Title: Vicarious Entrapment: Your Sunk Costs, My Escalation of Commitment

Authors:

Gunia, Brian; Northwestern University

Sivanathan, Niro; London Business School

Galinsky, Adam; Northwestern University

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Abstract

Individuals often honor their own sunk costs, increasing their commitment to failing courses of action, from financial investments to wars. Because honoring sunk costs is driven by self-justification processes, a widely offered prescription for preventing escalation of commitment is to have a different, second individual make subsequent resource decisions. In contrast to this proposed remedy, three experiments explored whether creating a psychological connection between the first and second decision-maker leads the second decision-maker to invest further in the failing program orchestrated by the initial decision-maker. Across three studies, employing different escalation scenarios, we found that multiple forms of psychological-connectedness – perspective-taking and interdependence – led decision-makers to vicariously justify others' initial decisions, escalating their commitment to the earlier investments. Overall, psychological connections between decision-makers undermined the most accepted prescription for de-escalation. These results have important implications for organizations and public policy and for theories of escalation.

Key words: escalation of commitment, sunk costs, vicarious self-justification, perspective-taking, interdependence

In 2006, Brian Hunter, a trader with Amaranth hedge fund, held a position that assumed natural gas prices would rise. Despite mounting evidence to the contrary, he stuck to his stance. Within a week, he amassed $6 billion in losses, precipitating the largest hedge fund collapse in history. In 1965, the Long Island Lighting Company set out to build the first commercial nuclear power plant, scheduled for operation in 1973 with an estimated cost of $70 million. Despite cost overruns, regulatory setbacks, and evidence of economic infeasibility, the company pressed forward. When the project was finally decommissioned in 1983, never having seen a day of commercial operation, the expenditures had mushroomed to over $6 billion. Both examples exemplify a decision bias referred to as escalation of commitment: a decision-maker's tendency to honor resources already invested (what economists call sunk costs) by allocating further resources to a failing course of action (Staw, 1976).

Escalation is driven by motivational processes (Kunda, 1990), fueled by the desire to justify past decisions (Staw, 1976). Based on these self-justification processes, researchers have prescribed an elegant remedy: have one individual make the initial resource decision, and a different individual make the subsequent decision (Brockner, 1992; Sivanathan, Molden, Galinsky, & Ku, 2008). The partitioning of decision-makers presumably removes the subsequent decision-maker's self-serving need to justify past actions.

In some instances, however, this theoretically-sound advice fails. For instance, as Lyndon Johnson assumed the Presidency from his fellow Democrat, he inherited John Kennedy's initial commitment of 16,000 troops to the Vietnam War. Near the end of the Johnson administration, the initial commitment had spiraled to 537,000 troops. Although many socio-political processes contributed to the increase in troop deployment, Staw (1976) singled out escalation as one important cause.

We suggest that the success of the commonly-prescribed, two decision-maker solution requires that the individuals to have no psychological connection. If the second decision-maker is psychologically-connected to the first, she may become vicariously motivated to justify the actions of the first. The current research explicitly tests whether psychological connections – born of perspective-taking and interdependence – between separate decision-makers facilitates escalation, counter to the prescribed solution in the literature.

Escalation of Commitment

Escalation of commitment occurs when a decision-maker allocates resources toward a particular goal and then receives feedback that the goal has not been achieved. Now facing an ambiguous choice about whether additional resources will achieve the goal, the decision-maker increases his or her original investment (i.e., escalates). Because individuals are motivated to see themselves positively (Bradley, 1978; Weinstein, 1980), feedback that challenges this view (e.g., failing to achieve a goal) creates dissonance that decision-makers attempt to reduce by escalating their commitment to the original decision, hoping to prove their initial investment was correct all along (Brockner et al., 1986; Festinger, 1957; Sivanathan et al., 2008; Staw, 1976). Consistent with this self-justification reasoning, eliminating personal responsibility reduces escalation (Bazerman, Beekun, & Schoorman, 1982; Schoorman, 1988; Staw, 1976). Similarly, introducing a new decision-maker after an initially failed decision removes personal responsibility and negates the need to justify other's actions (Brockner, 1992). This partitioning of decision-makers has been promoted as a halcyon pill to cure escalation. However, research has yet to consider whether meaningful psychological connections between the decision-makers may undermine the benefits of this partitioning.

