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Financial Vulnerability and the Reproduction of Disadvantage in Economic Exchanges

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Integrative value generation through negotiated business deals is a fundamental way in which organizations and economic systems attain economic benefits. It is also an important way in which individuals can improve their financial situation. We propose that individuals most in need of improving their financial standing, those in a financially vulnerable situation, are least likely to reap the benefits of integrative value generation. We theorize that financial vulnerability induces a more zero-sum construal of success, or a view that success for one person must come at another person's success. A more zero-sum construal of success, in turn, hampers negotiators' ability to realize integrative potential in negotiations. In a large archival dataset (N = 191,648), we found evidence that various proxies of financial vulnerability are associated with a more zero-sum construal of success. In two subsequent face-to-face negotiation studies, we found that financial vulnerability, whether measured or induced experimentally, undermined integrative value generation. The final two-part study found evidence of the hypothesized psychological process. Taken together, our studies uncover a fundamental pathway through which the disadvantage of financially vulnerable people is reproduced through economic exchanges.

Keywords: negotiation, integrative value generation, financial vulnerability, low-income workers

Negotiation is a fundamental value-generating activity permeating organizations and economic systems (Thompson, Wang, & Gunia, 2010). Many organizational endeavors are realized through negotiated business deals, for example through interactions with customers, suppliers, prospective employees, or potential business partners (Luecke, 2003). In many cases, business negotiations afford the opportunity for integrative value generation, colloquially referred to as "win-win" agreements, or agreements that "expand the pie" (Walton & McKersie, 1965). In such situations, it is possible to achieve higher joint outcomes by conceding on issues that are of low priority to the self but of high priority to the other party in return for obtaining concessions on issues that are high priority to the self but low for the other party. Thus, integrative value generation in negotiations presents an important way in which individuals and organizations can advance their economic outcomes (Rubin, Pruitt, & Kim, 1994).

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Given the economic benefits of integrative value generation, one might expect that individuals who are financially vulnerable, and thus most in need economically, would be most invested in reaping the benefits of integrative value generation. There are millions of workers living at or below the poverty line in the U.S. alone (Proctor, Semega, & Kollar, 2016), and billions across the globe (World Bank, 2018). Many of them work as low-level employees in organizations. Even in prestigious occupations, entry-level positions often involve low compensation and potentially mean several years of financial vulnerability for workers entering such professions (Lee & Mather, 2008). In the current research, we propose that financial vulnerability has unexpected psychological consequences that ultimately undermine integrative value generation, reducing business value generated for broader organizational and economic systems, and reducing vulnerable workers' economic opportunities.

We construct our theoretical model by drawing on social cognition principles of *sampling-based belief formation* and *category-driven social cognition* (Denrell & Le Mens, 2007; Fiske & Taylor, 2013). We argue that financial vulnerability alters people's generalized assumptions about the nature of success, such that financially vulnerable individuals will more strongly believe that the success of one person needs to come at the expense of the success of another person (i.e., they will construe success in a more zero-sum manner). We further argue that a more zero-sum construal of success among the financially vulnerable will make them less likely to realize the potential for integrative value generation. We tested the idea that financial vulnerability is associated with a

more zero-sum construal of success using a large-scale dataset with responses from 191,648 participants surveyed across 90 countries and 25 years. We conducted follow-up laboratory studies in which we either measured participants' objective financial standing or manipulated the extent to which they felt financially vulnerable, and we observed consequences for integrative value generation in actual negotiations with financial outcomes (Studies 2a–3). Study 3 used a two-step design to test the proposed role of a zero-sum construal of success, as well as potential alternative mediators of the effect.

