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Precision vs. Realism on the Framing Continuum: Understanding the Underpinnings of Message Effects

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Precision vs. Realism on the Framing Continuum: Understanding the Underpinnings of Message Effects

EMILY K. VRAGA, D. JASUN CARR, JEFFREY P. NYTES,
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Although largely unrecognized, a close reading of extant experimental research on framing effects reveals that contrasting approaches mark the conceptualization and operationalization of message frames in much contemporary inquiry. One approach strives to maintain factual and logical equivalence while altering the vantage point taken in the story, while the other emphasizes different facts, changing the sources, subjects, and scope of a story as part of the frame shift. Exploring the continuum between precision and realism as approaches to framing—between more internally valid and more ecologically valid conceptions of frames—is the focus of this research. An online experimental study contrasted a precise equivalence framing of a social issue in gain and loss terms against a version that included frame-resonant facts, providing the news story more realism. These frames were embedded within a broadcast news report that was scripted, filmed, and produced in conjunction with working television journalists from a PBS affiliate. Results suggest that both more precise and more realistic forms of gain and loss framing deserve continued attention, albeit with careful consideration of what it means “to frame,” both conceptually and operationally.

Keywords framing, risk perceptions, video processing

Although largely unrecognized, conceptions of framing in contemporary research exist along a continuum. A close reading of experimental research on framing reveals two contrasting approaches to conceptualizing and operationalizing message frames, with many examples occupying the space between these extreme points. At one extreme, scholars strive to maintain factual and logical equivalence while altering the vantage point taken in the story; at the other end, the facts of a story change as part of the frame shift. Within this body of work, there is an implicit disagreement about how to define frames that is centered around the question of whether it is the shift in perspective that drives framing effects or whether it is the combination of frames and accompanying facts that explains observed differences. Although largely unnoticed, some theorists and researchers have discussed the tradeoff between “precision” and “realism” (Druckman, 2004; Iyengar,

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1991; McLeod & Shah, in press). It is this distinction between internally and ecologically valid conceptions of frames that motivates this research.

Many scholars emphasize precision in their approach to framing. These researchers tend to focus on the internal validity of their designs by conceptualizing framing as a shift in the perspective taken by the story, while keeping all other factual elements of the message constant. As Druckman (2004) notes, “a framing effect occurs when different, but *logically equivalent*, phrases can cause individuals to alter their preferences” (p. 671). This definition draws extensively on the prospect theory experiments of Tversky and Kahneman (1974, 1981), which use logically and mathematically equal choices when testing effects on decision making.

This approach can be critiqued as lacking ecological validity. Notably, other researchers emphasize a more realistic approach, reflecting the reality that journalists, when constructing stories, rely heavily on gathering relevant facts and information that fit the frame they adopt. Druckman (2001) highlights this difference when he contrasts the approach noted above that stresses *equivalence* with one that conceives of framing in terms of relative *emphasis* on salient aspects of reality (Entman, 1993). In such an approach, different facts, sources, and targets are included or excluded depending on the frame selected by the journalist. From this perspective, the inclusion or omission of these features is part of the frame, and framing effects result from both the perspective taken by the reporter and the relevant facts that are part of the issue coverage. Of course, this begs the question of whether it is the frames themselves or the shifting facts, sources, and targets accompanying them that are responsible for these observed effects.

In this research, we set out to explore two points along this continuum. Specifically, we employ a design that contrasts a highly precise version of gain versus loss framing with a version that includes frame-resonant facts, moving us along the continuum toward a more realistic presentation. While frame equivalence is maintained in general terms, this contrast allows us to compare a strict (i.e., frame precision) and loose (i.e., frame realism) version of gain versus loss framing in the tradition of prospect theory (Tversky & Kahneman, 1974, 1981). To further enhance realism, we embed these frame manipulations within the main source of news and public affairs information for a majority of the public: the broadcast news report (Fowler, Goldstein, Hale, & Kaplan, 2007). Even in the new media environment, video news reports remain popular (Fowler et al., 2007; Madden, 2007; Veenstra, Sayre, Shah, & McLeod, 2008), but research on framing continues to rely on print manipulations when testing for effects.

To do so, we conducted an experiment in which two parallel video manipulations were tested to gauge frame precision and frame realism as approaches to conceptualizing message effects. Specifically, we examined the effects of gain and loss frames on the outcomes of risk perceptions, a particularly relevant context given the emphasis on logical balance and mathematical equality across frames (Tversky & Kahneman, 1974, 1981). Four different versions of the same broadcast news report were scripted, filmed, and produced in conjunction with working television journalists from a PBS affiliate. These fictitious stories covered the rising incidence of bankruptcy among recent college graduates resulting from a lack of insurance coverage in entry-level jobs. Two of the four versions of the story simply shifted the frame of the news report between a gain frame and a loss frame, holding all factual content constant and logically uniform—consistent with an equivalence approach to framing. The second set of manipulations featured this same frame shift but enhanced the gain and loss frames by adding unique yet consistent facts to each story, further emphasizing gains or losses with resonant information about job prospects and the rates of bankruptcy. This addition of frame-resonant facts moves us

toward the realism anchor along the continuum of framing effects but does not change the source, target, or perspective of the story, as would be more consistent with a study employing an emphasis approach to framing (Druckman, 2001, 2004). By doing so, we situated respondents within the domain of losses or the domain of gains in two different ways—one on the precision end of the framing continuum and the other moving toward greater realism.

Literature Review

Fractures Within Framing

Much of the scholarly effort concerning framing effects has focused on making grounded, a priori predictions through the development of theory regarding specific frame distinctions and interactions (McLeod & Shah, in press). Many of these studies have manipulated a single frame—gain versus loss, ethical versus material, strategy versus policy—without considering the deeper conceptual issues at play. Although recent research has begun to investigate how frame interplay and competition affect opinions (Chong & Druckman, 2007a, 2007b; Shah, Kwak, Schmierbach, & Zubric, 2004; Sniderman & Theriault, 2004), the higher-order commonalities across varied frame distinctions have remained unstudied and therefore undertheorized. This is particularly true for distinguishing approaches along the framing continuum (e.g., precision and realism approaches) that is the central focus of this research.

This largely tacit tension between precision and realism in framing is long-standing. The emphasis on precision can be traced to the original prospect theory studies of Tversky and Kahneman (1974, 1981). In this approach, facts and ideas remain consistent between frame shifts. The prototypical study of this type focuses on gain versus loss framing to demonstrate that the way information is presented affects decision-making processes, even when the options are logically equivalent. These studies demonstrate that people tend to be risk-seeking when they encounter problems framed in terms of losses and risk-averse when those same problems are framed in terms of gains, leading to the selection of different, logically equivalent alternatives and violations of invariance in decision making.

