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Abstract

Prospect theory (Kahneman & Tversky, 1979) predictions were examined in light of ethnocentrism and intergroup conflict. An experiment conducted at the outset of the 2003 invasion of Iraq by the U.S., U. K. and their allies explored American and British participants' preferences for certain versus uncertain gains and losses concerning Iraqi, American, and British lives. In four conditions, participants showed the usual loss aversion when deciding between options that only affected Iraqi lives. Six other conditions examined choices between the lives of Americans, Britons, or Iraqis. Strong ethnocentric biases rather than risk-aversion occurred. Participants preferred policies that prioritized their own nationals' and allies' lives over Iraqi lives. War-related and other attitudes corresponded to participants' decisions. The need to expand prospect theory to address intergroup relations is discussed.

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Weighing the Prospects of War

Policy decisions often require anticipating potential gains and losses for different groups of people. Prospect theory (e.g., Kahneman & Tversky, 1979) describes how people weigh potential gains and losses, which are called "prospects," starting from one's reference point or the status quo. According to prospect theory, gains are more appealing than losses, but a potential loss is even more aversive than a potential gain of the same magnitude is appealing. For example, losing € 5 feels more painful than finding € 5 feels enjoyable. One consequence of this asymmetry between preferences for potential losses and gains is that when people assume their outcomes will be losses, they are more willing to take risks, whereas when they assume their outcomes will be gains, they prefer certainty.

In a classic demonstration of this risk-preference reversal, Tversky and Kahneman (1981) asked American participants to choose between two health policies designed to treat an outbreak of an unusual Asian disease that was expected to strike the U.S. and kill 600 people. The expected consequences of one policy were described as certain and fixed, whereas the expected consequences of the other policy were described in probabilistic terms as uncertain. Between-participants, the choices were either framed as losses, by describing how many people would die as a result of the policy, or framed as gains, by describing how many people's lives would be saved. For example, in the gain frame condition, the certain choice was described as saving exactly 200 lives, and the uncertain choice was described as having a 2/3 chance of saving 600 lives and a 1/3 chance of saving no lives. All four choices (two within the loss and gain conditions) had the same expected value (of 400 deaths and 200 lives saved). However, in the loss condition, 78% chose the uncertain loss over the certain loss, whereas in the gain condition, 72% chose the certain gain over the uncertain gain. Such preferences for uncertain losses and certain gains have been shown when people consider real and fictive monetary consequences for

themselves (e.g., Fennema & Wakker, 1997), access to medical care for others (Levin & Chapman, 1990, 1993), other people's lives (Fagley & Miller, 1997), and public policies and political candidates (e.g., Quattrone & Tversky, 1988).

The robustness of risk-preference reversals has led political scientists to recognize the utility of applying prospect theory to international relations (e.g., Berejikian, 2002; Farnham, 1992; Jervis, 1992; McDermott, 1998). For example, McDermott and Kugler (2001) used prospect theory to analyze U.S. President G.H.W. Bush's 1991 Gulf War decisions. They reasoned that Bush's desire to restore a loss (i.e., the Iraqi take-over of Kuwait) motivated him to pursue military action against Iraq. But, they reasoned, the prospect of further risks (e.g., loss of more American lives, domestic opposition) was not sufficiently motivating to pursue an additional gain (i.e., control of Iraq), and this led Bush to curtail military action short of toppling the Iraqi government. Hence, prospect theory seems to hold promise for understanding intergroup relations, potentially explaining when war will be pursued or curtailed (for more detailed commentaries see Boettcher, 1995; Farnham, 1994; McDermott, 2004a, 2004b). However, such post hoc case studies do not rule out other explanations for policy-maker's decisions (Boettcher, 1995; McDermott & Kugler, 2001).

Another serious limitation of extant research on prospect theory is that neither experiments nor case studies sufficiently consider *whose* prospects matter to those making decisions and why. The terms "loss" and "gain" might be understood to be general (i.e., occurring to anyone). But nearly all experiments have examined prospects only for the participant or for a single group on whose behalf the participant acts (e.g., citizens of the participant's nation). Notable exceptions to this trend were provided by Levin and Chapman (1990, 1993). These researchers found that Americans were less likely to show preference-reversals when considering prospects concerning Iranians rather than Americans and when considering prospects involving people who contracted AIDS due to their own behavior rather than those who contracted AIDS due to medical practice. Lewin and Chapman's (1990, 1993) results show that prospect theory does not fully describe preferences for prospects that affect denigrated outgroups, and suggest that the psychology of group prejudice may provide refinements to, or limiting conditions for, prospect theory.

