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Security Seeking in a Regulatory Focus Whodunit: The Case of the Relative Orientation in Behavioral Economics

Abstract

[Excerpt] As a complement to other chapters in this handbook, this chapter's initial focus is about understanding security concerns in interdependent economic decision-making, that is, contexts wherein individuals are asked with distributing resources between two or more parties, typically themselves and another. The economics component of economic decision-making concerns the manufacturing, distribution, and exchange of resources, whether money or ornament-shaped chocolates. The decision-making component involves applying psychological principles, such as motivation, to understanding how individuals choose among alternatives. For these reasons, it is a topic that falls under the study of behavioral economics (Camerer & Loewenstein, 2004; De Cremer, Zeelenberg, & Murnighan, 2006).

It is the interdependent component of economic decision-making, however, that helps us investigate individuals' intentions to cooperate or compete, to explore self-interest and its manifestation in individuals' treatment (or lack thereof) of other parties. This intersection of topics allows us to answer the types of questions raised by examples like the one described above, such as, "Why might someone sacrifice her own absolute gains simply to avoid receiving less than someone else?" Understanding the answers to these kinds of questions about how resources are manufactured, distributed, and exchanged is a topic with great ramifications for, among other things, domestic and international politics (e.g., Lancaster, 2007; Waltz, 1979), the funding of research disciplines or functional areas within organizations, deal-making and dispute resolution, and basic survival functions, through the sharing of food, shelter, and other basic resources (e.g., Boyd & Silk, 2012; Hill, 2002).

Keywords

security, economic decision-making, orientation, behavioral economics

Disciplines

Human Resources Management | Industrial and Organizational Psychology | Organizational Behavior and Theory | Work, Economy and Organizations

Comments

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Security Seeking in a Regulatory Focus Whodunit
The Case of the Relative Orientation in Behavioral Economics

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One recent December, the first author came close to causing a new level of warfare between his daughters. The event began innocently enough. He was in the “Awesome Dad” mode, about to hand our chocolate caramels to his kids, both under the age of 10. The chocolates were wrapped in festive colors—red and green—and shaped like Christmas ornaments. The color of the wrapper made no difference in taste (as confirmed by Geoff’s “randomly controlled taste tests”). Pulling them out of the bag, Geoff could almost anticipate the competition that was about to erupt over the single green chocolate, yet the experimentalist in him let the scene play out. Each child was quick to make her appeal for why *she* should get the green one, complete with accusations of favoritism (“But you have her the special treat last time”), victimization (“You don’t care about me”), and deprivation (“I never even got to try the green one”). Even after being warned that continuing to protest would mean no one would receive any chocolate, they continued unabated. Each child would rather have *no chocolate* than let her sister receive the *more attractive* one.

As we soon conclude, we argue that these behaviors, exhibited over chocolates by children whose behaviors appear irrational, can (a) manifest over real economic outcomes, (b) with adults, and (c) originate from a meaningful, regularly occurring, and rational intention: the search for security. As a complement to other chapters in this handbook, this chapter’s initial focus is about understanding security concerns in interdependent economic decision-making, that is, contexts wherein individuals are asked with distributing resources between two or more parties, typically themselves and another. The economics component of economic decision-making concerns the manufacturing, distribution, and exchange of resources, whether money or ornament-shaped chocolates. The decision-making component involves applying psychological principles, such as motivation, to understanding how individuals choose among alternatives. For these reasons, it is a topic that falls under the study of behavioral economics (Camerer & Loewenstein, 2004; De Cremer, Zeelenberg, & Murnighan, 2006).

It is the interdependent component of economic decision-making, however, that helps us investigate individuals' intentions to cooperate or compete, to explore self-interest and its manifestation in individuals' treatment (or lack thereof) of other parties. This intersection of topics allows us to answer the types of questions raised by examples like the one described above, such as, "Why might someone sacrifice her own absolute gains simply to avoid receiving less than someone else?" Understanding the answers to these kinds of questions about how resources are manufactured, distributed, and exchanged is a topic with great ramifications for, among other things, domestic and international politics (e.g., Lancaster, 2007; Waltz, 1979), the funding of research disciplines or functional areas within organizations, deal-making and dispute resolution, and basic survival functions, through the sharing of food, shelter, and other basic resources (e.g., Boyd & Silk, 2012; Hill, 2002).

We focus on something emblematic about the motivations exhibited in the above example: Geoff thought his daughters would be most concerned with *absolute* value (whether or not they received a chocolate), but they were also concerned with *relative* value (avoiding getting the "worse" chocolate than the other child) This concern with relative economic value is regularly demonstrated and well established (e.g., Messick & Thorngate, 1967; Stouffer, Schuman, DeVinney, Star, & Williams, 1949). That said, it is not readily apparent how to reconcile a focus on relative outcomes—at sacrifice to one's own absolute outcomes—with existing theories about self-interest. The lens of economics theory (Mill, 1874/1968; Smith, 1776/1863) would consider the sacrifice of absolute in favor of relative outcomes irrational and non-normative, and existing psychological theories on self-interest (Deutsch, 1973; Kelley, Beckman, & Fischer, 1967; Pruitt & Rubin, 1986) would also find these outcome preferences difficult to explain.

However, based on our recent research (Gu, Bohm, & Leonardelli, 2013), we argue that such behavior is in many cases a natural manifestation of self-interest depending on how individuals conceptualize self-interest within their self-regulatory system. Specifically, we conclude that while a focus on absolute outcomes occurs when people pursue their interests by focusing on opportunity and

advancement, a focus on relative outcomes occurs when people pursue their interests by focusing on safety and security (Higgins, 1997). We begin by reviewing our theoretical approach to security, originating from regulatory focus theory (Higgins, 1997), and then review the economic decision-making literature on relative outcomes and discuss our research. Finally, we offer implications for how security seeking can affect different kinds of economic decision-making. In so doing, we also address how consequences are shaped by whether security seeking originates from community-level events.

A Regulatory Focus Approach to Understanding Security

Our perspective on how security motivation shapes interdependent economic decision-making originates from regulatory focus theory, which describes how individuals can take different means to approaching desired end states (Higgins, 1997; for a recent review, see Scholer & Higgins, 2011). A *promotion* focus refers to individuals approaching desired ends by pursuing their ideals, wishes, and aspirations, that is, by focusing on growth, nurturance, and achievement of positive outcomes. By contrast, a *prevention* focus refers to individuals approaching desired ends by pursuing their oughts, duties, and obligations, that is, by focusing on safety, security, and the prevention of negative outcomes. Although everyone values both advancement and security, in some situations security is emphasized more than advancement, and vice versa. For example, an individual is more likely to be concerned with safety, and therefore more likely to be in a prevention focus, when crossing a busy street. However, the same person would be more likely to be concerned with opportunity, and therefore more likely to be in a promotion focus, when buying a lottery ticket. In addition to situations that are more or less likely to induce a promotion or prevention focus, individuals can be chronically more promotion or prevention focused.