Our article contributes to the emerging research on the role of financial vulnerability in core phenomena of interest to organizations. There is a growing realization in organizational (Leana, Mittal, & Stiehl, 2012) as well as broader social science (Henrich, Heine, & Norenzayan, 2010) that the theoretical and empirical focus in the literature is heavily biased in favor of those who are relatively well-off. Leana et al. (2012) show that only a small fraction of studies among top publications in management focus on financially vulnerable employees. More importantly, even when past organizational research did sample low-income workers, the substantive theoretical focus was rarely on understanding the psychology and behavior of such employees. Leana and Meuris (2015) note that employee financial standing "received relatively little attention in organizational research as a driver of employee attitudes, affect, and behavior, despite its importance in people's lives" (p. 56). In a similar vein, Christie and Barling (2009) note that variables capturing employees' financial situation, such as income, have "usually been treated as nuisance variables whose influence must be excluded" (Christie & Barling, 2009, p. 1475). By uncovering a relationship between financial vulnerability and a core organizationally relevant phenomenon—integrative value generation through business deals—our research significantly extends the understanding of how financial vulnerability shapes workers' psychology and behavior. We show that a large segment of the workforce might be psychologically inhibited in situations that are essential to value generation both for them as well as for organizational and economic systems.

The same insight represents a contribution to the literature on sources of inequality and stratification. Macrolevel perspectives on stratification noted that disadvantage tends to reproduce itself, yet specific individual-level pathways through which this occurs are not well understood (Corcoran, 1995; Duncan, Yeung, Brooks-Gunn, & Smith, 1998; Haushofer & Fehr, 2014). Given the importance of behaviors studied in the organizational literature (including integrative value generation) for economic advancement, the fact that the organizational literature largely ignored financial vulnerability as a factor makes it unsurprising that the understanding of individual pathways of disadvantage reproduction is limited. We highlight the utility of studying microlevel scaffolding of the macrolevel issues related to inequality and disadvantage. In so doing, we also address a long-standing concern regarding a disconnect between micro and macro levels of analysis in organizational and social science focusing on disadvantage. For example, Baron and Pfeffer lament that the literature on sources of inequality and disadvantage lacks "any attention to the "micro-macro" connections—between social structures, institutions, and organizations, and, cognitions, perceptions, interests, and behaviors at the individual or small-group level" (Baron & Pfeffer, 1994, p. 191).

Finally, we contribute to the negotiation literature. Negotiation scholars long argued that the assumption that success is zero-sum in negotiation situations (also called fixed-pie bias) is the most important barrier to integrative value generation (Chou, Halevy, Galinsky, & Murnighan, 2017; de Dreu, Koole, & Steinel, 2000; Pinkley, Griffith, & Northcraft, 1995). Given the importance of the extent to which people construe success in negotiation in a zero-sum manner (i.e., hold a fixed-pie perception), relatively little is known about factors that contribute to this obstacle to successful negotiations, with research identifying only a few antecedents (Gelfand & Christakopoulou, 1999; Peng, Dunn, & Conlon, 2015; Pietroni, Van Kleef, De Dreu, & Pagliaro, 2008). Our research adds to this important body of knowledge by locating a major, pervasive, and tremendously socially important factor—financial vulnerability—explaining why a large sector of the workforce might construe success in negotiation in a zero-sum manner. Finally, our work draws attention to an overlooked aspect of the social implications of negotiations. Most work on negotiation and disadvantage looks at how negotiation contributes to gender issues (Kray, Galinsky, & Thompson, 2002; Nelson, Bronstein, Shacham, & Ben-Ari, 2015). Our work demonstrates that negotiation also plays a notable role in the advancement potential of a hitherto overlooked but particularly vulnerable segment of employees, hopefully opening avenues for future negotiation research on this problem.

Theory

Financial Vulnerability Prompts a Generalized Zero-Sum Construal of Success

In the economics and psychology literatures, financial vulnerability is conceptualized as a continuous indicator of a person's ability to buffer various shocks in life through material resources (Anderloni, Bacchiocchi, & Vandone, 2012). For example, a person can be financially vulnerable due to a lack of material resources that would allow the person to meet increased expenses due to an unexpected illness. As such, financial vulnerability is primarily a function of a person's level of disposable material resources. This view is consistent with research on the effect of finances on life satisfaction (Furnham, 2014; Johnson & Krueger, 2006), which suggests that "money protects people from unfortunate and unforeseen perturbations in life" (Vohs, Mead, & Goode, 2008, p. 208).