Communication researchers operating in this tradition attempt to keep their frames as similar as possible, often only manipulating cues such as quotes and imagery (Bartels, 2003; Green & Blair, 1995; Iyengar & Morin, 2006; Nelson, Clawson, & Oxley, 1997). While some of these studies have used the same gain/loss framing conceptualization pioneered by Tversky and Kahneman (Quattrone & Tversky, 1988), others expand to compare ethical frames with material frames (Shah, Domke, & Wackman, 1996) or free speech versus public order frames (Nelson et al., 1997). Generally, research has confirmed that even these subtle shifts in perspective or language can alter the relevant considerations people use in making a decision. By focusing on keeping the facts similar across conditions, these researchers assert that they are maximizing internal validity by ensuring that the observed differences are driven solely by the shift in frame and not other factors that could change between stories, such as accompanying fact packages.

This view of framing has been critiqued from the sociological position—a perspective that was equally instrumental in the introduction of the framing concept to the field of communication. When news sociologists such as Tuchman (1978) and Gitlin (1980) explored the construction of frames by journalists, they were not tracing choices between logically equivalent alternatives such as those that occupied psychologists like Tversky and Kahneman. Rather, they were interested in how the frame adopted by the journalist

led to the development of stories that emphasized different aspects of reality and different sources and subjects. From this perspective, “to frame” is not simply to shift perspectives while maintaining factual equivalency; rather, it is how the choice of perspective shapes the facts that the journalist chooses to emphasize. This is best reflected in Entman’s (1993) oft-quoted definition of framing: “To frame is to select some aspects of a perceived reality and make them more salient in a communicating text” (p. 52).

Of course, under this definition of framing, other elements of the story can also work to advance the frame, as the considerations used often bring with them differing information. For these researchers, a frame is considered the complete news story that is produced using a specific perspective, including the facts that apply to that frame. Research that adopts a more realistic or ecologically valid approach has spanned many issues, from analysis of the frames present in news and elite discourse (Iyengar & Simon, 1993; Shah, Watts, Domke, & Fan, 2002) to experiments about social protest (McLeod, 1995; McLeod & Detenber, 1999), strategy versus policy framing (Cappella & Jamieson, 1997; Valentino, Beckmann, & Buhr, 2001), and distinctions between episodic and thematic frames in television news coverage (Iyengar, 1991). Scholars using this tradition emphasize their unique contribution in investigating frames present in both media and discourse and utilizing journalistically valid frames in experimental work.

Although studies all along the continuum between equivalence and emphasis offer important insights into the ways by which framing can work, the inherent distinction in their theoretical view cannot be ignored. Shah et al. (2004) provide evidence of this in their experimental research. Although not emphasizing that they were utilizing differing conceptions along the framing continuum, their study crossed gain and loss frames (precision) with framing that shifted the problem definition from the individual to the societal level (realism). They find that these two types of frames interact with each other to produce effects on cognitive complexity and elaboration. Of course, understanding the underpinnings of what are labeled framing effects requires that they be pitted against one another, not only examined in combination. A first step in examining the framing continuum involves testing whether it is the pure frame shift or the combination of frames and facts that accounts for the power of frames. The gain/loss frame appears to provide the best context in which to test an approach emphasizing precision, due to the explicit requirement of maintaining logical equivalence across conditions. However, gain and loss framing does not preclude the addition of relevant facts to more closely align with an approach emphasizing realism.

Perceptions of Personal and Social Risk

Given our focus on gain and loss framing, deeper attention to the implications of message characteristics for risk perceptions is in order. Every day, individuals make decisions based on the perceived risks and benefits of their actions. As noted above, some previous research into framing has focused on the roots of these perceptions and how conditions emphasizing gains or losses make individuals become either risk-averse or risk-seeking, respectively (Kahneman & Tversky, 1979; Quattrone & Tversky, 1988; Tversky & Kahneman, 1981). But these are not the only ways to conceptualize risk. An individual’s perception of risk often is defined by a combination of individual, societal, and cultural constructs (Weinstein, 1989a).

Of course, perceived risk often depends on the target of that risk (Griffin, Dunwoody, & Neuwirth, 1999). One of the most obvious and commonly conceptualized differences is in the perceived risk to oneself and to others. Research shows that even when individuals

are willing to admit a potential risk exists, they are less willing to admit that they themselves are at risk because “individuals have a strong but unjustified sense of subjective immunity” (Douglas, 1985, p. 29). These differences in risk perceptions are often explained by the theory of optimistic bias, which refers to the underestimation of the likelihood of experiencing negative events and the overestimation of experiencing positive events (Clarke, Lovegrove, Williams, & Machperson, 2000; Weinstein & Klein, 1996).

This optimistic bias often leads to motivated reasoning to support desired conclusions. People tend to rate their own characteristics as more likely to lead to success in outcomes such as marriage or graduate school (Kunda, 1987, 1990), but when confronted with undesirable consequences, people express more skepticism, require more evidence, and rate these outcomes as less severe (Ditto & Lopez, 1992; Kunda, 1987). Studies of optimistic bias have assessed perceived personal risk in relation to many issues, including personal illness (Perloff & Fetzter, 1986; Williams & Clarke, 1997) and unemployment (Weinstein, 1980). Optimistic bias has been found to be greatest for hazards with which subjects have little experience, that are perceived as low in probability, and that are judged to be controllable by personal action (Weinstein, 1987).

One potential reason for these differences between the self and others draws from social judgment theory. The key contribution of this literature is the suggestion that all judgments are relevant and situational, depending on the salient or relevant anchor against which something is compared (Herr, 1986; Mussweiler, 2003). Combined with optimistic bias, judgments of others are likely to be contrasted with oneself. Cognitive mechanisms and biases predominantly serve as motivated distortions meant to protect self-esteem, project a positive social image, and reduce anxiety about risk (Weinstein, 1980; Weinstein & Klein, 1996). Individuals have an innate desire to believe they are more secure and less vulnerable than others, and admitting that peers are less susceptible to harm can threaten individual feelings of competence and self-worth (Weinstein, 1989b).

Risk perceptions themselves appear to have multiple dimensions, including judgments of concern and estimates of severity. Despite the sizeable literature on risk perception, attitudes and behaviors in response to levels of concern are more difficult to postulate. Weinstein (1982) found that higher levels of perceived seriousness regarding a hazard increased levels of biased perception, yet personal concern about a hazard decreased these biases. Factors related to high-level concern typically include hazards that are high consequence, high probability, uncontrollable, and involuntary (Slovic, 1992; Weinstein, 1982, 1984, 1987).

Perceptions of severity are subjective and variable. As with concern, the perceived severity of an event or outcome correlates with the perceived risk to both others and the self (Shah, Faber, & Youn, 1999). Risk can be conceptualized as being equal to the probability of an adverse event multiplied by the magnitude of its consequences: The greater the perceived magnitude (severity), the greater the concern and perceived risk. This is consistent with expectancy-value models, which have provided important insights into attitude structure (Ajzen, 1988; Fishbein & Ajzen, 1975; Purvis Cooper, Burgoon, & Roter, 2001).