Regulatory focus has been connected to a variety of outcomes. Early research connected it to different emotional experiences (Higgins, 1987) as well as different means for goal attainment (e.g., Forster, Higgins, & Idson, 1998; Forster, Liberman, & Higgins, 2005; Higgins, Shah, & Friedman, 1997).

More recently, it has been demonstrated that regulatory focus affects such diverse outcomes as decision-making (e.g., Brockner, Paruchuri, Idson, & Higgins, 2009; Crowe & Higgins, 1997; Scholer, Zou, Fujita, Stroessner, & Higgins, 2010), self-evaluation (e.g., Leonardelli & Lakin, 2010; Leonardelli, Lakin, & Arkin, 2007), close relationships (e.g., Bohns & Higgins, 2011; Bohns et al., 2013; Molden, Lucas, Finkely, Kumashiro, & Rusbult, 2009; Righetti, Rusbult, & Finkenauer, 2010), group processes (e.g., Faddegon, Ellemers, & Scheepers, 2009; Faddegon, Scheepers, & Elleniers, 2008), and intergroup dynamics (e.g., Sassenberg & Woltin, 2008; Shah, Brazy, & Higgins, 2004; Trawalter & Richeson, 2006).

More importantly, for our purposes, regulatory focus has been shown to predict individuals' behavior in interdependent economic decision-making tasks (see Galinsky, Leonardelli, Okhuysen, & Mussweiler, 2005; more recently, Appelt & Higgins, 2010; Shalvi et al., 2013). Galinsky et al. (2005) found that negotiators with a promotion focus yielded better outcomes for themselves and greater joint gain than did negotiators with a prevention focus. Given the existing theories of self-interest in the negotiations literature, it may be tempting to conclude from Galinsky et al.'s (2005) data that, relative to a promotion focus, a prevention focus leads to a lower level of self-interest (Kelley et al., 1967) or a greater prosocial orientation (Deutsch, 1973; Pruitt & Rubin, 1986). However, we have argued instead that individuals in a promotion focus and individuals in a prevention focus simply manifest their self-interest in different ways (Go et al., 2013). While individuals in a promotion focus are more likely to exhibit the traditional form of self-interest described earlier, that is, a concern with absolute gain or maximizing the best possible outcome, individuals in a prevention focus are more likely to exhibit a concern with relative outcomes, or the difference between their outcomes and those of the other party.

The Difficulty of Explaining Relative Outcomes

Our general thesis is that the preferential regulation of relative outcomes is rooted in a rational pursuit of self-interest. Yet, for the most part, existing theories on self-interest cannot readily explain how sacrificing absolute value for the sake of relative gain could be considered a self-interested act. To be

sure, a focus on relative outcomes is a well-established phenomenon. As far back as Stouffer's work on relative deprivation (Stouffer et al., 1949) and Messick and Thorngate's (1967) demonstration of "relative gain," which we elaborate on later, we have seen repeated demonstrations of people exhibiting a focus on relative outcomes (e.g., Crosby, 1976; De Dreu & van Lange, 1995; Eek & Garling, 2006; Knight & Dubro, 1984; Loewenstein, Thompson, & Bazerman, 1989; Messick & McClintock, 1968; Pilluda & Murnighan, 1996; Schulz & May, 1989; Snidal, 1991; Tajfel, Billing, Bundy, & Flament, 1971). Relative outcomes matter, and they have implications for our interactions with close others, business partners, subordinates, group processes, and intergroup relations. However, to our knowledge, absent from this literature is an explanation that offers a rationalist account for individuals' preference for relative outcomes. Our research fills this gap by offering a self-interest account of individuals' preferences for relative compared to absolute outcomes.

Psychological Explanations of Self-Interest

The concept of self-interest as defined by psychologists has gradually evolved to incorporate forms of self-interest that extend beyond the limited definition of self-interest focused on maximizing personal absolute outcomes. However, even with this more nuanced understanding, it is still difficult to reconcile the pursuit of relative outcomes with existing theory. This evolving conceptualization of self-interest is perhaps illustrated most strongly by the literature on negotiations (for reviews, see Bazerman, Curhan, Moore, & Valley, 2000; Carnevale & De Dreu, 2006; Thompson, 1990). Early negotiations research began by investigating individual negotiators' self-interest exploring the conditions under which negotiators would exhibit different levels of aspiration (Hamner & Harnett, 1975; Siegel & Fouraker, 1960), goals (Locke & Latham, 1990; for a recent review, see Tasa, Whyte, & Leonardelli, 2013), or resistance to making concessions (Kelley et al' 1967). Underlying this research was an assumption that the higher a negotiator's aspirations were, the less they would concede and the more they would accumulate when an agreement was reached. In other words, the basic assumption behind this research

was that self-interest would ultimately lead to greater absolute gains, particularly through a resistance to concessions.

A major development in the negotiations literature was the acknowledgement that, beyond personal self-interest, individual negotiators could also at times exhibit a prosocial orientation wherein they sought to benefit both themselves and the other party (Deutsch, 1973; Pruitt, 1998; Pruitt & Rubin, 1986). According to dual concern theory (Pruitt, 1998), negotiators' motivations differed according to the orthogonal dimensions of "concern for self" and "concerns for other." Knowing where an individual negotiator fell on these two dimensions could then inform what strategies they used in the negotiation. For example, a more problem-solving approach is likely when a negotiator is high in both motives, but a more contentious approach is likely when a negotiator is low in concern for the other.

These theoretical advances did much to strengthen the explanatory power of self-interest in economic decision-making. In spite of such advances, however, this area of research has still not addressed the emphasis on relative gains illustrated in our opening example, treating it instead as a separate approach to studying its consequences for interdependence behaviors (for a review, see Au & Kwong, 2004 and Bogaert, Boone, & Declerck, 2008; e.g., De Dreu & van Lange, 1995; Karagonlar & Kuhlman, 2013; McClintock & Allison, 1989). Geoff's daughters were motivated by neither an absolute value orientation nor a prosocial orientation. For evidence of this relative value orientation, we turn to another area of research conducted by social psychologists on what we (Cu et al., 2013) have recently referred to as "interdependence orientations" and identify some anomalous findings.

Preferences for Relative Outcomes

In contrast to the negotiations literature, the interdependence orientations literature initially originated from research on experimental games (Messick & McClintock, 1968; Messick & Thorngate,

1967), and the topic soon expanded into multiple domains, including those related to intergroup relations (Tajfel et al., 1971). One of the methodological advances gained by this literature was a means of measuring motivation in game contexts, using what Messick and McClintock called a "decomposed game" (researchers have also referred to this type of measure as "payoff matrices" or "allocation matrices"). On this measure, individuals evaluate preferences for different types of payoffs to be given to their party. Crucially, however, each of these payoffs for their party is yoked to payoffs for another party. These decomposed games are specifically designed to distinguish between the different kinds of motivational orientations individuals may take in an interdependent context. Consider, for example, a choice between giving oneself \$10 and another party \$12, or oneself \$8 and the other party \$8. Given these options, an individual may not choose solely based on which outcome is best for them; the individual may also consider information about the other party's outcome, or, in a break from previous literatures, the individual may consider the difference between the two parties' outcomes. (See Figure 14.1 for an example.)

