Using Idioms to Implicitly Invoke Analogical Framing in Decision Making

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1. Introduction

We often use analogies in strategic discourse to invite inferences about ambiguous situations that reinforce our own construal of these situations. By providing presumptive analogs, we control how audiences define and categorize these situations (Pratkanis & Aronson, 1992). For example, in the short-lived political debate preceding the American invasions of Iraq, supporters of U.S. involvement likened the conflicts to WW II and opponents called attention to their similarities with the Vietnam War (Spellman, Ullmann, & Holyoak, 1993). Several years earlier, Gilovich (1981) found that political science students were more likely to recommend intervention in a hypothetical foreign policy crisis when irrelevant features of the scenario (e.g., the name of the building used for press briefings) called to mind WW II (*Winston Churchill* Hall) rather than Vietnam (e.g., *Dean Rusk* Hall). The presence of these cues did not, however, lead students to judge the scenario as being more similar to one of the previous conflicts than the other. Subsequent research has confirmed that seemingly trivial cues can compel people to unwittingly employ analogies in their judgments and decisions (Spellman et al., 1993; Shimko, 1994; Stapel & Spears, 1996).

The reported research explores phrasal idioms' potential as an unobtrusive means of introducing analogies into decision scenarios. Many of the conventional figurative expressions we use to describe abstract concepts have a common analogical derivation (e.g., Lakoff & Johnson, 1980). For example, the idioms we use to describe corporate organizations reflect analogies to families (e.g., *parent company*), sports (*sales team*), ecological systems (e.g., *business climate*), and other source domains. In business correspondence, corporate executives tend to favor organizational idioms derived from

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analogies that cohere with their own beliefs about management (Morgan, 1997). How might this preference influence their correspondents' perceptions of the firm? There is no evidence that derivational analogies play a role in idiom comprehension (Glucksberg, Brown, & McGlone, 1993), but people are able to recognize analogical consistency among idioms (Bortfeld, 2002; Nayak & Gibbs, 1990). This recognition indicates that the underlying analogy is available in memory and can be accessed to participate in post-comprehension mental processes (McGlone, 2001). Analogical access of this sort does not, however, guarantee that people have introspective access to its impact on their judgments (Gilovich, 1981; Nisbett & Wilson, 1977). Thus the analogical consistency between idioms used to describe a decision scenario and a response option may lead people to favor the option, but nevertheless overlook the unremarkable presence of cliché expressions in the description as a factor influencing their choice.

A demonstration of the idiomatic influence hypothesized above would constitute a "framing effect," whereby the manipulation of a psychologically consequential but normatively peripheral aspect of a problem description influences judgment or choice (Tversky & Kahneman, 1981). Framing effects derive from non-canonical representations of a problem's premises, the construction of which violates the assumption of "invariance" in economic theories of rational choice (Arrow, 1982; Kahneman, 2004). Framing theorists have typically treated these biased representations as the product of an instantaneous, unitary process initiated by shallow cues (Laboeuf & Shafir, 2003). For example, McNeil, Pauker, Sox, and Tversky (1982) induced different choices between surgery and radiation therapy by describing outcome statistics in terms of survival or mortality rates. Because thinking of outcomes in terms of survival (e.g. 90% short-term survival) is less threatening than thinking of them in terms of mortality (e.g., 10% immediate mortality), survival framing yielded higher preferences for a particular therapeutic method than mortality framing. In this demonstration, a single cue (outcome wording) was sufficient to induce a biased representation of the scenario. However, framing effects may in principle require the processing of multiple cues, with each making an incremental contribution to the activation of the biasing concept. For example, the presence of a single sports cliche (e.g., referring to a business strategy as a *game plan*) in a paragraph describing a managerial decision scenario seems unlikely to activate the "business is sport" analogy among readers. Multiple idiomatic cues (*game plan*, *score*, *sales team*, etc.) are likely required to induce analogical activation sufficient to establish a preference for sport-framed response options.

By this logic, a decision frame can be thought of as having a "thickness" based on the number of biasing cues available in the problem description. Decision researchers have heretofore focused chiefly on brief scenarios in which "thin" frames consisting of one or two cues were sufficient to bias responses. However, inducing the aforementioned analogical bias may require a thicker frame consisting of several cues, because the activation strength of any individual idiomatic cue is not sufficient to invoke the analogy on its own. Just how thick should the frame be? Kahneman (2004) argued that framing effects require "passive acceptance of the formulation given" (p. 703), a circumstance that depends critically on the decision frame being inconspicuous. Although multiple cues might be necessary to activate an analogical frame, a surfeit of cues could call respondents' attention to the frame's presence. Once the frame is sufficiently thick to be noticeable, it may induce a "demand awareness" (Page, 1970) that reduces (or reverses) the analogy's influence on responding (see also Strack, Schwarz, Bless, Kubler, & Wanke, 1993). This pattern of findings would indicate that there are lower and upper boundaries

to an analogical frame's ideal thickness: It must be thick enough to evoke the analogy among respondents, but not so thick that it makes them mindful of the framer's attempt to influence their decisions.