Hypotheses

Bringing these two domains of research together, Gordon-Lubitz (2003) concludes that “perceptions of risk are particularly susceptible to framing effects” (p. 95). For this reason, we believe gain/loss frames provide an ideal context in which to contrast precision and realism as approaches to message influence on personal and impersonal perceptions of

economic prospects, both in terms of concern expressed about adverse outcomes and the severity of that eventuality.

Before we turn to comparisons between precise and realistic approaches to framing on risk perceptions at different referent levels, we first clarify how we expect prospect theory to apply within this context. This theory advances the view that these perceptual effects are driven by shifts in perspective, as people are motivated to be risk-averse when in the domain of gains and risk-seeking when in the domain of losses (Quattrone & Tversky, 1988; Tversky & Kahneman, 1974, 1981). This results from the fact that losses loom larger than gains, making a loss seem relatively more substantial than an equitable gain. This should certainly be true when people are forming economic judgments, such as securing employment (Kahneman & Tversky, 2000; Tversky & Kahneman, 1986). Accordingly, we hypothesize that people's concern about not finding a job and the severity of that possibility should be larger when the economic market is portrayed more favorably, as a gain frame would imply. This is because when economic prospects are poor, as would be conveyed by a loss frame, "rolling the dice" and losing is okay (i.e., attempting to find a job, and yet failing in this effort, is deemed acceptable when risk-seeking). On the other hand, when economic prospects are presented as favorable, as in a gain frame, this same possibility becomes more concerning and is perceived as a more severe outcome (i.e., failure to secure a job is deemed unacceptable when risk-averse). This effect should occur regardless of whether precision or realism is emphasized in constructing the frame, as the underlying prospect theory mechanisms remain constant.

H1a: When precision is emphasized, individuals encountering the gain frame will judge unfavorable economic outcomes as more averse than those encountering the loss frame.

H1b: When realism is emphasized, individuals encountering the gain frame will judge unfavorable economic outcomes as more averse than those encountering the loss frame.

Although we contend that both precision and realism as approaches to framing will yield differences in these sorts of economic evaluations between gain and loss framing, these differences will be amplified when realism is accentuated. Any truly strict approach to framing, such as that exemplified by gain/loss framing, relies purely on the perspective offered to audiences to produce observed effects. That is, in formal manipulations of gain and loss framing, the two alternatives are logically equivalent and factually identical. Under certain processing conditions, people can recognize the inherent equality of these options. Indeed, when the comparisons are made explicit, people will adhere to the more logical alternative that they often reject when the options are separated (Tversky & Kahneman, 1981). On the other hand, frames developed with realism in mind include facts and ideas that support the frame. These facts purposefully differ depending on the framing approach, and thus the two conditions are not factually equivalent. As these facts are meant to amplify and extend the logic of the corresponding frame, it seems reasonable that this additional information will heighten the gain versus loss differences.

H1c: The hypothesized differences between gain and loss frames on these evaluations will be greater when an issue is presented using frames emphasizing realism as opposed to precision.

Of course, there is reason to believe that these frames do not act equally for personal and impersonal perceptions of risk. Social judgment theory literature suggests that perceptions are inherently comparative: Changing the anchor against which comparisons are made

will also change the subsequent judgment (Herr, 1986; Mussweiler, 2001, 2003). In making judgments about risk, people are often comparing their own vulnerability against that of an unspecified other (Kunda, 1987; Weinstein, 1980). Thus, we would expect these judgments to shift depending upon whether the individual is asked to assess aversions to unfavorable economic outcomes at the personal or impersonal level. Given our prior predictions, it seems likely that the gain frame will also produce the greatest amount of difference between oneself and others, as concern about not finding a job and the severity of this outcome is particularly acute when the economic market is framed favorably. Furthermore, these effects should be amplified when facts that resonate with the frame are included.

H2a: When precision is emphasized, individuals encountering the gain frame will exhibit greater differences between the self and others in aversion toward unfavorable economic outcomes than individuals encountering the loss frame.

H2b: When realism is emphasized, individuals encountering the gain frame will exhibit greater differences between the self and others in aversion toward unfavorable economic outcomes than individuals encountering the loss frame.

H2c: The hypothesized differences between gain and loss frames on these comparative evaluations will be greater when an issue is presented using frames emphasizing realism as opposed to precision.

Method

To examine these hypothesized relationships, we developed an online experimental study. The data in this study were collected over a 2-week period during November 2007 using a 2×2 non-fully crossed design. Respondents were randomly assigned to one of the four experimental conditions. All of the respondents were enrolled in undergraduate courses at a large midwestern university and were offered extra credit for participating in the study. Of the roughly 870 potential subjects originally contacted via e-mail, 519 students completed the study and were included in the following analyses. These students tended to have a somewhat liberal political ideology toward social issues and a moderate ideological stance on economic issues. The subjects' average age was a little over 20 years old, with roughly 21 months until graduation. There were no significant differences between the means of any of the four cells on these key demographic or ideological variables.

Design

This study was designed to compare the effects of a pure frame manipulation of gain and loss (hereafter labeled frame precision) with the effects of the same frame manipulation enhanced with resonant facts (hereafter labeled frame realism). To examine these differences, we produced four versions of the same television news report in conjunction with a professional film crew and veteran reporter from Wisconsin Public Television. The news story focused on the issue of employee access to health care in the state of Wisconsin and the rising incidence of bankruptcy resulting from medical expenses among young adults. Specifically, it introduced a fictional piece of legislation that, if passed, would eliminate employer-mandated waiting periods, granting new employees immediate access to health care. Four people appeared in the manufactured stories: a recent college graduate, a local CEO, a think tank analyst, and the reporter.

Working journalists helped produce these reports, assisting in all stages of their development. Initially, we worked to generate a realistic script for each of the different versions

	Precision Approach	Realism Approach
Gain Frame	Gain News Frame	Gain News Frame + Resonant Gain Facts
Loss Frame	Loss News Frame	Loss News Frame + Resonant Loss Facts

Figure 1. Frame manipulations embedded in the news story.

of the story corresponding to our proposed experimental manipulations (see Appendix). Once the script was finalized, the professional film and sound crew accompanied the journalist to various locations to shoot footage for the story and to conduct the fictitious interviews. In taking these raw materials and producing the final stories, almost all video elements remained constant. Frame shifts were embedded in voice-overs from the journalist and in short scripted segments by the actors who served as interview subjects. In this way, the style and tone of the video was consistent across all conditions and operated within the norms of broadcast production. This allowed precise control over which frame elements were altered.

This approach allowed us to compare an internally valid gain versus loss frame distinction that closely paralleled Tversky and Kahneman's (1974, 1981) prospect theory manipulations with an ecologically valid gain versus loss frame distinction that supplemented these pure frames with corresponding fact packages (Entman, 1993) to more closely conform with the reality of how news reports are constructed. As explicated above, we conceptualize the former as frame precision and the latter as frame realism.