Recent research in psychology, behavioral economics, and, increasingly, organizational sciences, examines behavioral implications of financial vulnerability with the goal of understanding and alleviating challenges that financially vulnerable individuals face (Hall, Zhao, & Shafir, 2014; Leana & Meuris, 2015; Meuris & Leana, 2015). For example, Meuris and Leana (2018) found evidence that financial concerns, a consequence of financial vulnerability, undermine working memory, and in turn cause accidents among truck drivers. As their research highlights, investigating psychological consequences of financial vulnerability can uncover sources of important personal as well as organizational problems. In a similar vein, we argue that financial vulnerability will have a psychological influence on a generalized belief that is essential for integrative value generation, concerning the extent to which success is viewed as a zero-sum good.

The extent to which people construe success in a zero-sum manner is one of the lay theories (implicit or naïve theories), or a subjective belief people hold about the nature and causes of events in the world (Anderson & Lindsay, 1998). For example, lay theories about intelligence may vary in terms of whether intelligence is thought of as fixed or malleable. When people do not see intelligence as malleable, they are less motivated to engage in learning and invest in increasing their intellectual abilities (Blackwell, Trzesniewski, & Dweck, 2007; Mangels, Butterfield, Lamb, Good, & Dweck, 2006). The extent to which people construe success in a zero-sum manner concerns lay beliefs about the extent to which another's success is viewed as exhausting a limited pool of successful outcomes versus a view that success is more of a good that can grow so there is enough for everyone. As with lay theories of intelligence, construal of success can shape behavior in powerful ways. For example, a more zero-sum construal of success may make people more negative toward immigrants (Esses, Jackson, & Armstrong, 1998), concerned about "reverse racism" (Norton & Sommers, 2011), and less helpful at work (Sirola & Pitesa, 2018). As we explain in more detail below, how people construe success has been shown to play a particularly important role in the context of negotiations affording the opportunity for integrative value generation. We explain first why financial vulnerability would make people construe success in a more zero-sum manner.

The social cognition principle of *sampling-based belief formation* suggests that people's construal of the different aspects of the social world is strongly influenced by their idiosyncratic experience sampling. Experiences sampling is limited by the situations and situational constraints specific to each individual that limit people to a subset of possible experiences (Denrell, 2005). Experiences are thus shaped by the circumstances a person is born into and the subsequent choices and constraints idiosyncratic to each person. As we detail below, more (compared to less) financially vulnerable people can be expected to sample (in private life, at work, and in their own thoughts), on average, fewer experiences whereby wealth is generated anew.

Experiences with wealth being generated anew make it salient to individuals that one person's gain does not need to come at the expense of another's, as the situation signals that the overall pool of valued outcomes is expandable. Through repeated exposure to such situations, people can be expected to form a generalized belief about success whereby those who have more experience with wealth being generated anew will come to see success as more expandable and thus less zero-sum in general. In contrast, people who have less experience with wealth being generated anew should be more likely to view the pool of valued outcomes as fixed. Logically, such people would be more likely to assume that the success of one person can primarily come at the expense of someone else's, as it would be less likely to occur to them that the pool of valued outcomes can be expanded, given their more limited experience with this happening.

In their personal life outside of work, financially vulnerable people tend to be concentrated in neighborhoods different from those populated by people who are less financially vulnerable. This type of economic segregation, known as "neighborhood effects" (Sampson, Morenoff, & Gannon-Rowley, 2002), is documented extensively in sociology and economics. Residential segregation based on economic status means that people varying in their financial security are geographically distributed in a way that makes them disproportionally more likely to encounter people who are financially similar than financially dissimilar to them. There is a much lower likelihood for more (compared to less) financially vulnerable people to find themselves in an environment in which new wealth is generated and success of one person does not have to come at the expense of another.

Similarly, in the work domain, financially vulnerable workers generally occupy jobs that are not well paid and that entail occupational experiences removed from key domains underlying innovation, investment, and growth (Klein & Rones, 1989). Economic growth is driven by technological advances that allow increases in worker productivity (Aw, Roberts, & Winston, 2007; Nelson & Phelps, 1966). People working for lower wages are those performing the kind of work that is relatively low in productivity (Entorf, Gollac, & Kramarz, 1999; Theodos & Bednarzik, 2006). Low-productivity jobs tend to be segregated in terms of everyday experience from high-productivity jobs that underlie and afford exposure to domains of economic activity in which value is created anew (e.g., technology development, efficiency increases through organizational restructuring, etc.).