INSERT FIGURE 14.1 HERE

Within this literature, we see substantial evidence pointing to motivational orientations that are defined by the differences between outcomes (i.e., relative orientations; Crosby, 1976; Messick & Throngate, 1967; Snidal, 1991; Stouffer et al., 1949; Tajfel et al., 1971; Turner, 1975; Waltz, 1979). In their review of the interdependence literature, Gu et al. (2013) pointed out that individuals tend to exhibit two types of relative orientations. On one hand, individuals may seek *equality* (i.e., to minimize differences in outcomes between themselves and the other party); on the other hand, they may seek *relative gain* (i.e. to maximize the difference between their outcomes beyond what the other party receives). Particularly striking, accumulating evidence has demonstrated that individuals at times prefer to regulate relative outcomes even if that means their party receives less in terms of absolute value (e.g.,

Guth, Schmittberger, & Schwarz, 1982; Leonardelli & Brewer, 2001; Messick & Thorngate, 1967; Tajfel et al., 1971).

These relative orientations could be contrasted to orientations more focused on maximizing absolute outcomes, such as self gain (i.e., seeking to maximize outcomes for one's own party only) or joint gain (i.e., seeking to maximize outcomes for both parties). Gu et al. (2013) organized the orientations as part of a 2 X 2 matrix, with orientations differentiated by economic orientation (absolute, relative) and social orientation (prosocial, proself; see Table 14.1). Whereas previous theories in economics and psychology typically interpreted these outcome preferences as simply proself or prosocial (generally) or self gain or joint gain (specifically), it is more difficult to explain relative orientations using the existing theories of self-interest. This is the gap our research sought to fill we proposed and tested a model to predict when individuals would be more likely to pursue relative outcomes as opposed to absolute outcomes. Specifically, we have argued that the manner in which individuals pursue their own self-interest—with either a primary concern for security and safety or a primary concern for opportunity and advancement (Higgins, 1997; Higgins, Roney, Crowe, & Hymes, 1994)—can determine whether they are likely to pursue relative or absolute outcomes.

Relative Outcomes Are Explained by a Security Focus

We offered the following rationale: in interdependent contexts, absolute and relative outcomes offer different kinds of value. Absolute outcomes offer value in the form of increased opportunity: the more total resources an individual accumulates, the more opportunities she can access directly through her purchasing power. By contrast, the value offered by relative outcomes is largely symbolic, such as perceived status relative to others. If there is any tangible benefit, it is likely to occur when individuals wish to compete for the same outcome, an event that is possible but probabilistically unlikely.

When an individual is in a promotion focus, and therefore focused on opportunities for achievement and growth, she will be more likely to focus on maximizing value to ensure success. Consequently, individuals in a promotion focus will be more drawn to outcomes that offer the best chance for success. Given that absolute outcomes are usually more useful than relative outcomes, individuals in a promotion focus will be more drawn to absolute than relative outcomes. For example, when choosing between the two possible outcomes described earlier, an individual in a promotion focus will likely prefer the option of \$10 for self and \$12 for other over \$8 for self and \$8 for other, because the first option offers greater absolute value.

INSERT TABLE 14.1 HERE

By contrast, individuals in a prevention focus pursue desired goals by focusing on and ensuring against the possibility of loss. For example, one can secure a house through multiple routes, such as locking the doors and windows, setting the alarm, and informing the neighbors of one's absence. If an individual is in a prevention focus, she will ensure that all possible routes are secured before leaving. In interdependent decisions, a negative relative outcome could put an individual at a disadvantage, and thus someone in a prevention focus would be more concerned with relative outcomes than if she were in a promotion focus. With respect to the options described earlier, an individual in a prevention focus will prefer \$8 for self and \$8 for other over \$10 for self and \$12 for other, because the latter option puts her at a relative disadvantage.

We conducted three studies to test these predictions. The first used measures of interdependence orientations and a decomposed-game methodology to assess the different orientations endorsed by individuals in a promotion versus a prevention focus. Specifically, participants completed a regulatory focus manipulation in which they were randomly assigned to write about their current goals from the lens of either a promotion or a prevention focus, and then completed the ring measure (Griesinger &

Livingston, 1973; Liebrand, 1984), named such because the payoffs to the self and the other party are taken from the perimeter of a circle located in a self—other outcome plane (i.e., a figure where the x-axis represents outcomes for the self and the y-axis represents outcomes for the other party) The power of this method is that it allows researchers to use participants' responses to identify an extensive series of interdependence orientations (MacCrimmon & Messick, 1976; McClintock, 1972), including the four orientations of interest in our work (self gain, relative gain, joint gain, and equality), as well as altruism (exhibiting outcome preferences that favor the best outcome for the other party, regardless of what outcome the participant would receive). As mentioned earlier, previous research revealing that prevention-focused individuals negotiate worse outcomes for themselves might suggest that a prevention focus leads to a greater concern with or focus on the other party's interests. However, we found no evidence to support this possibility. Only 1 out of 184 participants exhibited altruism; the rest of the participants exhibited one of the four standard orientations.

The data revealed no association between regulatory focus and social orientation; individuals in a prevention focus were just as likely to be prosocial or proself as those in a promotion focus. However, there was a difference in participants' preferences for relative versus absolute outcomes. Among those participants with a prosocial orientation, a prevention focus was more strongly associated with a preference for equality (a prosocial concern with relative outcomes), while a promotion focus was more strongly associated with joint gain (a prosocial concern with absolute outcomes). Furthermore, among those with a proself orientation, a prevention focus was more strongly associated with a preference for relative gain, while a promotion focus was more strongly associated with a preference for self gain. Giving confidence to our results, in our second study we replicated these findings using a different measure (Bornstein et al., 1983) that allowed participants to exhibit multiple orientations simultaneously.

Finally, a third study sought to test these predictions behaviorally by putting absolute and relative value in direct competition with each other. To do so, we had participants play an ultimatum game (Guth

et al., 1982). Typically this game is conducted with two parties, a proposer and a responder. The proposer makes an offer to the responder for how a windfall of 810 should be divided between the two parties. The responder then decides whether to accept or reject the offer; if accepted, each party receives the proposed payout, but if rejected, both parties get nothing. Participants were randomly assigned to either a promotion or a prevention focus condition and then placed in the responder role and told that a purported proposer had made an offer in which the proposer would receive \$9 and the responder would receive \$1. This offer represented a positive absolute outcome for the responder (\$1 is better than nothing) but a negative relative outcome (\$1 is much less than \$9). According to our predictions, a prevention focus should lead individuals to reject such offers more than those with a promotion focus do. That's exactly what we found: close to 50% of our prevention-focused responders rejected the offer, whereas less than 20% of our promotion-focused responders rejected it.