When gain and loss frames were presented emphasizing precision, statements about the current policy were inverted to maintain logical consistency. The gain version of the news story presented the benefits of maintaining the current policy of employer-mandated waiting periods for business owners (i.e., minimizing up front costs) as well as the benefits of the new legislation for new employees (i.e., immediate access to coverage). Similarly, the loss version of the news story presented the consequences of abolishing the current policy for business owners (i.e., incur additional up front costs) or that of failing to adopt the new legislation for new employees (i.e., subjecting them to waiting periods of up to 1 year). Although the frames shifted, both stories were structured consistently and presented identical factual information.

On the other hand, when movement along the continuum toward frame realism structured manipulations of gain versus loss frames, this shift was advanced using the exact same changes in language as in the frame precision approach but was supplemented with fact packages (e.g., rates of job creation, costs of health care, and rates of bankruptcy) designed to resonate with the corresponding frame (see Figure 1). Each news story contained two additional facts—one that elaborated on maintaining the current policy and one that elaborated on passing the new legislation. In the loss condition the facts focused on negation (e.g., rates of bankruptcy), whereas in the gain condition the facts focused on

affirmation (e.g., job creation). We endeavored to make the facts included in each story equivalent in scope and power. Moreover, these facts were systematically manipulated such that the elements included in stories were derived from the frame employed. Therefore, great care was taken to add only discrete facts associated with the operant frame, subtly yet systematically introducing realism into the broadcast news reports while maintaining a considerable amount of control. In this way, our manipulations contained equivalent gain or loss frames, either omitting or including resonant facts. The videos ran between 3 minutes and 32 seconds and 3 minutes and 54 seconds.

Measures

Aversion Toward Unfavorable Economic Outcomes. To test subjects' aversion toward the risk of unfavorable economic outcomes for both themselves and others, we used two sets of measures. Drawing from expectancy-value research (Fishbein & Ajzen, 1975), we created a multiplicative term combining the expressed concern of not finding a job by the severity of that circumstance. These two multiplicative measures (for oneself and for others) were summed to create a single index from 0–200 for general aversion (i.e., personal plus impersonal aversion) to unfavorable economic outcomes (precision condition, $M = 113.41$, $SD = 44.12$; realism condition, $M = 113.05$, $SD = 48.32$).

Comparative Aversion to Unfavorable Economic Outcomes. To measure the difference between aversion toward unfavorable economic outcomes for oneself compared to others, we took the multiplicative expectancy-value score for others created above and subtracted from it the expectancy-value score for oneself. It had a possible range of –100 to 100 for comparative aversion (i.e., impersonal minus personal aversion) toward unfavorable economic outcomes (precision, $M = -3.86$, $SD = 24.26$; realism, $M = -1.84$, $SD = 22.63$).

Results

A series of *t*-tests were run to test each of our hypotheses. These tests were run separately for the frame precision and frame realism conditions because this was not a fully crossed design. This design feature was purposeful and reflected our effort to supplement the frame realism condition with frame-resonant facts. In both the precise, $t(228) = 2.02$, $p < .05$, and realistic framing conditions, $t(239) = 2.06$, $p < .05$, the gain frame rendered unfavorable economic outcomes more aversive than in the loss condition. Thus, the severity and concern of not finding a job differed significantly between conditions, providing support for H1a and H1b (see Figures 2 and 3).

To compare the relative strength of the two approaches to framing—precision versus realism—we used a planned comparison of the mean differences between the two approaches. This complex contrast (Marascuilo & Serlin, 1988) demonstrates there is no significant difference between the framing approaches in terms of the effects of the gain versus loss frame on general aversion toward unfavorable economic outcomes, $t(471) = .12$, *ns*. The frame realism condition did not strengthen the results of the frame precision condition, leading to the rejection of H1c.

Our next set of hypotheses deals with the influence of the gain and loss frames on the comparative judgments of aversion to unfavorable economic outcomes. H2a and H2b predicted that the gain frame would produce greater differences in aversion toward unfavorable economic outcomes for the self and others in both the frame precision and frame

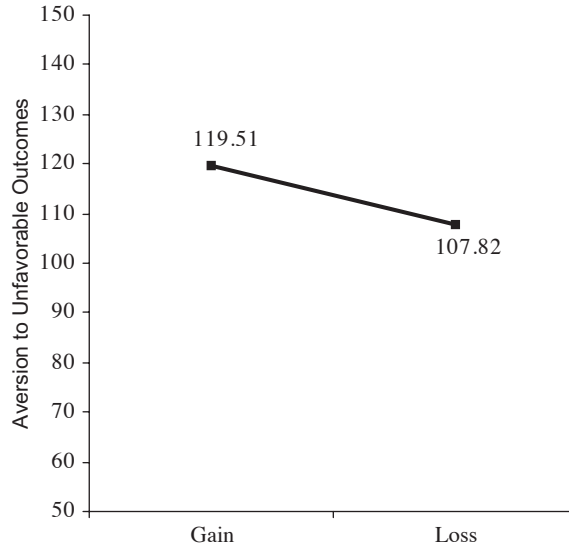


Figure 2. Aversion to unfavorable economic outcomes under the precision approach.

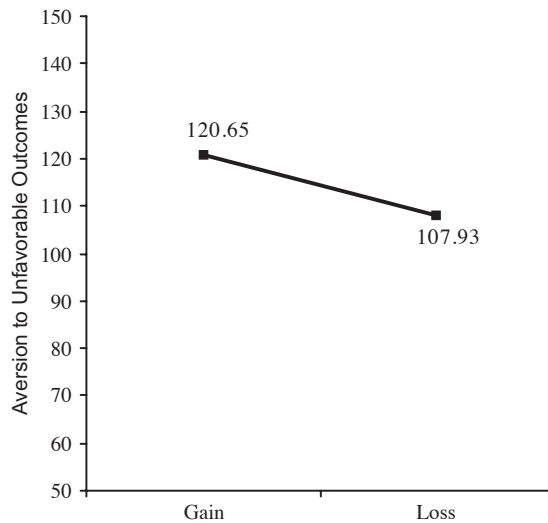


Figure 3. Aversion to unfavorable economic outcomes under the realism approach.

realism conditions. Only H2a is supported: The t -tests demonstrate that in the frame precision conditions the gain frame leads to a greater gap between the self and others, $t(228) = -2.58, p < .05$, but this difference is not significant in the frame realism conditions, $t(239) = .516, ns$, leading us to reject H2b (see Figures 4 and 5).