Even beyond direct differences in exposure to cases of new wealth generation through private and work life, financial concern might relate to differences in the sampling of introspective experiences relevant to whether value is construed in a zero-sum manner. A subjective salience of financial concern might conjure up thoughts of difficulty of generating wealth anew. People who are more relative to less financially vulnerable spend much more time worrying about finances (Marjanovic, Greenglass, Fiksenbaum, & Bell, 2013; Shah, Zhao, Mullainathan, & Shafir, 2018). Such cognitions regarding the difficulty of generating new wealth can represent another form of experience sampling relevant to thoughts about the ease with which wealth can be generated anew versus only at the expense of others.

People's idiosyncratic experiences, in turn, influence their construal of the state of affairs in the world because people anchor on their personal experiences when forming beliefs about external phenomena. For example, people believe that others share their preferences, expectations, and opinions to a greater extent than is the case (Cronbach, 1955; Ross, Greene, & House, 1977). The reason for this sampling-based belief formation process is that when thinking about the state of affairs in the world (e.g., how hard it is to generate economic value anew?), people first attend to their personal situation (e.g., how hard it is *for me* to generate economic value anew?), thereby anchoring their estimates. People then adjust from the anchor, but most often insufficiently, to come up with an estimate about the general state of affairs in the world (Krueger, Acevedo, & Robbins, 2006; Ross et al., 1977; Van Boven & Loewenstein, 2003).

There is evidence from several domains that people make inferences about the state of affairs in the world by anchoring on their personal situation. For example, people's expectations of how available and dedicated people generally are in relationships (attachment styles) are shaped by their idiosyncratic interactions with caregivers during childhood (Bartholomew, 1993; Bowlby, 1982). Similarly, research on learned helplessness shows that individuals generalize failures from the original setting where they experienced the initial setback to the construal of their ability more generally (Seligman, 1992). In relation to financial issues specifically, studies in which participants' financial concerns were ma-

nipulated experimentally show that even introspective sampling of such personal experiences influences generalized attitudes. For example, Pitesa and Thau (2014) found that directing participants' attention to their financial vulnerability makes people generalize from their personal situation, which entails being relatively unprotected from potential harms due to a lack of resources, to the broader state of affairs, inferring that harmful behaviors present a greater risk to other people as well.

Given the social cognition principles of sampling-based belief formation outlined above, more financially vulnerable individuals should hold a more zero-sum construal of success in general due to greater personal sampling (in private life, at work, and in one's own thoughts) of experiences suggesting new wealth generation is difficult and value can primarily come at the expense of others. Anthropological work on peasants, recent cross-cultural work on values, and work on psychology of financial markets all provide indirect evidence suggestive of this possibility. Foster (1965) suggests that economically vulnerable peasants adopt an "Image of Limited Good," such that people "see their universe as one in which the good things in life are in limited and unexpandable quantities, and hence personal gain must be at the expense of others" (Foster, 1965, p. 301). Recent empirical research by Rőżycka-Tran, Boski, and Wojciszke (2015) examined "belief in zero-sum game," that is, the extent to which people construe success in a zero-sum manner. The authors found that the more people estimated their family's economic status to be above average in a country, the less they construed success as zero-sum. In addition, the authors found that the average level of zero-sum construal of success was lower in richer countries. Finally, Kuhnen and Miu (2017) found that lower socioeconomic status, which entails greater financial vulnerability, makes people less likely to assume that wealth, in the form of stock values, can grow, implying that personal increases in wealth can only come at the expense of others rather than through new wealth generation. Taken together, the social cognition principle of sampling-based belief formation and indirect evidence from several domains of research suggest that financial vulnerability should lead people to hold a more zero-sum construal of success.

Hypothesis 1: Financial vulnerability is associated with a more zero-sum construal of success.

