Response options: Justin Timberlake, Janet Jackson, CBS

reading nonagentive (M = 42.87%, SE = 2.40%) than after reading agentive (M = 33.92%, SE = 2.26%) language [$F(1,583) = 8.99$, $p = .003$, $\eta^2 = .01$]. Again, this effect of language was seen across the three conditions, with no interaction of the effect of language × condition [$F(2,583) = 0.20$, n.s.].

Financial liability. The modal response for financial liability was $0 (57.2% of all data). This is likely because the sentence "Eventually the fine was dismissed in court" appeared in the liability question. Nevertheless, the linguistic framing of the event influenced people's judgments about financial liability. Overall, the proportion of people who gave any nonzero amount of financial liability to Timberlake depended on linguistic framing. 46.7% assigned a nonzero fine after reading agentive language, whereas only 38.5% did so after reading nonagentive language [$\chi^2(1,N = 589) = 4.05$, $p = .044$].

The amount of money for which Timberlake was held liable likewise depended on linguistic framing (Figure 2B). Participants who got the agentive report asked that Timberlake pay an extra $30,828.69 (53%) more in fines than did those who got the nonagentive report [M_{Agentive} = $88,818.12, SE = $8,115.75; $M_{\text{Nonagentive}}$ = $57,989.43, SE = $6,465.34; $F(1,575) = 10.31$, $p = .001$, $\eta^2 = .02$].[2] Again, there was no interaction of the effect of language × condition [$F(2,575) = 1.22$, n.s.].

Agentive and nonagentive linguistic framing did not affect people's attributions of blame or financial liability to Janet Jackson or CBS (see the supplementary materials).

In an additional set of analyses, all of the reported contrasts were conducted with an additional factor: whether or not the participant reported having seen the video of this incident prior to the experiment. This factor was not a reliable main effect nor did it interact with effects of linguistic framing in any of the analyses.

Discussion

Linguistic framing influenced how much people punished an individual involved in an event, even when they witnessed the event, and even though the event was one that our participants already knew about. Agentive language led to harsher punishment than did nonagentive language. Replicating results from the first two studies, linguistic framing not only influenced attributions of blame, but also influenced assessments of financial liability. In the case of the wardrobe malfunction incident, an agentive report led people to think that Justin Timberlake owed more than $30,000 more (an extra 53%) in fines compared with a nonagentive report. In real-world contexts, visual evidence of accidents is rarely presented in the absence of linguistic framing. These results suggest that the form of this framing guides punishment.

GENERAL DISCUSSION

In three studies, linguistic framing influenced participants' judgments about blame and punishment. Financial liability judgments, in particular, were strongly affected by linguistic framing: Agentive descriptions led to 30%–50% more in requested financial damages than did nonagentive descriptions. Judgments of financial liability were affected by linguistic frame even when blame was held constant. This finding suggests that linguistic framing can have an influence not only on verdicts of guilt and innocence, but also on the sentencing process. In Study 3, linguistic framing influenced reasoning even about an event that people knew a lot about, had seen before, and witnessed (again) right before judging the individual involved.

Previous inquiries into effects of language on attribution have examined the role of verbs, voice, and word order in guiding how people determine the cause of an event (e.g., Brown & Fish, 1983; Garvey, Caramazza, & Yates, 1975; Kasof & Lee, 1993; Kassin & Lowe, 1979; Pryor & Kriss, 1977; Schmid & Fiedler, 1998; Semin, Rubini, & Fiedler, 1995). Here, we provide the first report on the impact of transitivity both on people's attributions of blame and also on the real-world outcomes of these attributions (punishment). These studies extend previous research in several important ways. First, we probed people's decisions about a concrete form of punishment—financial liability, freely estimated in dollars—in addition to more abstract ratings of blame. Second, we examined effects of linguistic fram-

ing in a rich knowledge context: People had current visual evidence and also previous knowledge about the framed event. This richness characterizes many real-world reasoning situations, but few previous attribution framing studies. Finally, we considered the transitive/intransitive alternation, a property of event description that both has important real-world consequences and differs interestingly across languages.