Prospect theory has not incorporated considerations of psychological others because it assumes that reference points are self-referential. But people in other social categories such as "foreigners" may be treated sometimes as out-group members and sometimes as in-group members, as when they are re-categorized psychologically (e.g., Gaertner, Dovidio, & Bachman, 1996; Gaertner, Mann, Murrell, & Dovidio, 1989). For example, Esses, Dovidio, Jackson, and Armstrong (2001) improved Canadian citizen's attitudes towards immigration by reminding them that immigrants shared either common ethnic roots or a common present nationality with the participants. To provide a stronger test of the hypothesis that psychological inclusion of others influences how lives are valued, the present experiment not only compared the prospects of denigrated outgroups with those of co-nationals, but also compared the prospects of allies with both denigrated outgroups and with co-nationals. If allies are valued more than denigrated outgroups but comparably with co-nationals, this would provide direct support for the notion that psychological inclusion of others influences the evaluation of a given group's prospects. One prediction from the group prejudice literature, then, is that individuals' prospects will be more highly valued to the extent that those individuals are psychologically included in the

participants' own group. This is often termed *ethnocentrism*. The group prejudice literature also implies that the way that decision choices are presented may invoke group prejudice. In particular, considerable research has identified two conditions that lead to negative treatment of outgroups: 1) intergroup competition over valued resources (e.g., Sherif & Sherif, 1953; Campbell, 1972) and 2) intergroup threat, that is, the presumption that the outgroup poses a risk of loss for the ingroup (e.g., Greenberg et al., 1990; Jackson & Esses, 2000; Sears, 1988).

Although intergroup competition and perceived intergroup threat often co-occur, they are psychologically distinct, because competition does not always imply the threat of a loss, and losses can occur for reasons other than competition. Consider two nations who compete over land that neither controls. Such nations are in a situation of competition with potential gain for both, but neither is threatened. Alternatively, both nations may be threatened with losses from global warming or other environmental hazards that may reduce nations' territories for reasons that are unrelated to competition. We address the empirical question of whether just one of these factors, competition or threat, or both together, are necessary to produce ethnocentric choices. These two conditions, *competition* and *threat*, may pertain to the framing effects examined by prospect theory as follows: First, if the prospect of a loss constitutes a psychological threat, and threat induces ingroup favoritism, then decisions in loss-frame conditions should be more group-prejudiced than decisions in gain-frame conditions. For example, when deciding between certain and uncertain gains for an enemy, participants may follow prospect theory and chose certain gains, but when deciding between certain and uncertain losses for an enemy, participants may prefer certain losses, in contradiction to prospect theory's prediction that people prefer uncertainty in loss domains. Intergroup competition may also lead people to make more group-prejudiced decisions than they would in the absence of competition, such as when groups' prospects are independent of one another. Group-prejudiced decisions should occur to the degree that outgroups' prospects are in conflict with the prospects of ingroups. If competition (rather than threat) induces group prejudice, then participants may also make different decisions than prospect theory predicts. In particular they may be reluctant to choose an uncertain loss for the ingroup over a certain loss for the outgroup. Likewise they may be reluctant to choose a certain gain for the outgroup over an uncertain gain for the ingroup.

We tested these predictions using a replication and extension of Tversky and Kahneman's (1981) "Asian disease" experiment. The design of the experiment enabled us to test whether participants would apply prospect theory in a *group-neutral* matter, showing preference for certain gains and uncertain losses regardless of whose lives were at stake. Against this default hypothesis, we tested several alternative hypotheses derived from intergroup relations research. When making decisions about the outgroup's prospects alone, if participants are indifferent between decision choices that provide equivalent expected values, they will show no risk-preference reversal. This would be evidence of *ethnocentric indifference* to the prospects of the outgroup. If participants prefer certain losses and uncertain gains for an enemy outgroup, this would be evidence that they value the enemy's prospects negatively (i.e., *ethnocentric aggression*). Finally, if participants make similar decisions for allies as for co-nationals, this would be evidence of *allocentrism* in which ally's prospects are valued similarly to those of co-nationals.