Generalized Zero-Sum Construal of Success Hinders Integrative Value Generation

Many negotiation situations afford potential for integrative value generation by virtue of the fact that not all issues negotiated are of equal importance to all parties. For that reason, negotiating parties can create value by conceding on issues that are lower priority to the self than the other party and in exchange obtaining concessions on issues that are lower priority to the other party than the self. However, to uncover whether the negotiation affords the opportunity for integrative value generation, people need to make an effort to explore the integrative potential of the situation rather than assume that integrative potential is unlikely and approach the situation in a competitive manner. If people enter the negotiation situation assuming that integrative value generation is unlikely, the process of detecting and realizing integrative value generation potential would be hindered and potentially precluded altogether.

Numerous studies on negotiation suggest that the assumption that negotiation outcomes are zero-sum is the single most important barrier to the realization of integrative potential in negotiation (Bazerman & Neale, 1983; de Dreu et al., 2000; Schelling, 1960; Thompson & Hastie, 1990). This literature suggests that people who assume that one person's success can primarily result from another person's loss (i.e., hold a more fixed-pie perception) are less likely to realize integrative potential because they fail to attend to information that might alert them that such potential exists in the given situation. Even when such information is registered, it is processed less deeply and thus has less influence on negotiation outcomes (Pinkley et al., 1995).

We draw on the principle of *category-driven social cognition* to argue that financial vulnerability will make people more likely to assume outcomes in a particular negotiation situation are zero-sum due to their generalized zero-sum construal of success. The principle of category-driven social cognition suggests that people's generalized assumptions about the state of affairs in the world shape how they process and approach particular situations. This occurs because people tend to be "cognitive misers," minimizing cognitive effort in most situations (Baumeister & Sommer, 1997; Fiske & Taylor, 2013). Many social situations people face are somewhat ambiguous, and people will be driven by their generalized beliefs about the relevant category of situations in how they interpret and behave in the particular situation. For example, research on trust found that when making a judgment about whether a particular individual is trustworthy or not, people rely both on the information contained in the specific situation (e.g., whether the person demonstrated behaviors suggesting he or she is trustworthy) as well as general beliefs about whether people in general are trustworthy (Rotter, 1967).

Most negotiation situations are at least somewhat ambiguous in terms of whether they offer an opportunity for integrative value creation. Because of that, one notable goal of negotiation research and education is to uncover ways for people to recognize whether such an opportunity exists and how to capitalize on it (de Dreu et al., 2000). Given this ambiguity, we expect people to be influenced in their approach to negotiation situations offering an opportunity for integrative value creation by their assumptions about whether in general value can be created so that both parties prosper, or whether the gain of one party can generally only come at the expense of another party's outcomes.

We argued above that financially vulnerable individuals will hold a more zero-sum generalized construal of success. If this is the case, then given the principle of category-driven social cognition detailed above, in a particular negotiation situation offering an opportunity for integrative value creation, financially more (compared to less) vulnerable individuals should, on average and across situations, be more likely to (incorrectly) assume that outcomes are zero-sum. Given that outcomes are zero-sum in a particular negotiation situation (i.e., displaying a fixed-pie bias) is a key precursor to realizing integrative value generation potential, as outlined above, and given that more (compared to less) financially vulnerable individuals should be particularly likely to hold this assumption, due to their generalized zero-sum construal of success, we expect financial vulnerability to be negatively associated with integrative value generation. We hypothesize the following:

Hypothesis 2: Financial vulnerability hinders integrative value generation in negotiations.

Hypothesis 3: A more zero-sum construal of success explains the effect of financial vulnerability on integrative value generation in negotiations.

Overview of Studies

In Study 1, we assembled and analyzed a large archival dataset spanning 25 years and including 90 countries that allowed us to test how different objective as well as subjective indicators of financial vulnerability predict the extent to which people construe success in a zero-sum manner. Thus, Study 1 tests Hypothesis 1 only. The remaining studies involved face-to-face negotiations, allowing us to test implications for integrative value generation. In Study 2a, we experimentally manipulated a sense of financial vulnerability, and in Study 2b we recruited participants from the opposite ends of the income spectrum given that the two groups report drastically different levels of financial vulnerability (Marjanovic et al., 2013). In Study 3, we implemented a two-step approach to testing the mechanism, such that in one data collection we examined zero-sum construal of success as a function of participants' income, and in the second data collection that used a nonoverlapping sample, we examined how the same individual difference measure of a zero-sum construal of success influences integrative value generated in face-to-face negotiations. Thus, across five studies, we test our theory using various operationalizations and relying on both externally and internally valid methods. Studies 2 and 3 both received human subject approval from University of Maryland College Park Institutional Review Board #805187 (Project Title: *Information and Negotiation Behavior*).