This study also served to test our predicted mechanism for why regulatory focus would be associated with individual preferences for relative versus outcomes. Specifically, we theorized that individuals in a prevention focus would be especially concerned with the social status conferred by relative outcomes. Status refers to an individual's position or rank relative to others (Go et al., 2013). From this point of view, individuals with a prevention focus are not prosocial but instead concerned with the social consequences of their decision-making, namely, the degree to which their value or worth relative to others is determined by their economic preferences in interdependent decision-making.

As mentioned earlier, relative outcomes are believed to reflect the possibility of loss for individuals with a prevention focus. For the most part, this will mostly have a symbolic value and could therefore be interpreted by individuals in a prevention focus as indexing their social value relative to others. From this point of view, an offer in which the responder receives \$1 while the proposer receives 89 would be considered offensive and disrespectful—an indication that the responder has low social status. Consistent with this theorizing, the greater tendency for participants in the prevention focus

condition to reject the \$1 offer was mediated by the extent to which participants in this condition viewed the offer as disrespectful.

Overall, three studies supported the hypothesis that a prevention focus leads to a greater focus on relative outcomes, such as equality and relative gain, than a promotion focus, whereas a promotion focus is more concerned with absolute gain. Furthermore, we established that this focus on relative outcomes is the result of heightened concerns with social status for those seeking security. Our studies suggest that people's self-interested concerns with their own personal security or advancement can predict how they prefer to distribute resources between parties. We see a great deal of value in future pursuits building from this original research, for example, by situating the manifestation of security seeking and social comparison in economic decision-making more broadly. Moreover, we see that the different ways security seeking manifests across levels of analysis (via individual differences, community events, or, even inure broadly, cultural differences) may also have unique implications for social comparison and economic decision-making. Building from Gu et al.'s (2013) contributions, we now flesh out and consider sonic of these implications.

Situating a Security Focus Within Economic Decision-Making

Much of our theorizing so far has focused on explaining the manifestation of a security focus in the context of interdependent decision-making, and we have presented evidence for our theory that security concerns manifest as the regulation of relative economic outcomes. The concerns raised by a security focus (i.e., the possibility of loss leading to concerns with status or buying power) are inherent in sharing resources, occurring even in such trivial and minimal contexts as dividing red and green chocolates, suggesting to us that the apparent simplicity of such tasks hides deeper concerns. In the following sections, we consider how a prevention focus affects our perception of different types of resources, and how we choose to seek and spend our resources in different economic contexts.

Security Seeking and Resource Features

The type of goods. A striking aspect of our findings is that individuals in a prevention focus are willing to sacrifice absolute gains—a \$1 windfall in an ultimatum game or an ornament-shaped chocolate—to avoid relative disadvantage. The disadvantaged social status conveyed by receiving less than another party means that outcomes that represent gains in an absolute sense are in fact interpreted as losses by these individuals. Importantly, this concern with status is highlighted in situations like those we created in our studies—namely, decisions involving a simultaneous distribution of resources to two or more parties. That is, status concerns may not drive all economic decisions made by individuals in a prevention focus; rather, status concerns are likely to emerge in situations that allow for this interpretation of an absolute gain as a loss through the process of social comparison. Strip away the interdependence of the resource decision, and there is no basis for comparison. Hence, there should be a lower concern with status.

That said, many everyday economic decisions, which on the surface do not appear to be yoked to the outcomes of others, continue to have comparative aspects. Economic decisions are typically not based in a vacuum. For example, when offered jobs, individuals typically negotiate over their own individual salaries but use others' salaries (for similar work) as a basis of social comparison (Mellers, 1982). Others' outcomes serve as an important source of information by which to assess one's own outcomes and an additional standard by which to index loss. Individuals in a prevention focus may be particularly likely to use other people's outcomes as standards to guide their economic decisions, even when these decisions are not obviously comparative in nature. This prediction is consistent with recent research on regulatory focus theory, which has shown that individuals in a prevention focus seek to maintain the status quo or what is normatively appropriate (Zhang, Cornwell, & Higgins, 2014; Zhang, Higgins, & Chen, 2011).

Economists have identified certain types of resources for which the assessment of value is especially linked to social comparison. Such resources are known as positional goods (Frank, 1985;

Hirsch, 2012). For example, salaries and luxury cars are considered to be more positional goods because they are valued by comparison to what others have. By contrast, goods such as gas mileage and leisure time are considered less positional because they are valued on a more absolute level (Carlsson, Johansson-Stemnan, & Martinsson, 2007). In essence, on average, individuals care less about having a car that is more gas efficient than others' cars than they do about having a car that is more expensive than others' cars. Interestingly, our research suggests that people in a security mindset (a prevention focus) may be more concerned with the positional features of a purchase, or positional goods in general, because of their emphasis on relative value. Future research would benefit from investigating this prediction more rigorously.

Value-in-use versus value-in-exchange. Above, we highlighted the specific types of economic decisions that support the link between security concerns and a preference for relative over absolute value. Here we discuss the specific types of resources that support this link. A crucial distinction, made as far back as Smith (1776/1863), is that resources can have "value-in-use" or "value-in-exchange" (see also DeVoe & Iyengar, 2010). For those resources that have value-in-use, the resource is valued for the purpose it serves, whether as a good or service. Oranges and massages are purchased to meet the needs for food or for relaxation, respectively. Once that need is met, the item loses its value. By contrast, for those resources that have value-in-exchange, the resource is valued for the items and services (other resources) for which it can be exchanged. Examples of resources that have value-in-exchange include money and airline miles.

Gu et al. (2013) previously argued that the link between regulatory focus and interdependence orientations is specific to resources with exchange value. For the average individual, the advantages to accumulating value-in-use resources are limited. To illustrate, value-in-use is typically interpreted in the context of consumption (see also Loewenstein, 1999). For example, a person typically wishes to accumulate only the number of oranges needed to meet the need for food rather than to accumulate as

many oranges as possible (such accumulation creates other problems, such as storage and decay). There is similarly little advantage to accumulating relatively more oranges than another person. Because they will soon spoil, any status I acquire from having more oranges than you is likely to be short-lived. However, resources that have value-in-exchange can be accumulated indefinitely and bring increasing value. In other words, a person who has more oranges simply has more oranges, but a person who has more money has more opportunities and greater status. Stated differently, quantity is not the metric by which absolute and relative value are assessed for objects valued for their use. Rather, it may be that other features of the value-in-use resources are used to index absolute and relative value, such as quality and rarity respectively.

Of course, such perceptions will depend in substantial part on the circumstances of the individual seeking the resource. Resources that are ostensibly considered as valued for their use by consumers could in fact be valued in exchange. For example, farmers with orange groves may be more likely to value their oranges for their exchange value, as something to be sold, rather than for their value in use. The predictions of Cu et al. (2013) apply to resources that would be perceived by the individual as valued in exchange.