American and British participants made decisions concerning American, British, and Iraqi lives at the outset of the March, 2003 U.S./U.K.-led invasion of Iraq. Concurrent national opinion

polls showed that 70% or more of the American public supported the war with Iraq (Gallup, 2003). Following majority opposition for over a year, British opinion swung suddenly in a pro-war direction (63% support) six days into the war when Baghdad fell (Time, 2002; Travis, 2003a, 2003b). The divergence of opinion about the war within and between nations enabled us to test whether opinion about the war influenced how participants weighed prospects of gains and losses for the involved nations. Although social and political values have been robustly shown to influence other kinds of policy attitudes and decisions (e.g., Pratto & Cathey, 2002), we have found no studies that examine how independently-assessed values or beliefs influence how people make decisions in prospect-theory scenarios. Given that the national discourses in the U.S. and U.K. were focused on the war against Iraq, and that the conditions of the experiment spoke to the publics' concerns in the U.K. and U.S., this experiment provides a particularly strong test of the predicted inclusion and framing effects.

Method

Participants and Procedure

Participants were undergraduate volunteers from psychology and sociology courses in the U.S. and England who completed questionnaires at their own rate during the first 3 weeks after the March 17, 2003 invasion of Iraq by U.S.- and U.K.-led forces. Sample 1 consisted of 149 undergraduates at the University of Connecticut, U.S., and was 57% female and 88% White. Sample 2 consisted of 126 undergraduates at the University of Surrey, U. K., and was 83% female and 72% White. Data from U.S. citizens ($N = 147$) and U.K. citizens ($N = 111$) were analyzed.

Materials

The first sentence of each vignette asked participants to imagine that those in the decision-maker's role were preparing plans for the event (an outbreak of an unusual Asian disease in Iraq or battle plans for a war against Iraq). Following Tversky and Kahneman (1981), for all conditions, the experiment scenario stated that 600 people were expected to die and participants chose between two policies whose expected consequences were described as follows. Loss choices were between a policy that would have a $2/3$ probability that 600 people would die and a $1/3$ probability that no one would die or a policy that would result in 400 deaths. Gain choices were between a policy that would result in 200 people being saved or a policy that had a $1/3$ probability that 600 people would be saved and a $2/3$ probability that no one would be saved.

Design

The experimental design employed a gain frame and loss frame within each of five *contexts*, for a total of 10 conditions between-participants. The loss/gain framing manipulated whether threat was invoked. The contexts manipulated which group's prospects were at stake and whether intergroup competition was invoked.

Two contexts tested whether prospect theory would apply to decisions made only about an "enemy" outgroup. Intergroup competition was not invoked in these four conditions. Participants chose between certain or uncertain losses or gains of Iraqi lives. The *Iraqi disease* context closely replicated Tversky and Kahneman (1981) by describing an expected outbreak of disease in Iraq and put participants in the role of Iraqi public health officials making the decision of

which health policy to adopt. In the *Iraqi military* context, participants imagined that they were military planners for their own nation preparing battle plans for Iraq, and made decisions about which battle plans to follow. These conditions tested whether Iraqi lives had positive value to participants and whether participants' imagined role (as health workers or military planners) altered that value.

The remaining contexts invoked competition by presenting decisions as being between outcomes that affected members of different nations. There were three competition contexts, one pitting co-nationals against Iraqis (the *ethnocentric competition* context), one pitting one's allies against Iraqis (the *allocentric competition* context), and one pitting one's co-nationals against allies (the *fraternal competition* context). In all conditions, we pitted group inclusion against group-neutral prospect theory predictions by the choices given to participants. The nation that participants were expected to favor the most (ordered as own nation, ally nation, and enemy nation) was always described as having uncertain losses and uncertain gains, and the other nation in that condition as having certain losses and certain gains. For example, in the U.S.-Iraq competition condition, loss choices were between 400 Iraqis deaths or a 2/3 probability of 600 American deaths and a 1/3 chance of no American deaths. If participants follow prospect theory in a group-neutral manner and attempt to avoid the possibility of anyone dying, most should choose the uncertain American loss option. However, if they prefer that Iraqis die for sure rather than risk American lives, they should choose the certain option of 400 Iraqi deaths. The gain condition presented a corresponding choice between a certain Iraqi gain and an uncertain American loss, also with equivalent expected values. Table 1 summarizes the design.

Predictions

This design allowed us to test effects of inclusion, threat, and competition on prospects. First, if lives are valued equally regardless of their nationality, then reliable preferences for uncertain losses and certain gains should be obtained regardless of context. Such a finding would imply that psychological inclusion and intergroup prejudice are irrelevant to prospect theory. However, if participants consider outgroup lives to have negligible value, or do not count such lives as part of the status quo, they will fail to invoke prospect theory reasoning when considering Iraqi lives. They might show *ethnocentric indifference* in the two single-nation conditions. That is, they may be less risk-avoidant or even rationally indifferent between choices with the same expected value for a non-valued outgroup. Third, if Iraqi lives have negative value to participants, they will exhibit *ethnocentric aggression* in these conditions, and actively choose certain losses or uncertain gains for Iraqis. Such a result would be the reverse of the *group-neutral* prospect theory predictions.