H2c predicted that frame realism would amplify this difference between the self and others in the gain versus loss frame compared to frame precision. We again tested this hypothesis using a complex contrast. In this case, the test revealed a significant difference between the two values, but in the opposite direction of our prediction. It is frame preci-

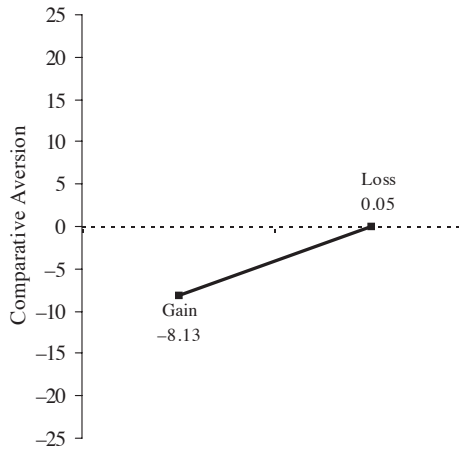


Figure 4. Comparative aversion to unfavorable outcomes under the precision approach.

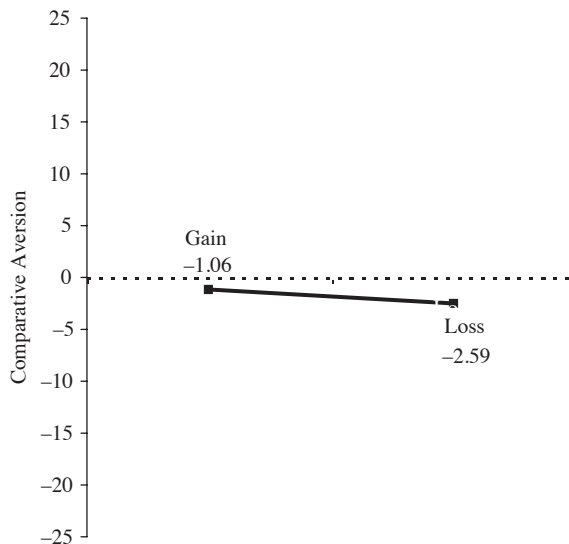


Figure 5. Comparative aversion to unfavorable outcomes under the realism approach.

sion that amplifies the difference between gain and loss frames in terms of comparative aversion toward unfavorable economic outcomes, $t(471) = 2.26, p < .05$.

Additional Analyses

To better understand how this comparative judgment score operates, we decided to explore the effects of the gain versus loss frames on both personal and impersonal judgments. First, we tested how the frames affected personal aversion toward unfavorable economic outcomes. For personal judgments, the gain frame produces significantly greater personal aversion only in the frame precision conditions, $t(231) = 2.96, p < .01$. In the frame realism conditions, the loss and gain frames are not significantly different from

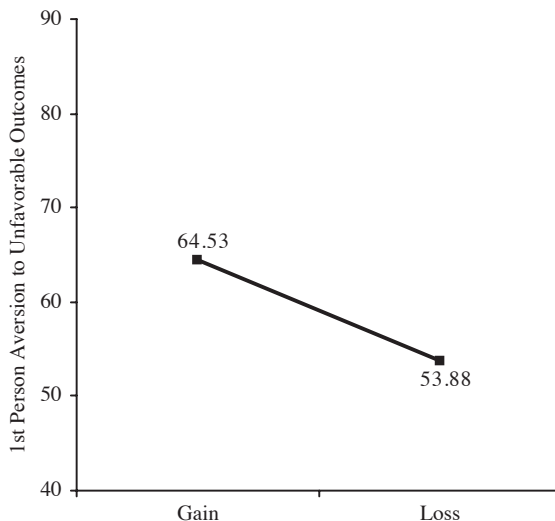


Figure 6. Aversion to unfavorable outcomes for the self under the precision approach.

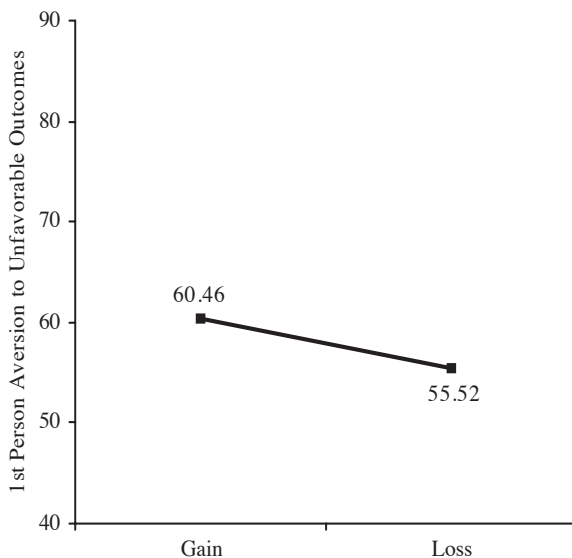


Figure 7. Aversion to unfavorable outcomes for the self under the realism approach.

each other, $t(241) = 1.33$, *ns* (see Figures 6 and 7). We compared these findings to determine if one type of frame amplified the effects of the other, but these two conditions were not significantly different, $t(476) = -1.10$, *ns*.

Next, we examined the effects of the gain and loss frames on impersonal perceptions. In this case, the *t*-tests demonstrate that it is only in the frame realism condition that the gain frame produces significantly higher estimates of aversion toward unfavorable economic conditions, $t(241) = 2.39$, $p < .05$, while in the frame precision conditions there is no significant difference between the gain and loss frame, $t(229) =$

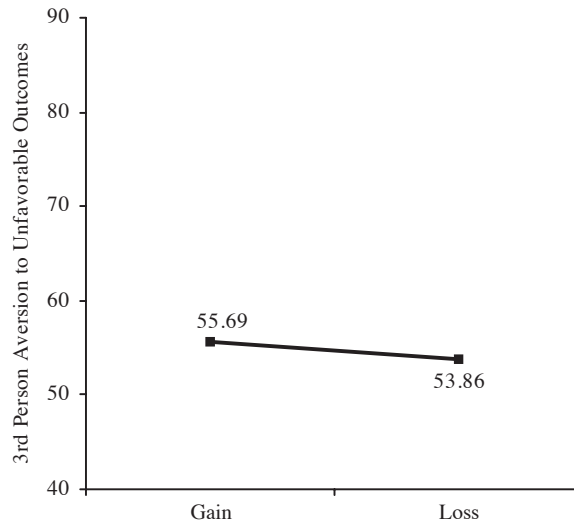


Figure 8. Aversion to unfavorable outcomes for others under the precision approach.

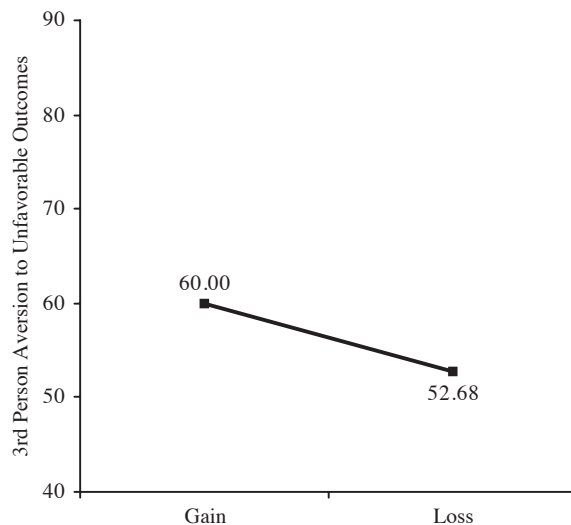


Figure 9. Aversion to unfavorable outcomes for others under the realism approach.