In addition, some resources are not easily categorizable as value-in-use or value-in-exchange. For example, knowledge is one such resource, in that it can simultaneously have value-in-use and value-in-exchange functions. Once an individual knows how to fish, she can catch her own fish (value-in-use), and she can use that knowledge to provide a service, such as teaching others how to fish (value-in-exchange). Further, research on interdependent decision-making has tended to focus on the distribution of finite amounts of resources, but knowledge remains a resource we can continually give to others. It is unclear how a security focus might affect the distribution of resources like knowledge, but this could be a worthwhile area for future research. Perhaps security seeking will influence the degree to which individuals hide knowledge from others (Connelly, Zweig, Webster, & Trougakos, 2012).

Resource acquisition versus distribution. Another intriguing question concerns the function served by emphasizing relative outcomes over absolute outcomes in interdependent group contexts. The study of interdependence psychology falls against the backdrop of what has been called the cooperation problem (West, El Mouden, & Gardner, 2011). The basic notion is this: why is it that people cooperate when, knowing that others will cooperate, it is in their best interest to defect? One potential answer to this question is that the individuals who choose to cooperate do so because they are focused on relative, rather than absolute, outcomes.

The regulation of relative outcomes, it has been argued, has played an important role in terms of maintaining group cooperation. It has been assumed that humans adapted to an environment wherein people lived as foragers (Tooby & Cosmides, 1988). Moreover, big game resources, such as those produced from a hunt, were scarce, and foraging groups benefited from sharing these resources, thereby greatly reducing the risks of starvation for the entire group (Boyd & Silk, 2012). Foragers who focused on their own absolute outcomes without concern for how resources would be distributed among the group would have been met with various forms of punishment (Boyd & Silk, 2012; Fehr & Fischbacher, 2003).

In such a hunter-gatherer environment, a focus on advancement and opportunity (a promotion focus) may have motivated the acquisition of resources, hence increasing self and joint gain. Conversely, a focus on security and safety (a prevention focus) may have motivated a fair distribution of resources, while also avoiding one's own relative disadvantage. Certainly, this is quite speculative. However, some predictions from this line of theorizing could be tested using modern cooperation games. For example, priming people with security concerns may make them less likely to defect in social dilemmas like commons and public goods games.

Wealth and the Pursuit of Security

A focus on security, as operationalized by a prevention focus, connects to concerns with status and relative economic outcomes, and as theorized in the previous section, we propose that a security focus

may motivate a greater pursuit of positional relative to non-positional goods and services, because such goods and services are believed to indicate greater status. This tendency to pursue goods as a means of maintaining relative status is sometimes referred to as "keeping up with the Joneses" (Gali, 1994).

However, the purchase of positional goods depends in part on the purchasing power of those individuals with heightened needs for security. For example, under conditions where resources are not as readily available (such as during an economic downturn), a purchase of a luxury vehicle cannot be afforded by most people. In such economic contexts, we believe that security concerns may manifest in different ways.

One possibility is that individuals may be more likely to identify lower-cost positional resources that are still able to convey status. For instance, when luxury cars are out of reach (or simply become too gauche to parade), certain types of clothing, handbags, and technologies—items that are not too pricey, but just pricey enough to indicate status—may become increasingly popular.

Another possibility for how people pursue security during tough economic times may be by embracing what we call a "Robin Hood ideology." We define such an ideology as the belief (or set of beliefs) that those less economically fortunate (the "have-nots") are justified in taking resources through whatever means necessary from those believed to be more fortunate (the "haves"). Financial strain, likely coupled with perceptions that the existing distribution of wealth is illegitimate, is likely to heighten this belief and may lead individuals with low levels of wealth to pursue feelings of security by supporting or engaging in illegal activity intended to redistribute wealth in more egalitarian ways. Such beliefs may even be precursors to economically motivated robberies and muggings, which may specifically target positional goods. Some research has connected perceptions of wealth differences to illegal activity, finding that car inspectors were more likely to pass cars that would have failed an emissions test were they standard rather than luxury vehicles (Gino & Pierce, 2010). Also suggestive of this linkage is evidence indicating that when employees feel they are being treated unfairly (i.e., when their perceived

status is threatened), they are more likely to retaliate against the organization to "even the score" (Cropanzano, Goldman, & Folger, 2003; Skarlicki & Folger, 1997). In addition to attempting to redistribute resources, individuals might also try to undermine others' outcomes to pursue a sense of security. For example, research has found that individuals tend to socially undermine someone else (e.g., destroy her ability to accomplish more positive outcomes; Duffy, Ganster, & Rigor, 2002) when they are envious of this person's achievements or possessions (Duffy, Scott, Shaw, Tepper, & Aquino, 2012). The conditions under which this envy and behavior manifest remain to be established, as well as the conditions under which security seeking will lead to positional purchasing or what might be considered a "Robin Hood"-like redistribution. Future research will benefit from investigating the extent to which a "Robin Hood" ideology is likely to be connected to a security focus, a concern with status, and a focus on relative outcomes.

A Security Focus Across Different Levels of Analysis

In our research, we have used a particular conceptual definition of security concerns (i.e., a prevention focus) to investigate the implications of such concerns for interdependent economic decision-making. Specifically, we have relied on situational manipulations of regulatory focus, which make concerns with either security or growth accessible to experimental participants for brief periods of time. However, in everyday life, concerns with security are likely to manifest in a variety of ways, as the chapters in this volume highlight. Here we discuss how manifestations of security focus manifest in community-level events.

Satisfaction With Interdependent Choices ("The Grass Is Greener")

The greater emphasis on relative versus absolute outcomes may also have implications for how regulatory focus influences overall satisfaction with interdependent outcomes. In economic interdependence, individuals with a prevention focus seek to avoid receiving outcomes that would leave them at a loss. What is perceived to be a loss or non-loss—a potential loss of status or power to another party—may be

subjective. Consider, for instance, a scenario wherein an individual is presented with a choice between five \$1 bills or one \$5 bill, wherein regardless of the option she chooses, another person will receive the remaining outcome. In terms of absolute value, the outcomes are exactly the same (\$5). However, an individual could still perceive these outcomes as differing in relative value if one were to use different evaluation criteria. For example, when using a convenience criterion, it may be considered advantageous to receive the \$5, as it is less money to carry. Conversely, it may be considered better to receive five \$1s, as it is easier to purchase items with more exact change. Depending on the evaluation criterion, either outcome could be perceived as a loss or non-loss.

At the very least, the individual with a prevention focus would be more likely to deliberate over how to evaluate such differences. Given that a prevention focus motivates the prevention of *any* possibility of loss, we expect such individuals will identify multiple criteria for determining which outcome is better (including the two listed above: easier to carry, exact change). The irony is, such deliberation makes both outcomes look like losses to someone in a prevention focus. Consequently, it may be difficult for these individuals to feel satisfied because they will always see the disadvantages of their own outcomes relative to the other person's; after all, any option is likely to have both advantages and disadvantages. Based on previous research, it is possible that such an obsession with upward social comparison will result in lower overall satisfaction with the selected alternative. Future research would benefit from testing this prediction.