Dyadic Approach

Integrative value generation is a dyad-level outcome (it is a phenomenon that does not exist at the individual level), while financial vulnerability is a property of the individual. To study the relationship between the two, across studies that examined integrative negotiation outcomes (Studies 2a–2b and Study 3b), we constructed negotiating pairs such that a sense of financial vulnerability was either induced in both parties, or both parties came from either lower versus higher income brackets. The focus on dyads in which either both parties feel more financially vulnerable or both parties feel less financially vulnerable allowed for the methodologically cleanest test of our theory, as any dyad-level differences in integrative value generation could be clearly ascribed to dyad-level differences in financial vulnerability. If the members of the dyad differed much in their sense of financial vulnerability, interpreting why dyad-level outcomes vary as a function of dyad members' sense of financial vulnerability would be more challenging. For example, it might be unclear whether integrative gain was undermined because of the member who felt vulnerable or because of the member who did not.

In addition, constructing the situation such that either both parties feel financially vulnerable or both parties do not feel financially vulnerable had good mundane realism given the longstand finding in the social networks literature concerning the homophily of individuals in a network, or the fact that individuals tend to interact with those who are similar to them (McPherson, Smith-Lovin, & Cook, 2001). For example, similarity in occupation, power, and status strongly predicts interaction frequency (McPherson, Smith-Lovin, & Brashears, 2006). In the modern economy, people will clearly also interact with those who are different from them in terms of financial vulnerability. If only one negotiation party construes the situation in a more zero-sum manner, that is still likely to undermine integrative value generation as realizing a negotiation's integrative potential requires information sharing and a cooperative approach (Pinkley, 1995). Thus, our theory should apply across different combinations of negotiation party's financial vulnerability. Given that this is the initial test of the relationship between financial vulnerability and integrative value generation, we focus on the methodologically cleanest situation of either both parties feeling more financially vulnerable or both parties feeling less financially vulnerable. We discuss potential implications for other dyad compositions at greater length in the General Discussion.

Potential Alternative Mediators

We considered other potential reasons why people who experience financial vulnerability would fail to realize integrative value potential in negotiations. We derived our prediction a priori by theoretically focusing on the role of a zero-sum construal of success, given its key role as a precursor to successful negotiation outcomes. Nevertheless, in Study 3, in which we tested the hypothesized mechanism directly, we also tested several potential alternative explanations for the effect. As detailed below, the other mechanisms we tested include general self-efficacy, sense of power, affect, and construal level. While we thought it is possible that some of the effect of financial vulnerability is transmitted through these alternative mediators, we felt that the theoretical and empirical background for the role of a zero-sum construal of success was stronger than for any of the alternative mediators. Thus, our hypothesis development focuses on this mechanism, and we examine the role of other mechanisms in an exploratory fashion. We discuss the different mediators at a greater length in the General Discussion and we provide a succinct rationale for their inclusions here.

First, lower socioeconomic background, which is marked by financial vulnerability, tends to be associated with a lower generalized self-efficacy (Ali, McWhirter, & Chronister, 2005; Boardman & Robert, 2000), defined as "beliefs in one's capabilities to mobilize the motivation, cognitive resources, and courses of action needed to meet given situational demands" (Wood & Bandura, 1989, p. 408). Generalized self-efficacy affects how people perform in various domains (Bandura, 1977; Gecas & Seff, 1989), including negotiations (Sullivan, O'Connor, & Burris, 2006), so we tested generalized self-efficacy as another potential pathway through which financial vulnerability might impact integrative value generation.