.627, *ns* (see Figures 8 and 9). We tested whether this difference between the conditions is significant, but this test also failed to reach conventional levels of significance, $t(474) = 1.30$, *ns*. In summary, at the personal level we only find a significant difference between gain versus loss in the frame precision conditions, while at the impersonal level this trend is reversed, with the frames differing significantly only in the frame realism conditions.

Discussion

This study is a first step in exploring media effects along the framing continuum. As such, it directs attention to the question of whether it is the frame (i.e., the perspective taken in a

news story) or the combination of the frame and the attendant facts (i.e., the aspects of reality made salient in a text) that produce framing effects. If it is the frame, absent the inclusion of resonant facts, that has influence, this would be seen as evidence of a pure framing effect and would suggest that political communication research should pay more attention to frame equivalence. On the other hand, if it is the facts in conjunction with the frame that produce differences, this would suggest a more complex set of mental processes are operating. Indeed, some may see this as evidence that individuals are systematically processing the factual information that is resonant with the frame, leading to more powerful framing effects.

This exploration produced a set of findings that lead us to conclude that both of the points along the framing continuum we tested have merit and that their operationalizations can have influence. While it is true that framing has been defined and studied in vastly different ways, our shift from a pure gain-loss frame manipulation (i.e., greater frame precision) to one that included resonant facts (i.e., greater frame realism) provides important insights about media influence. For those who think of frames as logically equivalent ways of presenting information (Green & Blair, 1995; Quattrone & Tversky, 1988; Shah et al., 2004), our findings are a confirmation that it is indeed frames, absent resonant facts, that produce some of the effects attributed to them. At the same time, those who view frames as organizing structures that bring with them a variety of different facts, sources, and subjects (Cappella & Jamieson, 1997; Iyengar, 1991) can also take solace in these findings. The manipulation including greater frame realism was consequential within the context of risk perceptions and their outcomes.

Specifically, we observed that our manipulations of gain and loss frames in terms of precision and realism both produce significant differences in ratings of aversion to unfavorable economic outcomes, such that the gain frame uniformly increased aversion toward unfavorable outcomes. This provided support for H1a and H1b. As this suggests, no differences were observed between precision and realism as approaches to framing in our initial testing. But this is not the whole story. When it comes to comparative judgments, only utilizing the precision approach, in which all facts were held constant, did we observe a significant increase in the gap between the self and others for the gain frame. Notably, this difference was not in the direction predicted by H2c, as it was frame precision (rather than frame realism) that produced greater differences in comparative judgments.

To better understand this pattern of effects, the elements that composed total and comparative judgments were examined separately. This analysis revealed that at the personal level, aversion to unfavorable economic outcomes was influenced mainly by the shift in gain and loss framing under conditions of frame precision, while at the impersonal level aversion was largely a function of the same shift under conditions of frame realism. There are a number of potential explanations for these differential effects. It may be that when individuals make judgments about the possibility of unfavorable economic outcomes befalling themselves—such as college students about to graduate without finding a job—the inherent cognitive biases that are so well documented in prospect theory distort their own perceptions of concern and susceptibility. Conversely, when these same individuals are confronted with frame shifts that incorporate factual information—such as rates of economic growth and job expansion—it is used to adjust estimates of unfavorable economic outcomes befalling larger population estimates. While our tests of differences between these competing operationalizations of frames did not meet conventional levels of statistical significance, they do suggest that both approaches to framing produce effects worthy of further exploration.

As noted above, this may be indicative of different underlying cognitive mechanisms that vary in degree of systematic information processing. Future research should attempt

to assess the degree to which each of these conceptions of framing generates different levels of systematic versus heuristic processing (Eagly & Chaiken, 1993). Furthermore, the implications of these findings for research on economic evaluations are worth considering. Much of the early risk perception literature, especially prospect theory, dealt only with frame precision, which may have heightened the ability to perceive effects, especially on personal-level assessments. As research progressed and frame realism became more widely adopted in experimental research, including tests of gain and loss framing, these effects may have become more difficult to observe. This is especially relevant to studies exploring the dynamics of prospect theory that attempt to mimic real-world discourse, in which frame realism approaches may prove less powerful in influencing personal evaluations. However, frame realism may prove influential in making judgments about others. If this is the case, future research must consider not only what approach to framing is adopted, but also at what social level judgments are being assessed.

In addition, an important contribution of this study centers on its effort to move beyond textual framing and return to an examination of framing in video news reports (Iyengar, 1991). The noticeable absence of framed video content in tests of effects is not surprising, given the inherent complexity of designing and producing these types of manipulations. However, considering that most Americans still rely on television news as their primary source of public affairs information (Fowler et al., 2007), it is especially important to move beyond the framing of print news stories in our experimental testing and examine how framed video content is processed. Notably, this research embedded the frame manipulations in the spoken elements of the news story. Other recent work has manipulated the visual elements of news stories and observed effects, reinforcing calls to consider how text and video interact to produce effects (Iyengar & Morin, 2006). This may require researchers to form collaborations with broadcast professionals who can aid them in the production of realistic manipulations, as we did in this study, or to secure grant funding to stage such productions using their own facilities. This will remain true even as information increasingly moves online; video portrayals of news are not likely to become obsolete but to instead become integrated into a mixed modality environment.

But this study only provides an initial foray exploring the framing continuum, motivating further research into the underpinnings of message effects. Our manipulations investigate only two points along the framing continuum, points that are both closer to the equivalence end of the continuum. Thus, while our conception of frame precision employs a strict approach to framing consistent with prospect theory, our manipulation of frame realism invokes a “loose equivalence,” essentially building off the logically uniform gain and loss frames with the addition of frame-resonant facts. While the addition of these facts does move us toward greater realism in conceptualizing frame effects, future research should move beyond this to examine other message features further along the framing continuum toward emphasis rather than equivalence. This might include examinations of the interplay of frames with discordant facts, facts at different social levels (individual or collective), and the alteration of sources and targets.

In conclusion, this research provides a number of new directions for future scholarship, for those hoping to build framing theory as well as further understand risk perceptions. First, other framing dimensions beyond gain and loss should be tested within the frame precision and realism contrast we advance. For example, stripping the accompanying facts from strategy versus policy frames may render that distinction impotent, a possibility that demands attention. Any testing of this sort should also attempt to move beyond the student sample that was the focus of this study. Of course, to ensure the experimental manipulations are processed, the issues selected should be relevant to the experimental

population. Moving beyond risk perceptions, an examination of message effects on a wider range of dependent variables such as policy preferences, candidate attributions, and feelings about story targets would allow future research to distinguish between framing, priming, and persuasion effects, as the magnitude of influence of various outcomes could be compared within the context of a single study. This would permit a deeper understanding of the underpinnings of message effects, an issue that has continually plagued framing research, and address the legitimacy of the distinction between framing effects per se and other message effects on beliefs, perceptions, attitudes, and judgments.