When participants' own nation competes against enemy nation, ethnocentric aggression and ethnocentric indifference predict that participants will choose certain losses for the enemy and uncertain gains for own nation rather than uncertain losses for own nation and certain gains for the enemy. This is because both theories imply that an Iraqi life has lower value than a co-national's life. If participants consider their allies to be ingroup members, comparable patterns would be seen in the ally versus enemy competition condition.

Finally, consider the fraternal competition context. If people weigh prospects in an *ethnocentric* way, such that they preserve risk-aversion every time co-national's prospects are in question,

then we should see the same patterns in the fraternal competition context as in the ethnocentric competition context. Alternatively, *allocentrism* towards one's ally would make competitive choices between one's co-nationals and one's ally equally unattractive. This should result in a reduction of risk-aversion for co-nationals and perhaps even indifference between two unattractive choices.

In total, the present design allowed us to test how participants weighed the prospects of gaining and losing co-national, ally, and enemy lives. Use of both competitive and non-competitive conditions for the enemy outgroup allowed us to test the extent that sheer prejudice against the enemy nation, rather than competition, induced prejudiced decision-making. Comparing framing effects within competition conditions allows us to test whether threat of loss rather than mere competition induced prejudiced decision-making. In addition, to test whether prejudiced decisions were due to ethnocentric indifference or to ethnocentric aggression, we assessed several relevant social attitudes, including various reasons for support or opposition to the war, concern over the combatants of each nation involved, and support for nationalism.

Attitude Measures

After indicating which choice they preferred, participants provided demographic descriptions of themselves. On the next page, participants indicated how strongly they agreed or disagreed with each of 16 statements about international relations (see items in Table 2). Following four filler items were 9 items regarding the war against Iraq and nationalism. Principal components analysis revealed one strong war attitude factor (eigenvalue = 4.03; $\alpha = .92$) and a weaker 2-item nationalism factor (eigenvalue = 1.29). Three other interspersed items asked how much participants feared for the safety of American combatants, British combatants, and Iraqi combatants, respectively.

Results

War-related attitudes

Means and test statistics comparing U.S. and U.K. citizens on the attitude measures are shown in Table 2. On average, American participants were neutral toward the war whereas British participants somewhat opposed it. Participants from both nations showed substantially less concern for Iraqi combatants than for American and British combatants, but Britons also showed less concern about American combatants than about British combatants. Although we found national differences in war-related opinions, both our samples supported the war less than their respective publics.

Rejection of decision choices

Some participants explicitly refused to choose between the outcomes offered. More of the U.K. sample (19 out of 111 or 17%) than the U.S. sample (3 out of 147 or 2%) did so, $\chi^2(2, N = 258) = 18.5, p < .001$. Those not choosing were more opposed to the war ($M = 3.17$) and more concerned about Iraqi combatants ($M = 4.87$) than those who chose certain ($M = 4.06, 3.83$, respectively) or uncertain ($M = 3.72, 4.29$, respectively) outcomes, $F_s(2, 252) = 3.94, 3.03$, respectively, $p_s < .05$.

Policy decisions

Choice of certain or uncertain outcomes were analyzed as a function of frame (gain, loss), context (Iraqi disease, Iraqi military, ethnocentric competition, allocentric competition, fraternal competition), and participant citizenship (U.S. or U.K.) using hierarchical log-linear analysis.¹ Frequencies are shown in Table 3. The citizenship main effect, partial χ^2 (1, $N = 236$) = 11.55, $p = .0007$, is due to the greater number of U.S. than U.K. citizens in the study. Two theoretically unpredicted interactions were obtained. One was the 2-way association between participants' choices and context, partial χ^2 (4, $N = 232$) = 12.56, $p = .01$. More participants selected uncertain outcomes in the Iraqi disease context, and more selected certain outcomes in the fraternal and allocentric competition contexts, but no certainty preference was shown in the Iraq-only military context or in the fraternal competition context (see bottom of Table 3). The reliable 3-way association among choice, context, and citizenship, partial χ^2 (4, $N = 236$) = 9.49, $p = .05$, implies that the choice by context association differed by citizenship. As there was also a reliable higher-order association, these associations are best understood in that light.