To investigate this possibility, we asked undergraduates to read a brief description of a managerial decision scenario and to choose one of two response options provided. Participants read one of four versions of the scenario, which differed in the number of highly conventional business-as-sport idioms (e.g., "game plan") used to describe scenario attributes (e.g., business strategy). One of the response options provided contained an idiom that was analogically consistent with the idioms appearing in the scenario descriptions. After choosing a response option, participants were asked to explain the reasons for their choice. We hypothesized that there would be a curvilinear relationship between frame thickness and response preferences. Specifically, we predicted that, relative to a control condition in which no sports idioms were present in the scenario description, participants would prefer the analogically consistent response option when a moderate number of these idioms were present. However, when there were a large number of idioms in the description, the analogical frame would become noticeable, thereby inducing a demand awareness that reduces preferences for the consistent response option. As a measure of this awareness, we inspected participants' written explanations of their decisions for references to the framing cues (the idioms in the scenario descriptions) or to the analogical source domain (sports in general). If awareness of the frame's presence serves to diminish its influence on responding, then we should observe a counterintuitive pattern of findings in which participants who make analogy-related references are among the least likely to have chosen analogically consistent responses.

2. Method

Participants

Two hundred thirty seven undergraduates participated in exchange for course extra credit. One hundred sixty eight were students in introductory psychology and statistics courses at Lafayette College. Sixty nine were students in psychological research methods and statistics courses at The College of New Jersey.

Materials

Four versions of a twelve-sentence vignette (approximately 240 words) describing a management decision scenario were created for this experiment (see Table 1). In this scenario, a large business firm – "DataCom" – acquires a smaller firm – "InfoTech" – that complements the larger firm's strengths. Shortly after the acquisition, the CEO at DataCom contemplates whether to let InfoTech retain its original company logo on its stationary and advertising materials, or to replace it with DataCom's logo. The vignette offered plausible reasons for and against each course of action. On the one hand, allowing InfoTech to retain its original logo enables its employees to "preserve some vestige of the independent, small-firm identity they had before the acquisition." On the other hand, making InfoTech change to the DataCom logo offers "a simple way to remind InfoTech personnel that they are now on the DataCom *team*" (emphasis added). The use of a sports idiom in the latter sentence served to code the recommended action (i.e., requiring that InfoTech change its logo) as consistent with a business-as-sports analogy. Immediately following the scenario description were instructions directing participants to choose one of

two response options (allow InfoTech to keep its original logo or require that it change to the DataCom logo) to recommend to the CEO and to describe the reasons for their choice.

The four vignette versions differed in frame thickness—i.e., the number of business-as-sports idioms used to analogically frame the scenario. Six highly conventional expressions (e.g., "game plan" used to describe "business strategy") were chosen as frame cues. Each vignette version contained zero (control), two, four, or six of these cues. Frame cues in the experimental versions were distributed in such a way as to maximize their salience to readers. In the two-cue "thin frame" version, frame cues appeared in the second and tenth sentences. In the four-cue "medium frame" version, cues appeared in the second, fifth, seventh, and tenth sentences. In the six-cue "thick frame" version, they appeared in the second, fourth, fifth, seventh, ninth, and tenth sentences. Frame cues omitted in the control, thin, and medium frame versions were replaced with literal expressions that (according to participants in a pilot experiment) conveyed the same meaning.

Table 1

Decision scenario vignette materials

DataCom, a medium-sized market research firm in the Midwest, recently acquired a smaller, younger firm—InfoTech—with staff and resources that nicely complement DataCom's existing strengths. CEO Kevin Carlson views this acquisition as a major achievement/ score. Kevin enjoys his leadership role at DataCom, but occasionally he has to make some difficult decisions. He is currently considering how he can make the InfoTech employees / rookies feel connected to DataCom without detracting from the sense of independence that will keep them happy. Kevin knows that keeping their morale high will be a critical factor if he is to succeed in making sweeping changes to DataCom's long-term business strategy / game plan.

One issue under consideration is whether to let InfoTech retain its original company logo on its stationary and advertising materials, or to replace it with the DataCom logo / mascot. There is no reason whatsoever to believe that keeping or changing the logo will affect either firm's ability to attract new clients. Furthermore, neither Kevin nor his staff is interested in creating some sort of combined DataCom/InfoTech logo. For fear of making the new employees feel like second-class citizens / the second string, it has proven to be a difficult decision for Kevin to make.