References

- Ajzen, I. (1988). *Attitudes, personality, and behavior*. Chicago: Dorsey Press.
- Bartels, L. M. (2003). Democracy with attitudes. In M. B. MacKuen & G. Rabinowitz (Eds.), *Electoral democracy* (pp. 48–82). Ann Arbor, MI: University of Michigan Press.
- Cappella, J. N., & Jamieson, K. H. (1997). *The spiral of cynicism*. New York: Oxford University Press.
- Chong, D., & Druckman, J. N. (2007a). A theory of framing and opinion formation in competitive elite environments. *Journal of Communication*, 57, 99–118.
- Chong, D., & Druckman, J. N. (2007b). Framing public opinion in competitive democracies. *American Political Science Review*, 101, 637–655.
- Clarke, V. A., Lovegrove, H., Williams, A., & Machperson, M. (2000). Unrealistic optimism and the health belief model. *Journal of Behavioral Medicine*, 23, 367–376.
- Ditto, P. H., & Lopez, D. F. (1992). Motivated skepticism: Use of differential decision-making for preferred and nonpreferred conclusions. *Journal of Personality and Social Psychology*, 63, 568–584.
- Douglas, M. (1985). *Risk acceptability according to the social sciences*. New York: Russell Sage Foundation.
- Druckman, J. N. (2001). The implications of framing effects for citizen competence. *Political Behavior*, 23, 225–256.
- Druckman, J. N. (2004). Political preference formation: Competition, deliberation, and the (ir)relevance of framing effects. *American Political Science Review*, 98, 671–686.
- Eagly, A. H., & Chaiken, S. (1993). *The psychology of attitudes*. Fort Worth, TX: Harcourt Brace Jovanovich College.
- Entman, R. M. (1993). Framing: Towards clarification of a fractured paradigm. *Journal of Communication*, 43, 51–59.
- Fishbein, M., & Ajzen, I. (1975). *Belief, attitude, intention, and behavior: An introduction to theory and research*. Reading, MA: Addison-Wesley.
- Fowler, E. F., Goldstein, K. M., Hale, M., & Kaplan, M. (2007). Does local news measure up? *Stanford Law and Policy Review*, 18, 410–431.
- Gitlin, T. (1980). *The whole world is watching*. Berkeley, CA: University of California Press.
- Gordon-Lubitz, R. J. (2003). Risk communication: Problems of presentation and understanding. *Journal of the American Medical Association*, 290, 289–295.
- Green, D. P., & Blair, I. V. (1995). Framing and the price elasticity of private and public goods. *Journal of Consumer Psychology*, 4, 1–32.
- Griffin, R. J., Dunwoody, S., & Neuwirth, K. (1999). Proposed model of the relationship of risk information seeking and processing to the development of preventive behaviors. *Environmental Research*, 80, S230–S245.
- Herr, P. M. (1986). Consequences of priming: Judgment and behavior. *Journal of Personality and Social Psychology*, 51, 1106–1115.
- Iyengar, S. (1991). *Is anyone responsible? How television frames political issues*. Chicago: University of Chicago Press.
- Iyengar, S., & Morin, R. (2006, June 8). Natural disasters in black and white: How racial cues influenced public response to Hurricane Katrina. *Washington Post*. Retrieved from <http://www.washingtonpost.com/wp~dyn/content/article/2006/06/07/AR2006060701177.html>

- Iyengar, S., & Simon, A. (1993). News coverage of the Gulf crisis and public opinion: A study of agenda-setting, priming, and framing. *Communication Research*, 20, 365–383.
- Kahneman, D., & Tversky, A. (1979). Prospect theory: An analysis of decision under risk. *Econometrica*, 47, 263–292.
- Kahneman, D., & Tversky, A. (2000). *Choices, values, and frames*. Cambridge, UK: Cambridge University Press.
- Kunda, Z. (1987). Motivated inference: Self-serving generation and evaluation of causal theories. *Journal of Personality and Social Psychology*, 53, 636–647.
- Kunda, Z. (1990). The case for motivated reasoning. *Psychological Bulletin*, 3, 480–498.
- Madden, M. (2007). *57% of Internet users have watched videos online and most of them share what they find with others*. Retrieved from http://www.pewinternet.org/pdfs/PIP_Online_Video_2007.pdf
- Marascuilo, L. A., & Serlin, R. C. (1988). *Statistical methods for the social and behavioral sciences*. New York: Freeman.
- McLeod, D. M. (1995). Communicating deviance: The effects of television news coverage of social protest. *Journal of Broadcasting and Electronic Media*, 39, 4–19.
- McLeod, D. M., & Detenber, B. H. (1999). Framing effects of television news coverage of social protest. *Journal of Communication*, 49, 3–23.
- McLeod, D. M., & Shah, D. V. (in press). *Framing the war on terror: The struggle over civil liberties in the age of terrorism*. Cambridge, UK: Cambridge University Press.
- Mussweiler, T. (2001). “Seek and ye shall find”: Antecedents of assimilation and contrast in social comparison. *European Journal of Social Psychology*, 31, 499–509.
- Mussweiler, T. (2003). Comparison processes in social judgment: Mechanisms and consequences. *Psychological Review*, 110, 472–489.
- Nelson, T. E., Clawson, R. A., & Oxley, Z. M. (1997). Media framing of a civil liberties conflict and its effect on tolerance. *American Political Science Review*, 91, 567–581.
- Perloff, L. S., & Fetzer, B. K. (1986). Self-other judgments and perceived vulnerability to victimization. *Journal of Personality and Social Psychology*, 50, 502–510.
- Purvis Cooper, C., Burgoon, M., & Roter, D. L. (2001). An expectancy-value analysis of viewer interest in television prevention news stories. *Health Communication*, 13, 227–240.
- Quattrone, G. A., & Tversky, A. (1988). Contrasting rational and psychological analyses of political choice. *American Political Science Review*, 82, 719–736.
- Shah, D. V., Domke, D., & Wackman, D. B. (1996). “To thine own self be true”: Values, framing, and voter decision-making strategies. *Communication Research*, 23, 509–560.
- Shah, D. V., Faber, R., & Youn, S. (1999). Susceptibility and severity: Perceptual dimensions underlying the third person effect. *Communication Research*, 26, 240–267.
- Shah, D. V., Kwak, N., Schmierbach, M., & Zubric, J. (2004). The interplay of news frames on cognitive complexity. *Human Communication Research*, 30, 102–120.
- Shah, D. V., Watts, M. D., Domke, D., & Fan, D. P. (2002). News frames and cueing of issue regimes: Explaining Clinton’s public approval in spite of scandal. *Public Opinion Quarterly*, 66, 339–370.
- Slovic, P. (1992). Perception of risk: Reflections on the psychometric paradigm. In S. Krimsky & D. Golding (Eds.), *Social theories of risk* (pp. 117–152). Westport, CT: Praeger.
- Sniderman, P. M., & Theriault, S. M. (2004). The structure of political argument and the logic of issue framing. In W. E. Saris & P. M. Sniderman (Eds.), *Studies of public opinion* (pp. 133–165). Princeton, NJ: Princeton University Press.
- Tuchman, G. (1978). *Making news*. New York: Free Press.
- Tversky, A., & Kahneman, D. (1974). Judgment under uncertainty: Heuristics and biases. *Science*, 185, 1124–1131.
- Tversky, A., & Kahneman, D. (1981). The framing of decisions and the psychology of choice. *Science*, 211, 453–458.
- Tversky, A., & Kahneman, D. (1986). Rational choice and the framing of decisions. *Journal of Business*, 59, S251–S278.