Second, and somewhat relatedly, financially vulnerable individuals generally have a lower perceived ability to influence outcomes in the world (Grossmann & Varnum, 2011; Kraus, Piff, & Keltner, 2009; Lachman & Weaver, 1998). Research on psychological sense of power, defined as subjective impression that one has influence over outcomes (Dépret & Fiske, 1993; Emerson, 1962) shows that it can impact negotiation outcomes, for example

by making people less responsive to other party's emotional signals (Van Kleef, De Dreu, Pietroni, & Manstead, 2006) or influencing first offers people make (see Kim, Pinkley, & Fragale, 2005, for a review; Schaerer, Swaab, & Galinsky, 2015). Thus, we also consider sense of power as another potential explanation for the relationship between financial vulnerability and integrative value generation.

Third, research found that poorer individuals experience more negative affect due to various constraints and challenges they face (Haushofer & Fehr, 2014). This is potentially relevant because affect has been found to impact negotiation outcomes. For example, positive affect was shown to reduce the use of aggressive tactics, thereby facilitating the creation of joint value in negotiations (Carnevale & Isen, 1986; Thompson, Medvec, Seiden, & Kopelman, 2001).

Fourth, construal level theory (Trope, Liberman, & Wakslak, 2007) deals with mental representation of stimuli/experiences in the world such that higher-level construal is manifest in more abstract, coherent, and superordinate mental representations. Because financial vulnerability directs people's attention to practical everyday considerations, such as those concerning costs and financial hurdles (Marjanovic et al., 2013), it is possible that it induces a lower-level psychological construal. Construal level influences a range of cognitive and behavioral outcomes (Trope & Liberman, 2010), and it has been found that negotiators with higher construal level perform better than those with lower construal level in integrative negotiations (Giacomantonio, De Dreu, & Mannetti, 2010). We therefore also tested for a potential role of construal level.

Data Transparency and Reporting

For all studies, materials, data, and codes for our main analyses as well as robustness checks are available at the Open Science Framework web page associated with this project: https://osf.io/pb3ng/?view_only=d231a90d7f3a4ac48b77545585cdb096. Unless otherwise noted, in the main body of text we report direction and size of effects using unstandardized OLS regression coefficients and their significance using *p* values, and all additional details concerning the results reported in text are available online as well as in the corresponding regression tables (where applicable).

Study 1: Method

Data Source

We conducted an initial test of the relationship between financial vulnerability and zero-sum construal of success by consulting the large-scale Integrated Value Survey (IVS) dataset, a combined dataset of the World Values Survey (WVS) and the European Values Study (EVS).[1] Both surveys consist of pooled cross-sectional datasets collected across many countries and intended to document societal values and their change. Samples were representative of the local adult population (people age 18 and older). Participants were interviewed by professional organizations using face-to-face or phone interviews based on equivalent questionnaires for each country. WVS contained six waves of surveys collected between 1981 and 2014, while EVS used similar methods and included four waves of data collection between 1981 and 2008. WVS and EVS have a common dictionary ensuring compatibility of key variables. For the combination of variables available to test our Hypothesis 1, data from 191,648 participants were available (see Table 1 for additional sample details).

Measures

Financial vulnerability. The IVS dataset included several proxies of financial vulnerability. We relied on participants' self-report of household income as the primary independent variable given the established relationship between income and financial vulnerability (Anderloni et al., 2012; Furnham, 2014). Participants rated on a scale of 1 to 10, from 1 = *the lowest income group in your country* to 10 = *the highest income group in your country*, and were asked to specify "what group your household is," "counting all wages, salaries, pensions and other incomes that come in" (see below for robustness checks we conducted by recalculating this variable into a proxy of absolute income reflecting purchasing power parity based on a formula developed by past research). We conducted additional tests by operationalizing financial vulnerability using additional sensible proxies available in the same dataset, including satisfaction of financial situation ("how satisfied are you with the financial situation of your household?"; 1 = *completely dissatisfied* to 10 = *completely satisfied*), gone without a cash income in the past 12 months, and gone without enough food to eat in the past 12 months (both rated on a 4-point scale ranging from 1 = *often* to 4 = *never*).

Zero-sum construal of success. The IVS dataset included a measure of zero-sum construal of success such that participants indicated their views using a scale ranging from 1 = *people can only get rich at the expense of others* to 10 = *wealth can grow so there is enough for everyone*. This measure is similar to those used in previous studies (e.g., Różycka-Tran et al., 2015). We reverse coded the scale such that the higher values denoted a more zero-sum construal of success.