The Community-Level Effects of Major Security Crises

A typical means of priming a security focus in our studies is to have participants write a brief essay related to security needs. This is called a prevention focus prime. In everyday life, events regularly occur that naturalistically result in the same kind of prevention-focused priming: an individual may nearly avoid a car accident, see a news story on a burglary in one's neighborhood, or be told by one's doctor to take better care of one's health. At times, an event may be so widespread that it primes an entire

community with a prevention focus. Relatively recent disasters (as of the writing of this chapter) such as 9/11 (occurring in 2001) and Hurricane Katrina (occurring in 2005) are two such events. The constant media coverage that typically follows such events may further reinforce this prevention focus prime, leading entire communities to behave like the chronically prevention-focused individuals described above. This would likely affect those indirectly and, directly affected by such community events. Some evidence supports these predictions: Carroll, Arkin, Seidel, and Morris (2009) revealed that traumatized hurricane survivors rate security higher than enhancement needs (enhancement needs have previously been associated with a promotion focus; Leonardelli et al., 2007).

We believe that examining the economic aftermath of such crises could potentially reveal interesting links between a security focus and interdependent economic decision-making for example, do people engage in more social comparison following a security crisis? As a consequence, do positional goods take on a different meaning? Or are tensions between the haves and the have-nots heightened? Are leaders who focus on ideals related to equality and fairness likely to fare better during times of crisis? These are interesting questions for future research.

Conclusion

The circumstances of ordinary life can easily put someone into a security mindset, or a prevention focus: the threat of terrorism, anxieties over a dismal economy, navigation of a dangerous intersection. Research we have conducted suggests that such a mindset can have important implications for how people think about the distribution of resources between parties. In our studies, individuals in a security mindset were concerned more with relative outcomes than those with a promotion focus, and in Study 3 (see “Relative Outcomes Are Explained by a Security Focus”), such outcomes were motivated by the perceived loss of social status. Consequently, rather than seeking to make as much money as possible, individuals in a security mindset are likely to be consumed by the possibility that relative economic outcomes have implications for themselves, such as social status/worth or buying power. Such a focus can

have important practical implications. On one hand, vigilance toward relative outcomes may serve to promote ideals of fairness in hard times. On the other hand, concerns with others have more than oneself may lead someone in a security focus to sabotage joint gain, causing everyone to receive less. In other words, from the mouths of babes, if I don't get the chocolate, no one gets the chocolate.

Note

1. Here, we use "relative value" in a strictly social sense, meaning how much an individual is gaining or losing *relative to another party*. "Absolute value" here refers to an individual's own value, although it too can be indexed by changes in an individual's *own economic outcomes* from a fixed reference point (gains/losses; e.g. Kahneman & Tversky, 1979).

References

- Appelt, K.C., & Higgins, E.T. (2010). My way: How strategic preferences vary by negotiator role and regulatory focus. *Journal of Experimental Social Psychology*, 46(6), 1138-1142.
- Au, W.T., & Kwong, J.Y.Y., (2004). Measurements and effects of social-value orientation in social dilemmas: A review. In R. Suleiman, D.V. Budescu, I. Fischer, & D.M. Messick (Eds.), *Contemporary psychological research on social dilemmas* (pp. 71-98). New York, NY: Cambridge University Press.
- Bazerman, M.H., Curhan, J.R., Moore, D.A., & Valley, K.L. (1000). Negotiation. *Annual Review of Psychology*; 51(1), 279-314.
- Isoagaert, S., Boone, C., & Declerck, C. (2008). Social value orientation and cooperation in social dilemmas: A review and conceptual model. *British journal of Social Psychology*, 47, 453-480.
- Bohns, V.K., & Higgins, E.T. (2011). Liking the same things, but doing things differently: Outcomes versus strategic compatibility in partner preferences for joint tasks. *Social Cognition*, 29, 497-527.
- Bohns, V.K., & Lucas, G.M., Molden, D.C., Finkel, E.J., Coolsen, M.K., Kumashiro, M., Rusbult, C.E., & Higgins, E.T. (2013). Opposites fit: Regulatory focus complementarity and relationship well-being. *Social Cognition*, 31, 1-14.
- Bornstein, G., Crum, L., Wittenbraker, J., Harring, K. Insko, C.A. & Thinaut, J. (1983). On the measurement of social orientations in the minimal group paradigm. *Psychology* (13(4), 321-350.
- Boyd, R., & Silk, J.B. (2012). *How humans evolved* (6th ed.). New York, NY: W.W. Norton.

- Brockner, J. Paruchuri, S., Idson, L.C., & Higgins, E.T. (2002). Regulatory focus and the probability estimates of conjunctive and disjunctive events. *Organizational Behavior and Human Decision Processes*, 87, 5-24.
- Camerer, C.F., & Loewenstein, G. (2004). Behavioral economics: Past, present, future. In C.F. Camerer, G. Loewenstein, & M. Rabin (Eds.), *Advances in behavioral economics* (pp. 3-51). Princeton, NJ: Princeton University Press.
- Carlsson, F. Johansson-Stenman, O., & Martinsson, P. (2007). Do you enjoy having more than others? Survey evidence of positional goods. *Economica*, 74(296), 586-598.
- Carnevale, P.J., & De Dreu, K.W. (2006). Motive: The negotiator's raison d'être. In L.L. Thompson (Ed.), *Negotiation theory and research* (p.p. 55-76). New York, NY: Psychology Press.
- Carroll, P.J., Arkin, R.M. Seidel, S., & Morris, J. (2009). The relative importance of needs among traumatized and non-traumatized samples. *Motivation and Emotion*, 33, 373-386.
- Connelly, C.E., Zweig, D. Webster, J. & Trougakos, J.P. (2012). Knowledge hiding in organizations. *Journal of Organizational Behavior*, 33(1), 64-88.
- Cropanzano, R., Goldman, B., & Folger, R. (2003). Deontic justice: The role of moral principles in workplace fairness. *Journal of Organizational Behavior*, 24(8), 1019-1024.
- Crosby, F. (1976). A model of egotistical relative deprivation. *Psychological Review*, 83, 85-113. doi: 10.1037/0033-295X.83.2.85
- Crowe, E., & Higgins, E.T. (1997). Regulatory focus and strategic inclinations: Promotion and prevention in decision making. *Organizational Behavior and Human Decision Processes*, 69, 117-132. doi:10.1006/obhd.1996.2675