Kevin is concerned about whether this issue might lead the new employees to think that they are at a disadvantage / the playing field is not level. On the one hand, allowing InfoTech to keep its original logo lets it preserve some vestige of the independent, small-firm identity it had before the acquisition. On the other hand, changing the logo is a simple way to remind InfoTech personnel that they are now ***on the DataCom team****.*

Design and Procedure

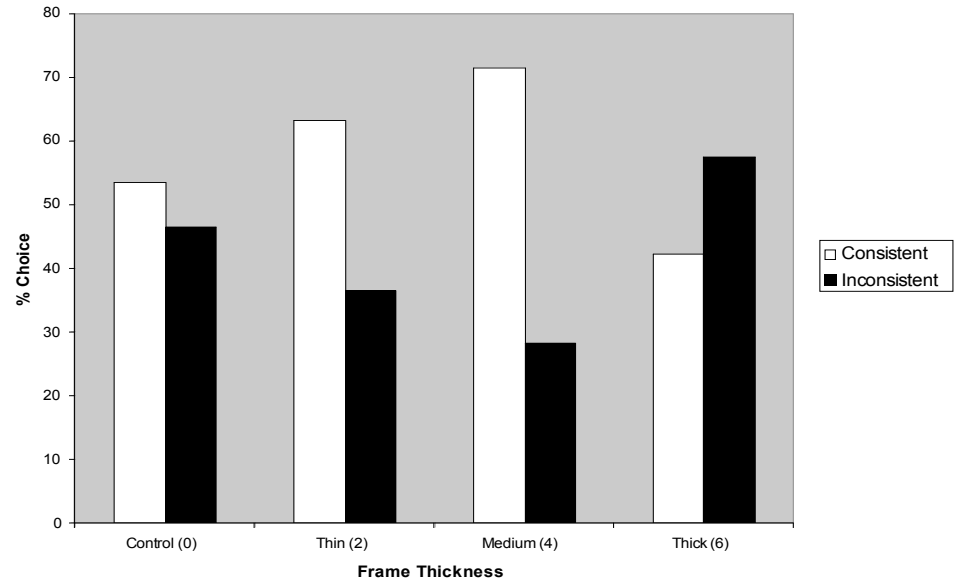
This experiment employed a one-way design with frame thickness (control, thin, medium, or thick) as a between-participants variable. The dependent variables were participants' choice of response option (analogically consistent or inconsistent) and the presence of references to the analogical frame in the written explanations they offered for their choices.

The experiment was conducted with groups of 10 to 15 participants at a time in a large classroom. Upon arrival to the classroom, they were randomly assigned to one of four questionnaires corresponding to the frame thickness conditions. Each questionnaire contained instructions, one version of the managerial decision vignette, and the two response options. The instructions directed participants to read the vignette carefully, choose one of the response options to recommend to the CEO, and then explain the reasons for their choice in a paragraph at the bottom of the page. Participants were given unlimited time to write their responses, but typically finished in 10-15 minutes. After turning in their completed questionnaires, they then read a typed debriefing describing the purpose and methods of the experiment and were given the opportunity to pose any questions they had to the experimenter.

3. Results

Initial analyses did not reveal any differences in choice patterns between the different college samples, so subsequent analyses collapsed across this factor. Participants' response choices by frame thickness condition are illustrated in Figure 1. The distribution of analogically consistent and inconsistent choices differed among the frame thickness conditions, χ^2 (3) = 11.69, p <.01 (ϕ_c = .44). A planned analytical comparison was conducted to test our hypothesis regarding the characteristics of this distribution. As we predicted, the choice pattern in the moderately thick frame (thin and medium) conditions differed reliably from those in the control and thick frame conditions, χ^2 (2) = 9.37, p <.01 ((ϕ_c = .43). Specifically, respondents in the thin and medium frame conditions were more inclined to choose the analogically consistent option than the inconsistent option (67.3% vs. 32.7%). In contrast, participants in the control and thick frame conditions did not exhibit a strong option for the consistent option over its inconsistent counterpart (47.9% vs. 52.1%). These results suggest that the analogical frame was most effective in biasing respondents' choices at a moderate level of thickness.

Figure 1. Percentages of analogically consistent and inconsistent response choices by frame thickness.



We had hypothesized that as frame thickness increases, the likelihood that participants would be aware of the frame would also increase and thereby reduce its influence on responses. The drop-off in analogically consistent responding between the medium and thick frame conditions is consistent with this hypothesis. To determine whether this decrease was accompanied by an increase in frame awareness, two independent, experimentally naïve judges inspected participants' explanations of their choices for the presence of frame-related references. The judges were instructed to count any mention of sports – the specific business-as-sport idioms used as frame cues, idioms and/or sports terminology that did not appear as frame cues, the word "sports" and its synonyms—as a frame-related reference and thus as evidence of frame awareness.[1] The judges agreed 93.2% of the time (Cohen's $\kappa = .82$) in distinguishing between explanations that did or did not make frame-related references.