Psychological Connections

Humans are inherently social beings, driven to secure attachments with others (Baumeister & Leary, 1995). We feel connected to others when we share group membership (Tajfel, Billig, Bundy, & Flament, 1971), similar names (Pelham, Carvallo, & Jones, 2005), and even the same birthday (Miller, Downs, & Prentice, 1998). Once a psychological connection forms between two individuals, they are more likely to cooperate (Batson, Chang, Orr, & Rowland, 2002) and favor one another financially (Aron, Aron, Tudor, & Nelson, 1991).

One powerful implication is that individuals take on the properties of the person they feel connected to, psychologically affording them "self" status. For example, in close relationships the boundaries between the self and a partner blur (Aron et al., 1991; Cialdini, Brown, Lewis, Luce, & Neuberg, 1997; Goldstein & Cialdini, 2007). People's mindsets and cognitive orientations can also produce this blurring of self and other. Perspective-takers, whether manipulated or measured, find the defining attributes of others more self-descriptive (Davis, Conklin, Smith, & Luce, 1996; Galinsky, Ku, & Wang, 2008). Similarly, individuals who construe the self as interdependent define themselves in terms of their groups' attributes (e.g., Brewer & Gardner, 1996; Kuhnen, Hannover, & Schubert, 2001; Markus & Kitayama, 1991). These psychological connections create numerous vicarious possibilities. When people feel connected to others they experience others' joy (Murray, Holmes, Bellavia, Griffin, & Dolderman, 2002) and pain (Jackson, Brunet, Meltzoff, & Decety, 2006). Connectedness can lead individuals to feel the exhaustion of other's self-control efforts (Ackerman, Goldstein, Shapiro, & Bargh, in-press) and even experience their cognitive dissonance (e.g., Norton, Monin, Cooper, & Hogg, 2003), leading them to alter their own attitudes as if they themselves had made the counter-attitudinal statement. Blurred boundaries between the self and other, born of

psychological-connectedness, lead one individual to experience and behave more consistently with another's current states.

The Current Research

We contend that psychological-connectedness will lead one decision-maker to honor the sunk costs of another decision-maker, as if the other's sunk costs were his own. Psychological connections make the debiasing effect of separating decision-makers to prevent escalation ineffective.

We conducted three studies, employing two validated escalation scenarios, to examine if multiple forms of psychological-connectedness – perspective-taking and interdependence – lead decision-makers to escalate their commitments to another's initial failed decision.

Experiment 1: Perspective-Taking and the Failing Division

The first experiment tested whether perspective-taking would increase commitment to another person's initial decision. We used a well-validated escalation scenario (originally used by Staw, 1976) in which participants learned that another individual, BG, chose to invest in a division that had since performed worse than an un-chosen division. Participants then made additional investments in the two divisions. We predicted that taking the perspective of the prior decision-maker would lead participants to invest more money in the originally chosen division.

Participants and Design

Participants were 55 undergraduate students (27 females,1 unreported) ,randomly assigned to either the *perspective-taking* or *objective* condition.

Participants read about a college-aged male, BG, who had served as financial Vice President in a previous experiment and invested $5 million in one of two divisions of the A&S Company (for full details, see Staw, 1976).

Perspective-taking. Participants in the *perspective-taking* condition were instructed to take BG's perspective by imagining how he might have felt and thought as he made his decision. Participants in the *objective* condition were instructed to be objective when evaluating his decision, without getting caught up in his thoughts or feelings.

Escalation of Commitment. Participants then learned that BG chose to invest in the Consumer Division. However, in the subsequent five years, this division performed worse than the un-chosen, alternate division (the Industrial division). Participants were told that they were now appointed VP of the A&S Company and needed to allocate an additional $10 million in any proportion, between the two divisions. Consistent with previous studies (Sivanathan et al., 2008; Staw, 1976), the amount of money invested in the Consumer Products division was used as a measure of escalation of commitment.