- De Cremer, D., Zeelenberg, M., & Murnighan, J.K. (2006). Social animals and economic beings: On unifying social psychology and economics. In D., De Cremer, M. Zeelenberg, & J.K. Murnighan (Eds.) *Social psychology and economics* (pp. 3-14). Mahwah, NJ: Lawrence Erlbaum.
- De Dreu, C.K.W., & Van Lange, P.A.M. (1995). The impact of social value orientations on negotiator cognition and behavior. *Personality and Social Psychology Bulletin*, 21, 1178-118. doi: 10.1177/01461672952111006.
- Deutsch, M. (1973). *The resolution of conflict: Constructive and destructive processes*. New Have, CT: Yale University Press.
- DeVoe, S.E., & Iyengar, S.S. (2010). The medium of exchange matters: What's fair for goods is unfair for money. *Psychological Science*, 21, 159-162. doi: 10.1177/0956797609357749
- Duffy, M.K., Ganster, D.C., & Pagon, M. (2002). Social undermining in the workplace. *Academy of Management Journal*, 45(2), 331-351.
- Duffy, M.K., Scott, K.L. Shaw, J.D., Tepper, B.J., & Aquino, K. (2012). A social context model of envy and social undermining. *Academy of Management Journal*, 55(3), 643-666.
- Eek, D., & Garling, T. (2006). Prosocial prefer equal outcomes to maximizing joint outcomes. *British Journal of Social Psychology*, 45(2), 321-337. doi: 10.1348/014466605X52290
- Faddegon, K. Ellemers, N., & Scheepers, D. (2009). Eager to be the best, or vigilant not to be the worst: The emergence of regulatory focus in disjunctive and conjunctive group tasks. *Group Processes & Intergroup Relations*, 12(5), 653-671.
- Faddegon, K., Scheepers, D., & Ellemers, N. (2008). If we have the will, there will be a way: Regulatory focus as a group identity. *European Journal of Social Psychology*, 38(5), 880-895.
- Fehr, E., & Fischbacher, U. (2003). The nature of human altruism. *Nature*, 425(6960), 785-791.

- Forster J., Higgins, E.T., & Idson, L.C. (1998). Approach and avoidance strength during goal attainment: Regulatory focus and the “goal looms larger” effect. *Journal of Personality and Social Psychology*, 75(5), 1014-1031.
- Forster, J., Liberman, N., & Higgins, E.T. (2005). Accessibility from active and fulfilled goals. *Journal of Experimental Social Psychology*, 41(3), 220-239.
- Frank, R.H. (1985). The demand for unobservable and other non positional goods. *American Economic Review*, 75(1), 101-116.
- Gali, J. (1994). Keeping up with the Joneses: Consumption externalities, portfolio choice, and asset prices. *Journal of Money, Credit and Banking*, 26(1), 1-8.
- Galinsky, A.D., Leonardelli, G.J., Okhuysen, G.A., & Mussweiler, T. (2005). Regulatory focus at the bargaining table: Promoting distributive and integrative success. *Personality and Social Psychology Bulletin*, 31(8), 1087-1098. doi:10.1177/0146167205276429
- Gino, E., & Pierce, L. (2010). Robin Hood under the hood: Wealth-based discrimination in illicit customer help. *Organization Science*, 21(6), 1176-1194.
- Griesinger, D.W., & Livingston, J.W. (1973). Toward a model of interpersonal orientation in experimental games. *Behavioral Science*, 18, 173-188.
- Gu, J., Bohns, V., & Leonardelli, G.J. (2013). Regulatory focus and interdependent economic decision-making. *Journal of Experimental Social Psychology*, 49(4), 692-698.
doi:10.1016/j.jesp.2012.11.008
- Guth, W., Schmittberger, R., & Schwarze, B. (1982). An experimental analysis of ultimatum bargaining. *Journal of Economic Behavior and Organization*, 3, 367-388. doi:10.1016/0167-2681(82)90011-

- Hamner, W.C., & Harnett, D.L. (1975). The effects of information and aspiration level on bargaining behavior. *Journal of Experimental Social Psychology*, 11, 329-342.
- Higgins, E.T. (1987). Self-discrepancy: A theory relating self and affect. *Psychological Review*, 94(3), 319-340.
- Higgins, E.T. (1997). Beyond pleasure and pain. *American Psychologist*, 52, 1280-1300.
doi:10.1037//0003-066X.52.12.1280
- Higgins, E.T., Roney, C.J.R., Crowe, E., & Hymes, C. (1994). Ideal versus ought predilections for approach and avoidance: Distinct self-regulatory systems. *Journal of Personality and Social Psychology*, 66(2), 276-286. doi:10.1037//0022-3514.66.2.276
- Higgins, E.T., Shah, J., & Friedman, R. (1997). Emotional responses to goal attainment: Strength of regulatory focus as moderator. *Journal of Personality and Social Psychology*, 72(3), 515-525.
- Hill, K. (2002). Altruistic cooperation during foraging by the Ache, and the evolved human predisposition to cooperate. *Human Nature*, 13(1), 105-128.
- Hirsch, E. (2012). *Social limits to growth*. New York, NY: Routledge.
- Kahneman, D., & Tversky, A. (1979). Prospect theory: An analysis of decision under risk. *Econometrica: Journal of the Econometric Society*, 47(2), 263-291.
- Karagonlar, G., & Kuhlman, D.M. (2013). The role of social value orientation in response to an unfair offer in the ultimatum game. *Organizational Behavior and Human Decision Processes*, 120(2), 228-239.
- Kelley, H.H., Beckman, L.L., & Fischer, C.S. (1967). Negotiating the division of a reward under incomplete information. *Journal of Experimental Social Psychology*, 3(4), 361-398.

- Knight, G.P., & Dubro, A.F. (1984). Cooperative, competitive, and individualistic social values: An individualized regression and clustering approach. *Journal of Personality and Social Psychology*, 46(1), 98-105. doi:10.1037//0022-3514.46.1.98
- Lancaster, C. (2007). *Foreign aid: Diplomacy, development and domestic politics*. Chicago, IL: University of Chicago Press.
- Leonardelli, G.J., & Brewer, M.B. (2001). Minority and majority discrimination: When and why. *Journal of Experimental Social Psychology*, 37(6), 468-485.
- Leonardelli, G.J., & Lakin, J.L. (2010). The new adventures of regulatory focus: Self-uncertainty and the quest for diagnostic feedback. In R.M. Arkin, K.C. Oleson, & P.J. Carroll (Eds.), *The uncertain self: A handbook of perspectives from social and personality psychology* (pp. 249-265). Mahwah, NJ: Lawrence Erlbaum.
- Leonardelli, G.J., Lakin, J.L., & Arkin, R.M. (2007). A regulatory focus model of self-evaluation. *Journal of Experimental Social Psychology*, 43(6), 1002-1009. doi:10.1016/j.jesp.2006.10.021
- Liebrand, W.B.G. (1984). The effect of social motives, communication and group size on behavior in an N-person multi-stage mixed-motive game. *European journal of Social Psychology*, 14, 239-264. doi:10.1002/ejsp.2420140302
- Locke, E.A., & Latham, G.P. (1990). *A theory of goal setting and task performance*. Englewood Cliffs, NJ: Prentice Hall.
- Loewenstein, G. (1999). Because it is there: The challenge of mountaineering . . . for utility theory. *Kyklos*, 52(3), 315-343.
- Loewenstein, G.E, Thompson, L., & Bazerman, M.H. (1989). Social utility and decision making in interpersonal contexts. *Journal of Personality and Social Psychology*, 57(3), 426-441. doi:10.1037//0022-3514.57.3.426