Previous work has shown that languages differ from one another in their preference for agentive versus nonagentive frames (e.g., Fausey & Boroditsky, in press; Fausey et al., in press). The present findings raise the possibility that speakers of different languages may prescribe more or less severe punishment as a function of the frequency of particular linguistic frames in their language. Although there have been many demonstrations showing the power of linguistic frames in shaping people's decisions, there has not been much contact between such findings and the literature investigating cross-linguistic differences in cognition. Establishing that linguistic framing has psychological consequences in a domain where languages naturally differ from one another opens the possibility for connecting these two rich bodies of knowledge.

In particular, as Sher and McKenzie (2006) have pointed out, the linguistic frames typically provided in framing studies often are not informationally equivalent. Each linguistic description is situated in a set of pragmatic norms within a language, and participants may be responding to the pragmatic cues implied by the choice of frame. The possibility of cross-linguistic comparisons offers an exciting extension to the framing literature: Rather than having frames provided by an experimenter, in the cross-linguistic case, speakers of different languages may self-generate different frames for the same events because of the prevalent patterns in their respective languages (e.g., Maass, Karasawa, Politi, & Suga, 2006). In this way, cross-linguistic comparisons may allow us to investigate conceptual framing, not just as a phenomenon in the communicative context (where participants may use pragmatic information to infer what the experimenter must mean by their choice of frame), but also in contexts where the participants naturally frame events for themselves.

The linguistic (and cross-linguistic) framing of agentivity is of particular importance in court proceedings. Filipović (2007) highlighted a case from Northern California, in which a Spanish-speaking suspect's nonagentive (and appropriate in Spanish) description of events ("se me cayó," roughly "to me it happened that she fell") was translated into English for the broader court into the agentive (and appropriate in English) "I dropped her." Do these two descriptions mean the same thing? Or does this change in framing have serious attributional consequences? Our results raise the possibility that speakers of different languages may arrive at rather different conclusions regarding blame and punishment for the same events.

In three studies, we find that agentive descriptions of events invite more blame and more severe punishment than do nonagentive descriptions. These results demonstrate that even when people have knowledge and visual information about events, linguistic framing can significantly shape how they construe and reason about what happened. In the case of agentive and nonagentive language, subtle differences in linguistic framing can have important real-world consequences. Deciding how much to blame an individual and how much to hold them financially liable appears to be broadly susceptible to linguistic framing.

AUTHOR NOTE

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NOTES

1. Note that the agentive/nonagentive distinction we draw here is different from the distinction between active and passive voice (e.g., *He ripped the costume* vs. *The costume was ripped by him*). The active/passive distinction has been shown to shift focus to or away from the agent (e.g., Garvey, Caramazza, & Yates, 1975; Kassin & Lowe, 1979; White, 2003). Here we focus on transitivity and investigate not just the attributional consequences of transitivity (blame) but also the concrete real-world outcomes of these attributions (punishment).

2. Eight participants whose financial liability responses exceeded $550,000 were excluded from this analysis.

These conclusions are the same when analyses consider just those participants who assigned Timberlake a nonzero fine ($n = 244$). Among these participants, those who got the agentive report assigned more fines ($M = \$193{,}726.47$, $SE = \$12{,}893.53$) than did those who got the nonagentive report ($M = \$153{,}179.61$, $SE = \$12{,}430.78$) [$t(242) = 2.22$, $p = .028$].

These data show some heteroscedasticity, but our main conclusions remain the same after appropriate corrections. A t test that did not assume equal variances confirmed a reliable difference between the financial liabilities assigned by participants who got agentive versus nonagentive reports [$t(559.36) = 2.97$, $p = .003$]. The main effect of task context (see the supplementary materials) was similarly confirmed by a Welch ANOVA test [$F(2, 371.55) = 3.24$, $p = .04$].

SUPPLEMENTAL MATERIALS

Additional results from Study 3 and nonparametric analyses of all study results may be downloaded from http://pbr.psychonomic-journals.org/content/supplemental.

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