- Valentino, N. A., Beckmann, M. N., & Buhr, T. A. (2001). A spiral of cynicism for some: The contingent effects of campaign news frames on participation and confidence in government. *Political Communication, 18*, 347–367.
- Veenstra, A. S., Sayre, B., Shah, D. V., & McLeod, D. M. (2008). Frames and knowledge in mixed media: How activation changes information intake. *Cyberpsychology & Behavior, 11*, 443–450.
- Weinstein, N. D. (1980). Unrealistic optimism about future life events. *Journal of Personality and Social Psychology, 39*, 806–820.
- Weinstein, N. D. (1982). Unrealistic optimism about susceptibility to health-problems. *Journal of Behavioral Medicine, 5*, 441–460.
- Weinstein, N. D. (1984). Why it won't happen to me—Perceptions of risk-factors and susceptibility. *Health Psychology, 3*, 431–457.
- Weinstein, N. D. (1987). Unrealistic optimism about susceptibility to health-problems—Conclusions from a community-wide sample. *Journal of Behavioral Medicine, 10*, 481–500.
- Weinstein, N. D. (1989a). Effects of personal-experience on self-protective behavior. *Psychological Bulletin, 105*, 31–50.
- Weinstein, N. D. (1989b). Optimistic biases about personal risks. *Science, 246*, 1232–1233.
- Weinstein, N. D., & Klein, W. M. (1996). Unrealistic optimism: Present and future. *Journal of Social and Clinical Psychology, 15*, 1–8.
- Williams, T., & Clarke, V. A. (1997). Optimistic bias in beliefs about smoking. *Australian Journal of Psychology, 49*, 106–112.

Appendix: Broadcast News Script

Shifts between gain and loss (in parentheses) versions are italicized. Attendant facts are depicted in bold.

[START with Sean at office]

Reporter VO: Nine hours a day. . . .

Reporter VO: Often six days a week. . . .

Reporter VO: Sean Townsend solves problems. Just two weeks after graduating from the UW in 2006, Townsend landed what he calls a dream job.

Sean SOT: “Well, I’ve been working towards an assistant engineering position at the data center. But this is an entry-level position that will get me there so I’m pretty excited about it. It is definitely a lot of work, though, I would say more than 40 hours a week.”

Reporter VO: But now Townsend has a problem he hasn’t been able to solve . . . health insurance. His employer, like many businesses, requires a 12-month waiting period before new employees qualify for coverage. As an apparently healthy 23-year-old, Townsend wasn’t concerned. Then, barely a month into his new job, he was diagnosed with Hodgkin’s disease. Medical bills piled up . . . and now, he’s filing for bankruptcy.

Sean SOT: “So I got this job right after school so I figured I was all set, but since I got sick a couple of weeks into the job and the insurance didn’t cover me I couldn’t pay my bills so I didn’t know what else to do.”

Reporter VO: *Eliminating health insurance waiting periods would have some real benefits for people like Sean Townsend. (Health insurance waiting periods pose some real risks for people like Sean Townsend.)*

Reporter VO: That’s one reason why a coalition of Democrats and Republicans is sponsoring a bipartisan bill to eliminate waiting periods. *Sponsors say this new legislation would mean that fewer young people would have to face these financial*

challenges. (Sponsors say without this new legislation, more young people will have to face these financial challenges.)

Reporter VO: A new report from the Madison-based Karlsen Foundation shows that the bankruptcy rate among recent college graduates is at an all time high.

Reporter VO: The study shows that 21 percent of Americans who declared bankruptcy in 2006 were between the ages of 22 and 29. That's a 9 percent increase over 2005, making them the fastest growing age group declaring bankruptcy. ***(Over the last three years, this translates into 100,000 bankruptcy filings among young adults in Wisconsin, a figure that leads the nation on a per capita basis.)***

Reporter Standup: While credit card debt is the leading cause of bankruptcy among recent graduates, the second leading cause is health care costs.

Reporter VO: Young adults—more than any other age group—are more likely to be involved in accidents that require trips to the emergency room. These costs hit hardest for people who lack health insurance. Surgery for a broken leg, for example, can run upwards of \$100,000. ***Even when it comes to minor health concerns, those who are insured are much more likely to seek routine and preventive care, which helps to control long-term health care costs for employers and employees.***

[Cut to interview: David Mathers, analyst, Karlsen Foundation]

David Mathers SOT: “You know half of personal bankruptcies stem from health care costs. In those cases, out-of-pocket costs averaged \$42,000. For the millions of college grads who are uninsured or waiting for their benefits, there really is cause to be concerned.”

Reporter VO: But there's another perspective on this debate—businesses such as Verona-based Cornerstone Systems see a financial *benefit to keeping (risk to eliminating) waiting periods.*

[Cut to interview: Larry Butler, vice president of Cornerstone Systems]

Larry Butler SOT: *“We see some real advantages to the current policy. Waiting periods make it much easier for us to provide insurance for our employees. We are much more willing to create new jobs if we know that we can minimize our up-front costs.”* (“*We see some real problems with changing the current policy. Ending waiting periods makes it harder for us to provide insurance for our employees. We are much less willing to create new jobs if we know that we will incur additional up-front costs.*”)

Reporter VO: ***Over the last four years, Wisconsin has seen the creation of over 170,000 new jobs, leading the nation on a per capita basis.*** New jobs are typically filled by recent graduates, most of whom have attended Wisconsin colleges and universities. ***(Getting rid of waiting periods would make it harder to negotiate competitive deals with health care providers, cost that would eventually be passed on to employers and employees.)***

Reporter VO: The legislature is expected to consider the bipartisan “Waiting Period Bill” within the next two weeks. For those entering the workforce, the outcome may have a big impact on their financial futures.