- MacCrimmon, K.R., & Messick, D.M. (1976). A framework for social motives. *Behavioral Science*, 21, 86-100.
- McClintock, C.G. (1972). Social motivation: A set of propositions. *Behavioral Science*, 17, 438-454.
- McClintock, C.G., & Allison, S.T. (1989). Social value orientation and helping behavior. *Journal of Applied Social Psychology*, 19(4), 353-362.
- Mellers, B.A. (1982). Equity judgment: A revision of Aristotelian views. *Journal of Experimental Psychology: General*, 111(2), 242-270.
- Messick, D.M., & McClintock, C.G. (1968). Motivational bases of choice in experimental games. *Journal of Experimental Social Psychology*, 4(1), 1-25. doi: 10.1016/0022-1031(68)90046-9
- Messick, D.M., & Thorngate, W.B. (1967). Relative gain maximization in experimental games. *Journal of Experimental Social Psychology*, 3(1), 85-101. doi: 10.1016/0022-1031(67)90039-X
- Mill, J.S. (1874/1968). *Essays on some unsettled questions of political economy* (2nd ed.). New York, NY: Augustus M. Kelley.
- Molden, D.C., Lucas, G.M., Finkely, Kumashiro, M., & Rusbult, C.E. (2009). Perceived support for promotion-focused and prevention-focused goals: Associations with well-being in unmarried and married couples. *Psychological Science*, 20, 787-793.
- Pillutla, M.M., & Murnighan, J.K. (1996). Unfairness, anger, and spite: Emotional rejections of ultimatum offers. *Organizational Behavior and Human Decision Processes*, 68(3), 208-994.
- Pruitt, D.G. (1998). Social conflict. In D. Gilbert, S.T. Fiske, & G. Lindzey (Eds.), *Handbook of social psychology* (4th ed., Vol. 2, pp. 89-150). New York, NY: McGraw-Hill.
- Pruitt, D.G., & Rubin, J.Z. (1986). *Social conflict: Escalation, stalemate, and settlement*. New York, NY: Random House.

- Righetti, E, Rusbult, C., & Finkenauer, C. (2010). Regulatory focus and the Michelangelo phenomenon: How close partners promote one another's ideal selves. *Journal of Experimental Social Psychology*, 46(6), 972-985.
- Sassenberg, K., & Woltin, K.A. (2008). Group-based self-regulation: The effects of regulatory focus. *European Review of Social Psychology*, 19(1), 126-164.
- Scholer, A.A., & Higgins, E.T. (2011). Promotion and prevention systems: Regulatory focus dynamics within self-regulatory hierarchies. In K.D. Vohs & R. Baumeister (Eds.), *Handbook of self-regulation: Research, theory, and application* (pp. 143-161). New York, NY: Guilford.
- Scholer, A.A., Zou, X., Fujita, K., Stroessner, S.J., & Higgins, E.T. (2010). When risk seeking becomes a motivational necessity. *Journal of Personality and Social Psychology*, 99(2), 215-231.
doi:10.1037/a0019715
- Schulz, U., & May, T. (1989). The recording of social orientations with ranking and pair comparisons procedures. *European Journal of Social Psychology*, 19, 41-59. doi:10.1002/ejsp.2420190105
- Shah, J.Y., Brazy, P.C., & Higgins, E.T. (2004). Promoting us or preventing them: Regulatory focus and manifestations of intergroup bias. *Personality and Social Psychology Bulletin*, 30, 433-446.
- Shalvi, S., Reijseger, G., Handgraaf, M.J., Appelt, K.C., ten Velden, E.S., Giacomantonio, M., & De Dreu, C.K. (2013). Pay to walk away: Prevention buyers prefer to avoid negotiation. *Journal of Economic Psychology*, 38, 40-49.
- Siegel, S., & Fouraker, L. E. (1960). *Bargaining and group decision making: Experiments in bilateral monopoly*. New York, NY: McGraw-Hill.
- Skarlicki, D.P., & Folger, R. (1997). Retaliation in the workplace: The roles of distributive, procedural, and interactional justice. *Journal of Applied Psychology*, 82(3), 434-413.

- Smith, A. (1776/1863). *An inquiry into the nature and causes of the wealth of nations*. Edinburgh: A. and C. Black. Retrieved from Google Books, December 8, 2013.
- Snidal, D. (1991). Relative gains and the pattern of international cooperation. *American Political Science Review*, 85, 701-726.
- Stouffer, S.A., Schuman, E.A., DeVinney, L.C., Star, S.A., & Williams, R.13. (1949). *The American soldier: Adjustment during army life* (Vol. 1). Princeton, NJ: Princeton University Press.
- Tajfel, H., Billig, M., Bundy, R., & Flament, C. (1971). Social categorization and intergroup behavior. *European Journal of Social Psychology*, 1, 149-178. doi:10.1002/ejsp.2420010202
- Tasa, K., Whyte, G., & Leonardelli, G.J. (2013). Goals and negotiation. In E.A. Locke & GP. Latham (Eds.), *New developments in goal setting and task performance* (pp. 397-414). New York, NY: Routledge.
- Thompson, L. (1990). Negotiation behavior and outcomes: Empirical evidence and theoretical issues. *Psychological Bulletin*, 108(3), 515-532.
- Tooby, J., & Cosmides, L. (1988). The evolution of war and its cognitive foundations. *Institute for Evolutionary Studies Technical Report*, 88(1), 1-15.
- Trawalter, S., & Richeson, J.A. (2006). Regulatory focus and executive function after interracial interactions. *Journal of Experimental Social Psychology*, 42(3), 406-412.
- Turner, J.C. (1975). Social comparison and social identity: Some prospects for intergroup behaviour. *European Journal of Social Psychology*, 5(1), 5-34. doi:10.1002/ejsp.2420050102
- Waltz, K. (1979). *Theory of international politics*. New York, NY: Random House.
- West, S.A., El Mouden, C., & Gardner, A. (2011). Sixteen common misconceptions about the evolution of cooperation in humans. *Evolution and Human Behavior*, 32(4), 231-262.

Zhang, S., Cornwell, J.E., & Higgins, E.T. (2014). Repeating the past: Prevention focus motivates repetition, even for unethical decisions. *Psychological Science*, 25(1), 179-187.

Zhang, S., Higgins, E.T., & Chen, G.Q. (2011). Managing others like you were managed: How prevention focus motivates copying interpersonal norms. *Journal of Personality and Social Psychology*, 100, 647-663. doi :10.1037/a0021750

Figure 14.1

These are the potential rewards for:

Your party	7	8	9	10	11	12	13	14	15	16	17	18	19
Other party	1	3	5	7	9	11	13	15	17	19	21	23	25

Figure 14.1. This particular example is adapted from Tajfel et al.'s (1971) allocation matrices (Matrix Type B; Experiment 2). Participants are instructed to select one column of numbers from the above choices available. For anyone wishing to collect data as well as quantify and analyze participants' responses to this measure or others, we highly recommend reading the source material on how to properly analyze responses.

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Table 14.1. Interdependence Orientations Differentiated by Social Orientation (Prosocial, Proself) and Economic Orientation (Relative, Absolute)

	<i>Relative</i>	<i>Absolute</i>
Prosocial	Equality	Joint gain
Proself	Relative gain	Self gain

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