Group-neutral prospect theory predicts a choice by frame association describing preferences for uncertain losses and certain gains. This association was not obtained overall, partial χ^2 (1, $N = 236$) = 0.13, n.s. Rather, a reliable choice by frame by context association was observed, partial χ^2 (4, $N = 236$) = 21.30, $p < .0003$, as expected. This was modified by the four-way association of choice by frame by context by citizenship, L. R. χ^2 (4, $N = 236$) = 10.82, $p = .05$. To explore these associations, we conducted a hierarchical log-linear analysis on frame, choice, and citizenship within each context. Only in the allocentric competition context was there a reliable association between frame, choice, and citizenship, L. R. χ^2 (1) = 4.44, $p = .035$, apparently because some Britons and no Americans chose uncertain losses for allies rather than certain losses for enemies (see frequencies in Table 3). This single citizenship interaction with the other two variables likely produced the 4-way association.

The more robust and expected 3-way interaction of frame, context, and choice collapsed across participants' nation is shown in Figure 1. Group-neutral prospect theory predictions would be shown as proportions reliably above 50% (the null hypothesis) for gains and reliably below 50% for losses. Binomial tests comparing the proportion of participants preferring the certain outcome with the null hypothesis followed that pattern in only two instances. In the Iraqi disease and the Iraqi military contexts, 72% of participants in the loss condition preferred uncertain losses, as predicted by prospect theory, $z = -1.57$, $p = .06$, $z = -6.05$, $p < .0001$, respectively. However, contrary to prospect theory predictions, a bare (and unreliable) majority of 56% in the corresponding gain condition preferred certain gains. Overall, the frame by choice association was marginally significant in the Iraqi disease context, χ^2 (1, $N = 57$) = 3.67, $p = .056$, and in the Iraqi military context, χ^2 (1, $N = 53$) = 3.68, $p = .055$. The loss condition effects replicate Tversky and Kahneman (1981) with an enemy nation rather than participants' own nation, showing that participants valued Iraqi lives, at least somewhat. However, contrary to prospect theory, the number of participants who chose certain gains for Iraqis did not differ from chance. Participants selecting uncertain gains for Iraqis may have wanted to try to save all the Iraqis rather than saving only some Iraqis.

The ethnocentric and allocentric competition conditions revealed rather different preferences. When choosing between certain losses for Iraqis and uncertain losses for either co-nationals or allies, 80% chose certain Iraqi losses, showing a strongly ethnocentric reversal of prospect theory

predictions. The preference for certain losses of Iraqi lives was significant in both the ethnocentric competition context, $z = 2.50$, and in the allocentric competition context, $z = 3.67$, $ps < .01$. The overall reliable frame by choice associations in the ethnocentric competition context, $\chi^2 (1, N = 32) = 7.15, p = .007$, and in the allocentric competition context, $\chi^2 (1, N = 50) = 5.70, p = .017$ showed that enemy lives had less value than co-nationals' and allies' lives. However, when choosing between certain gains for the enemy and uncertain gains for own nation or ally nation, no consensual preference emerged: 50% chose certain gains. The contrast between the clear ethnocentrism shown in the loss frame competition conditions and the overall ambivalence shown in the gain frame competition conditions is consistent with the idea that threat – the prospect of loss – rather than just competition, induces ethnocentric decision-making. There was no frame by choice association in the fraternal context, $\chi^2 (1, N = 44) = 1.49, p = .22$, and choices in neither framing condition differed from chance, $zs < .89$. These choices imply that allies' lives had positive value even compared with co-nationals' lives. The proportions of participants desiring certain gains were not reliably different than 50% in any context, $zs < 1.00$. In neither single-nation nor competition contexts did participants exhibit the preference for certain gains found in prior studies when participants considered co-nationals alone (Tversky & Kahneman, 1981) or in competition with Iranians (Levin & Chapman, 1990). To clarify whether the present decisions were motivated by ethnocentric indifference or humanitarian concern for Iraqi lives, we examined the association between participants' choices and their war-related attitudes.

Association between war attitudes and policy decisions

We conducted ANOVAs on war attitudes and the differences between concern for a) own nation and enemy combatants, b) own nation and ally combatants, and c) ally and enemy combatants as a function of frame (loss vs. gain), participants' choices (certain vs. uncertain), and citizenship (US vs. UK) within each context.² Main effects and interactions not described were unreliable. Several reliable 2-way interactions emerged, which are shown in Table 4. In the Iraqi disease context, a reliable frame by choice interaction on the difference in concern for co-national combatants versus enemy combatants was observed, $F (1, 52) = 3.86, p = .055$. Those who chose uncertain gains for Iraqis over certain gains for Iraqis had the lowest levels of ethnocentrism in their concerns about own nation versus Iraqi combatants. This suggests that trying to save all possible lives (i.e., choosing uncertain gains) is associated with concern for others regardless of the others' nationality. These attitude results indicate that the divide between participants in the gain frame condition is not due to indifference over Iraqi prospects.