The frequency of frame-related references differed reliably between participants who made consistent or inconsistent choices, regardless of frame thickness, χ^2 (3) = 9.51, $p < .03$ ($\phi_c = .36$). As we predicted, frame-related references were more frequent among those who had chosen the inconsistent than consistent response option (26.44% vs. 12.69%). A planned analytical comparison indicated that among participants who had

[1] We are aware that this measure likely overestimated frame awareness, i.e., it is possible that participants might have made references to sports when explaining their choices that were not motivated by conscious recognition of the analogical frame. Note, however, that this potential inflation factor works against our hypothesis that participants would be more likely to make frame-related references after having made a frame-inconsistent choice. The base rates of spontaneous or nonconsciously primed sports references should be equal regardless of choice consistency, and thus their occurrence favors the null hypothesis.

chosen the inconsistent option, the frequency of frame-related references was significantly higher in the thick frame condition (44.12%) than in the thin (18.18%) or medium frame (29.41%) conditions, $\chi^2(1) = 5.31$, $p < .03$ ($\phi_c = .34$). When participants made frame-related references to explain rejecting the consistent response option, the majority (62.5%) alluded to problems with the application of the business-as-sports analogy in the vignette scenario (e.g., "…sometimes it's more important for employees to feel like they have an individual identity than to have "team spirit" if you want them to be productive") or to the inadequacy of the consistent response option as a way to fulfill the trappings of the analogy (e.g., "…there are other better ways to make team players out of the InfoCom [sic] employees than changing their logo…").

4. Discussion

Managerial scientists often test competing theories by examining how changes in institutional and economic variables (e.g., high tech or low tech firms operating in an economic boom or slump) influence responses in a decision scenario when presentational elements (e.g., the language used to describe employer-employee relations) are held constant across scenario versions (Kardes, 2001). In the present study, we used an alternative approach in which structural variables were held constant while the presentation format varied across conditions. Our results suggest that changes in analogical format can exert a reliable impact on people's response choices in a decision scenario, as well as the explanations they offer for their choices.

Rhetoricians advise us to greet an analogy in strategic discourse with great skepticism, because the implied comparison between the source and target domains (e.g., between a sports team and a business) might not draw our attention to the most consequential target properties. Classical rhetorical theory recommends that we judge an analogy's utility by assessing whether it highlights significant similarities without ignoring equally pertinent dissimilarities (Corbett, 1990; see also Spellman et al., 1993). If we are to perform this assessment, however, we must be aware of the analogy's presence in the discourse. Relatively few of the participants who chose the analogically consistent response option made reference to the analogy to explain their choice (our gauge for awareness). Allusions to the analogical frame were far more frequent among the written rationales offered by participants for rejecting the analogically consistent response option. This finding comports with Strack, Schwarz, Bless, Kubler, and Wanke's (1993) demonstration that awareness of a potential source of influence on one's judgments precipitates contrastive responding (i.e., responding in opposition to source information) which differs markedly from the pattern of assimilative responding that occurs when the source is covert. In our experiment, what moderated this awareness was the density of business-as-sports idioms appearing in the scenario description, i.e., the analogical frame's thickness. Significantly higher rates of analogically inconsistent responses and frame-related references occurred when the frame was thick than when it was thin or moderate. We interpret this pattern as evidence that the analogical frame's influence on people's judgments was moderated by its salience in the discourse context – the more salient the frame, the less effective it was in biasing responses. Thus, as with flattery, there are diminishing persuasive returns for "laying it on thick" analogically; in our experiment, laying it on thin or moderately met with less resistance.

The human mind's remarkable capacity in certain domains (object perception, syntactic processing, etc.) to transmute surface stimulus features into canonical

representations does not extend to decision making (LeBoeuf & Shafir, 2003). As a result, our intuitive decisions can be unduly influenced by factors that determine the accessibility of features in a scenario. Highly accessible features influence decisions more than less accessible features, regardless of their practical import to an optimal choice between response options (Kahneman, 2004). Decision scientists have identified framing effects as a potentially powerful influence on feature accessibility. However, not all frames are equally successful in inducing "passive acceptance of the formulation given" in a particular decision scenario. In the same way one chooses a literal frame with the right characteristics (size, shape, color, etc.) to "bring out" an oil painting's best attributes, so must strategic communicators choose decision frames that (subtly) accentuate the scenario features that best serve their persuasive goals.

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