Results and Discussion

As predicted, participants who took the perspective of the first decision-maker invested more in the originally-invested division than participants who remained objective, $t(53) = 2.12$, $p = 0.04$, $d = 0.58$ (see Table 1). These results provide support for our prediction that taking a previous decision-maker's perspective would lead participants to escalate on that decision-maker's prior commitment.

Experiment 2: Perspective-Taking and the Failing Employee

In Experiment 2 we sought to increase our confidence in the generalizibility of our findings by: a) comparing perspective-taking to a control condition to ensure that the observed effects were not driven by the objective condition, b) separating the perspective-taking manipulation from the escalation task, and c) using a different, validated escalation scenario (job hiring, Bazerman et. al., 1982). Participants were asked to write about the day in the life of a

recent participant, NS, and were either instructed to take the participant's perspective or received no additional instructions. Participants then learned that NS had the choice to hire one of two job candidates, and the hired candidate had performed poorly. Participants were asked to evaluate the hired employee on two dimensions that determined the employee's future with the company (adapted from Bazerman et al., 1982). We predicted that participants who had taken NS's perspective would increase their investment in the chosen candidate.

Participants and Design

Participants were 54 undergraduate students (35 females), randomly assigned to either the *perspective-taking* or *control* condition.

Perspective-taking. Participants were shown a picture of a college-aged male named NS and were asked to write about a typical day in NS's life. Those in the *perspective-taking* condition were instructed to go through a typical day in his shoes, looking at the world through his eyes. Those in the *control* condition received no additional instructions.

Escalation of commitment. Participants then learned that NS was a hiring manager. After reviewing the resumes of "Ken Arnold" and "Tom Richards," NS had decided to hire Ken (for details see Bazerman et al., 1982). Participants learned that, although Ken seemed promising, his performance had since been poor: "The first big project Ken managed ran significantly over the allocated time schedule and budget. Ken also failed to secure an important contract with a big client, representing a significant financial loss to NS's company."

Participants learned that they would now assume the role of hiring manager and needed to conduct an annual review of Ken Arnold. Participants rated Ken's pay increase for the upcoming year (0-5%, half-point increments) and bonus vacation days (0-4, 1-day increments). Since the variables were on different scales, we standardized them. Because the standardized

variables were correlated r(54) = 0.37 and, consistent with previous studies (Bazerman et al., 1982), we averaged them to produce an escalation index, The tendency to invest further resources in pay and vacation time served as our measure of escalation of commitment.

Results and Discussion

As predicted, perspective-takers increased their investment in the chosen candidate more than control participants did, $t(52) = 2.138$, $p = 0.04$, $d = 0.59$ (see Table 1). These results provide strong support for our hypothesis that perspective-taking fuels escalation of others' commitments. In the first two experiments, vicarious justification of another's decision emerged using different escalation scenarios, different manipulations of perspective-taking, and different comparison conditions.

Experiment 3: Interdependence and Vicarious Self-Justification

Experiment 3 sought to extend the previous findings that psychological-connectedness fuels escalation, in several ways. First, we examined the effects of generalized psychological connection (interdependent mind-set). Second, to measure the experience of vicarious self-justification, we asked participants how they felt about themselves after learning the outcome of the first person's decision. We predicted that participants in the interdependent condition would vicariously feel worse and this would mediate their investment decisions.

Finally, we examined our hypotheses using economic majors – individuals well-versed in the irrationality of honoring sunk costs and the rational models of prospective decision-making (Arkes & Blumer, 1985). We predicted that, despite prior knowledge about rational decision-making, priming interdependence would motivate participants to honor the sunk costs of a previous decision-maker.

Participants and Design

Participants were 33 undergraduate economics majors (12 females), randomly assigned to either an *interdependent* prime or *independent* prime condition. Participants believed that they would participate in two separate experiments: a writing task followed by a decision-making task.