In the allocentric competition context, there was a reliable frame by choice interaction on support for war, $F (1, 48) = 10.81, p = .002$, on concern for own nation over enemy, $F (1, 45) = 6.50, p = .01$, and on concern for ally over enemy, $F (1, 45) = 8.45, p = .006$. Means on all three measures indicate that those making ethnocentric choices (certain loss for enemy or uncertain gain for ally) scored higher on ethnocentric attitudes concerning the war than those making the complementary choices (see Table 4). That is, those who supported the war, and were more concerned for own nation and allies over enemy combatants seemed to value allies' lives over enemies' lives in their decisions. These differences were also more pronounced in the loss frame than in the gain frame condition, compatible with the hypothesis that the prospect of loss is a threat which makes people become more ethnocentric. Note, though, that ethnocentrism was also associated with decisions made in gain frames; those choosing uncertain gains for the ally

expressed substantially more concern for own nation and ally combatants than for enemy combatants.

Decision choices in the fraternal competition context suggested that allies' lives had somewhat lower prospects than co-nationals lives. The ANOVAs on attitude measures also support this interpretation: there was a reliable frame by choice interaction on nationalism, $F(1, 39) = 4.20$, $p < .05$, and on concern for own nation over ally, $F(1, 39) = 5.52$, $p = .024$. Those who chose uncertain losses for own nation over certain losses for ally were especially low on nationalism. This was the only choice in which it was possible that no allies or co-nationals would die. Those who chose uncertain gains for own nation over certain gains for ally had the strongest concern for own nation combatants over ally combatants. This was the only choice in which it was possible to save all of own nation lives. There was also a main effect of choice on concern for own nation over ally such that those choosing uncertain outcomes were more ethnocentric ($M = 0.81$) than those choosing certain outcomes ($M = 0.18$), $F(1, 39) = 5.65$, $p = .02$.

Discussion

At the outset, we argued that prospect theory should be further elaborated by considering whose prospects are weighed and the psychology of group prejudice and inclusion. This would make prospect theory more useful in understanding social relationships. The present results bear this out.

We found that prospects are not just weighed for ingroups. When participants considered prospects for Iraq alone, they chose uncertain losses nearly as often as in prior studies in which participants considered only co-nationals' prospects. Moreover, they did so nearly as much when selecting policies to respond to the threat of disease as to the threat of a war waged by their own nations. Evidently, these participants were concerned about the lives of Iraqis, even as their governments declared war on Iraq. Further, they held an implicit reference point of no deaths for the enemy outgroup. In fact, where they deviated slightly from prior findings is that a larger proportion opted for uncertain larger gains over certain smaller gains (i.e., possibly saving all lives rather than saving relatively few for certain). Although prospect theory does not predict this pattern, the attitudes data in the disease context suggest that this might be an empathic or humanitarian choice, motivated by the desire to save all the Iraqis' lives. The two non-competition conditions, participants showed no evidence of ethnocentric indifference or of ethnocentric aggression.

The consideration participants showed for Iraqi lives in the two non-competition conditions contrasts sharply with their decisions when Iraqi lives competed against the lives of co-nationals or allies. There, certain enemy deaths were attractive to more participants than a possibility of deaths for co-nationals or allies. Clearly, these decisions were not group-neutral nor ethnocentrically indifferent. Possibly the competition between decision choices heightened intergroup boundaries such that social-identity based discrimination held sway. While ingroup identification sometimes promotes favoritism toward ingroups rather than denigration of outgroups (Brewer, 1979), ethnocentrism was more apparent in loss conditions than in gain conditions here. As we predicted, loss conditions appear to invoke psychological threat, which contributed to more ethnocentric decisions and attitudes.

Participants sought to preserve their ingroup's reference point or status quo most of all. Choosing certain enemy losses and uncertain ingroup gains avoids even the possibility of own nation or ally deaths. In other words, in the absence of a choice that allows for no deaths at all, ethnocentric priorities were enacted. This, however, does not constitute evidence of ethnocentric aggression.

Ethnocentrism was not observed when own nation and ally competed. Indeed, the allies were largely treated as equivalent to co-nationals. Hence, it was not the case that a competitive context necessarily resulted in national favoritism. Rather, the results suggest that the ethnocentrism we observed is rooted in the psychological conception of "ingroup," rather than in national categories per se. The results of all ten conditions can be accommodated by prospect theory if one assumes that prospects of co-nationals were larger than those for allies, which were larger than prospects for Iraqis, which were nonetheless positive. Hence, as we suggested, prospect theory can be expanded by incorporating an explicit theory of whose prospects are prioritized by decision-makers.

Let us summarize what participants' decisions indicate about their values and decision processes. When people make decisions under risk, they do not weigh all lives equally. Rather, participants' decisions revealed an implicit hierarchy of values for the relevant groups: the prospects of losing and saving enemies' lives matter so long as those prospects are independent of those lives psychologically defined as "ours" (which here were co-national soldiers and allies' soldiers). Once "our" lives are at stake, however, preserving enemy lives - and especially preventing enemy deaths - becomes less important to most participants. Thus, although participants' relative valuation of these national groups was clearly at play, measuring one person's general attitude toward a given group would not have been sufficient to allow one to predict how a person would make decisions about that group. Instead, values were expressed partly through the contingencies of decision preferences.

The apparent precariousness of preferences, such as those shown here for Iraqi lives, has led some to postulate that values are constructed on-line with respect to the choices offered (e.g., Tversky & Simonson, 1993), rather than being stable psychological orientations. Indeed, given such preference shifts, one might be tempted to assume that values cannot be measured in more abstract, absolute ways such as through opinion items (see Fischhoff, 1991, for a discussion). In fact, because Tversky and Kahneman (1979) presumed that preferences are constructed from the alternatives provided, they explicitly assumed that participants are equivalent to one another and that individual differences in preferences are of minimal importance.

However, the present results demonstrate that individuals can differ sharply in the alternative prospects that they call to mind. Indeed, the 50% of participants who chose certain gains for Iraq in the competition conditions held different attitudes than the 50% who chose uncertain gains for own nation or ally. What in the aggregate might appear to be ambivalence was in fact a measurable difference of opinion amongst participants. Similarly, participants who refused to choose between the certain and uncertain choices offered were not simply indecisive. In fact, they held the strongest attitudes against the new war and were most concerned about Iraqi combatants. It stretches credulity to imagine that participants who took the unusual action of defying an

experimenter's request were simply indifferent. These results suggest that, at least when experimental stimuli speak to real-world issues, participants' assumptions about alternatives and long-standing values are not irrelevant. Rather, participants' presumptions about what is possible and their values help to inform the meaning of their decisions.

The present results therefore mandate not only further theoretical explication of whose prospects matter to participants, but also what creates the universe of alternatives people consider when making decisions. Individuals are known to differ on whether they generally assume intergroup relations to be zero-sum competitions or assume that they share common fate with others (e.g., Pratto, Sidanius, Stallworth, & Malle, 1994). Decision choices could structure intergroup relations as being independent, competitive, or having common fate. It is essential that future research examine both individual differences and decision choices together as the present results show that it can be misleading to examine only one or the other.

More subtly, information outside the decision choices may be powerful in shaping expressed values and apparent policy support. For example, a predominant theme in speeches of G. W. Bush Administration officials leading up to the 2003 war on Iraq was to describe Iraq as a threat. In his 2002 State of the Union address, President G. W. Bush said, "We must prevent the terrorists and regimes who seek chemical, biological, or nuclear weapons from threatening the United States and the world." This sentence not only constructs for the audience a threat from an outgroup, but it links the fate of the U.S. to that of the world. If political speech can invoke both the threat of loss and allocentrism, it may be as effective in inciting indifference to outgroup casualties and protectionism for allies as the decision choices here did. Experiments could explore how political rhetoric frames the prospects of policy decisions to the public, not only as losses or gains but also as competitive or independent or cooperative options, and the effectiveness of such frames in manipulating public opinion.

The approach we have taken, to integrate the psychology of allocentrism and ethnocentrism with decision-making under risk, shows considerable promise for enriching the study of both. Indeed, we have shown the necessity of considering both kinds of psychological predilections at once. In a world in which uncertainty and threats come not only from diseases like SARS but from other groups of people, research on decision-making cannot afford to ignore either.