Interdependence. For the writing task, participants in the *interdependent* condition were instructed to write about an incident in which they worked with others to complete a task, focusing on the collaboration process. Those in the *independent* condition were instructed to write about an incident in which they worked alone to complete a task.

Escalation. Participants then followed the same procedures as Experiment 1, with two exceptions: 1) they learned nothing about (and saw no picture of) the previous participant and 2) they received no instructions about taking this person's perspective or remaining objective. In addition, we measured how participants felt after seeing the outcome of the initial participant's choice. They were asked: "After seeing the results of the participant's initial choice, how did you feel about yourself?" on a five-point scale ranging from "very negative" to "very positive."

Results and Discussion

As predicted, participants primed with interdependence invested significantly more in the previously-chosen division than participants primed with independence did, $t(31) = 2.67$, $p = 0.01$, $d = 0.96$ (see Table 1). Furthermore, participants in the interdependent condition reported feeling worse about themselves ($M = 3.00$ $SD = 0.43$) than participants in the independent condition did ($M = 3.67$ $SD = 0.97$); $t(31) = 2.26$, $p = 0.03$, $d = 0.81$). Self-evaluation mediated the relationship between interdependence and escalation: when self-evaluation and condition simultaneously predicted investment decisions, self-evaluation was significant ($B = -1.13$, $SE =$

0.50, $p = 0.03$), but condition was only marginally significant ($B = 1.58$, $SE = 0.89$, $p = 0.08$). We tested the overall significance of the mediator by constructing a 95% CI: if zero falls outside the 95% CI, the indirect effect is significant (Shrout & Bolger, 2002). The 95% CI = 0.04 to 2.12, demonstrating significant mediation. These results support the ability of psychological connections to produce vicarious self-justification and increased escalation, even for individuals trained in rational decision-making.

General Discussion

Across three experiments, using different instantiations of psychological-connectedness, escalation scenarios, and participant populations, we showed that psychologically-connected decision-makers escalate their investment in the failed decisions of others, vicariously justifying their earlier decision. People seem to escalate whenever they experience psychological connections – by taking the perspective of the decision-maker (Experiments 1-2), or by reflecting on interdependence more generally (Experiment 3). These effects held even when participants' training should have attuned them to the economic irrationality of escalation. The final study also demonstrated that vicarious dissatisfaction with the initial choice mediated the tendency for psychological connections to increase escalation.

Overall, these results paint a cautionary tale for reducing escalation: simply allocating multiple investment decision to different individuals may be insufficient. Real-world decision-makers often share a multitude of commonalities – locations (e.g., same department), attributes (e.g., gender), identities (e.g., university) – that create psychological connections. These results also imply that decision-makers in chronically-interdependent cultures (Markus & Kitayama, 1991), might be especially prone to escalating upon others' commitments, a fruitful avenue for future research.

Earlier, we described how President Johnson, Kennedy's fellow Democrat and running mate, escalated his predecessor's commitment to Vietnam. The 2008 U.S. Presidential race began as a referendum on the Iraq war, and it became clear that the Republican nominees were more committed to continuing and increasing their fellow Republican's initial decisions to invade Iraq. Our results suggest that the best remedy for escalation is not only to partition initial and subsequent decision-makers, but also to ensure they have minimal psychological connections. Introducing true outsiders into organizations or governments may be the difference between entrapment in endless cycles of failing investments and breaking free from the clutches of prior, failed decisions.

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Table 1

Mean level of investment (standard deviations in parentheses). Higher numbers indicate greater investment in the prior decision-maker's initial decision.

	Experiment 1	Experiment 2	Experiment 3
Condition	Manipulation: Perspective-Taking vs. Objective Escalation Scenario: Investment Decision	Manipulation: Perspective-Taking vs. Control Escalation Scenario: Hiring Decision	Manipulation: Interdependent vs. Independent Escalation Scenario: Investment Decision
	$ Million	Z-Scores	$ Million
Psychological Connection	5.29 (2.79)	0.23 (0.87)	5.45 (1.90)
Baseline (No Connection)	3.87 (2.13)	-0.23 (0.72)	3.33 (2.34)