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Biographical notes

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Table 1

Experimental Design

Context	Decision situation	Decision-makers' role	Certain group	Uncertain
group				
Iraqi disease	Asian disease strikes Iraq	Iraqi public health official	Iraqis	Iraqis
Iraqi military	Own nation plans for war against Iraq	Own nation military planner	Iraqis	Iraqis
Ethnocentric competition	Own nation plans for war against Iraq	Own nation military planner	Iraqis	Co-national
Allocentric competition	Own nation plans for war against Iraq	Own nation military planner	Iraqis	Ally national
Fraternal competition	Own nation plans for war against Iraq	Own nation military planner	Ally soldiers	Co-nationals

Note. For American participants, Co-nationals were described as “Americans” and ally nationals as “British.” For British participants, co-nationals were described as “Britons” and ally nationals were described as “Americans.” Two policy choices were described to participants and they indicated which policy they favored.

Table 2

Attitude items with rotated factor loadings in parentheses, mean ratings by citizenship and test statistics comparing Americans and Britons.

Measure	Participant Citizenship		F	df	p
	U.S.	U.K.			
We should not engage in any military action that will kill civilians. (-.67)	4.10	4.68	6.10	241	.01
I oppose making war on Iraq because of the harm would be done to the Iraqi people. (-.83)	3.47	4.58	20.34	242	.001
I favor making war on Iraq because it would make the world safer for my fellow citizens. (.75)	4.67	4.51	< 1	240	---
The U.S. and Britain are justified in waging war against Iraq. (.80)	4.68	4.18	4.10	240	.04
Diplomatic solutions should be pursued regarding the situation in Iraq rather than war. (-.77)	4.43	5.31	15.50	240	.001
The U.S. and Britain should wage war against Iraq as soon as it is militarily feasible. (.65)	3.12	3.52	3.20	235	.07
Generally, American influence is good for other countries. (.72)	4.20	3.49	11.50	238	.001
Average of above war attitude items	4.09	3.58	8.14	242	.005
U.S. policy promotes U.S. interests above those of the rest of the world. (.74)	5.11	5.26	< 1	239	---
In formulating policy, the first concern of our government must be protecting our country's interests, not those of other people. (.81)	4.85	4.48	3.43	242	.06
Average of above nationalism items	4.98	4.87	< 1	242	---
I fear for the safety of {group below} in a war against Iraq.					
Iraqi combatants	3.95	4.35	2.58	240	.11
British combatants	5.99	6.01	< 1	240	---
American combatants	6.26	5.27	30.92	241	.001

Note. Ratings were made from 1 (strongly disagree) to 7 (strongly agree). Items with negative factor loadings were reverse-scored before averaging. Numerator $df = 1$.

Table 3

Frequency of participants' choices of certain or uncertain outcomes by citizenship, frame and context.

Citizenship & Frame		Context				
		Iraq disease	Iraq military	Ethnocentric Competition	Allocentric Competition	Fraternal Competition
U.S.						
Loss	Certain	4	5	10	15	5
	*Uncertain	12	11	3	0	8
Gain	*Certain	10	7	4	9	8
	Uncertain	4	10	8	6	5
U. K.						
Loss	Certain	4	4	3	6	5
	*Uncertain	8	6	0	3	6
Gain	*Certain	5	9	2	6	4
	Uncertain	10	1	2	5	3
Total across frame and citizenship						
	Certain	23	25	19	36	22
	Uncertain	34	28	13	14	22
Total across frame						
U.S. Total						
	Certain	14	12	14	24	13
	Uncertain	16	21	11	6	13
England Total						
	Certain	10	13	5	12	9
	Certain	18	7	2	8	9

Note. * denotes preference predicted by prospect theory within each frame.

Table 4

Mean ratings of attitudes measures by frame and choice within contexts indicated.

Context Measure	Frame and Choice			
	Loss		Gain	
	Certain	Uncertain	Certain	Uncertain
Context: Disease strikes Iraq				
Concern for own nation – enemy	1.71	2.85	2.33	1.20
Context: Allocentric competition				
Support for war	4.54	2.04	3.59	3.93
Concern for own nation – enemy	2.76	0.00	1.36	2.45
Concern for ally-enemy	2.67	-0.67	1.00	1.82
Context: Fraternal competition				
Nationalism	5.25	4.11	4.92	5.13
Concern for own nation-ally	0.10	0.21	0.25	2.00

Note. Individual items are shown in Table 2 and were rated from 1 (strongly disagree) to 7 (strongly agree); items are shown in Table 2. Nationalism and support for war were the averages of ratings. Differences between ratings of concern for two nations are shown above.

Figure 1. Proportion of participants choosing certain option by frame and context

Footnotes

¹ A delta of .5 was added to all cell sizes to prevent cells with frequencies of zero, but this changed none of the test statistics.

² The only context in which citizenship had interacted with the frame by choice association was the ally versus enemy context in which no Americans chose uncertain losses, so the ANOVA in that context could not include citizenship.