Controls. We controlled for several key factors that have been found to impact people's zero-sum construal of success in past research, most notably gender, age, employment status, and education level (Norton & Sommers, 2011; Sirola & Pitesa, 2018). The goal was to show that income predicts zero-sum construal over and above these variables. We also reran our analysis without these control variables, and the results lead to the same conclusions with respect to our hypothesis (see online for details).

Study 1: Results and Discussion

Hypothesis 1 Test

We used robust regression with fixed effects for country and year. Thus, the analyses partial out any potential confounding influences

[1] A bibliography of journal articles, working papers, and conference presentations using World Values Survey can be found at http://www.worldvaluessurvey.org/WVSContents.jsp. A bibliography of publications using European Values Study can be found at https://europeanvaluesstudy.eu/education-dissemination-publications/. Two variables, Household Income and Zero-Sum Construal of Success, have been used previously by one or more authors (Pitesa & Thau, 2014; Sirola & Pitesa, 2016). The relationships examined in the present article have not been examined in any previous or current articles.

Table 1
Study 1: Variable Summaries and Correlations

Variables	*M*	*SD*	1	2	3	4	5	6	7	8
1. Zero-sum construal of success	4.60	2.73								
2. Household income	4.78	2.31	−.03***							
3. Satisfaction with finance	5.73	2.53	−.08***	.34***						
4. Gone without cash	3.11	1.03	−.05***	.25***	.29***					
5. Gone without food	3.47	.85	−.05***	.18***	.21***	.57***				
6. Gender	.49	.50	.02***	.03***	.02***	.02***	.01***			
7. Age	40.95	16.05	−.01***	−.09***	−.01*	.07***	.08***	.00		
8. Employment status	.69	.46	−.03***	.14***	.07***	.05***	.04***	−.03***	−.15***	
9. Education	4.82	2.21	−.02***	.29***	.12***	.11***	.13***	.03***	−.19***	.07***

Note. Gender: 0 = Male, 1 = Female; Employment Status: 0 = Unemployed, 1 = Employed.
* $p < .05$. ** $p < .01$. *** $p < .005$.

due to between-country or between-year differences. Due to the large number of countries and waves of data collection, the two variables are absorbed in the analyses and not shown in the regression output (the online data and code can be used to obtain these details). Figure 1 depicts the relationship between the four financial vulnerability indicators and participants' tendency to construe success in a zero-sum manner. Table 2 shows the regression results for the main hypothesis test (Model 1) and the subsequent robustness tests described below (Models 2–7). We found that higher household income was associated with a less zero-sum construal of success, $b = -0.06$, $p < .001$, that is, respondents with lower income agreed more strongly with the statement that "People can only get rich at the expense of others" than those with higher income (Model 1), supporting Hypothesis 1.

Robustness Checks

Donnelly and Pop-Eleches (2018) proposed a method to recode the income variable from the IVS dataset into a proxy of absolute income reflecting purchasing power parity, thus enhancing its comparability across countries. We followed the proposed approach and used the recoded income variable as the first robustness check. We found the same results, such that the recoded income variable was negatively associated with a zero-sum construal of success, $b = -0.11$, $p < .001$ (Model 2). Next, instead of using robust OLS regression with fixed effects for country and year, as a second set of robustness checks, we used multilevel modeling and found that results hold in both a two-level model, with individual observations nested within countries, $b = -0.05$, $p < .001$ (Model 3), as well as a three-level model, with individual observations nested within countries and years, $b = -0.06$, $p < .001$ (Model 4).

Finally, we reran the main analysis by using the additional proxies of financial vulnerability, using the same robust regression with fixed effect for country and year. See Table 2 for full details. In line with our theory, we found that satisfaction with financial situation ($b = -0.09$, $p < .001$; Model 5), a lower frequency of having gone without cash income ($b = -0.11$, $p < .001$; Model 6), and a lower frequency of having gone without enough food ($b = -0.14$, $p < .001$; Model 7) were all negatively associated with a zero-sum construal of success.

In conclusion, Study 1 found large-scale evidence that people hold a more zero-sum construal of success when they experience financial vulnerability (measured using different proxies).

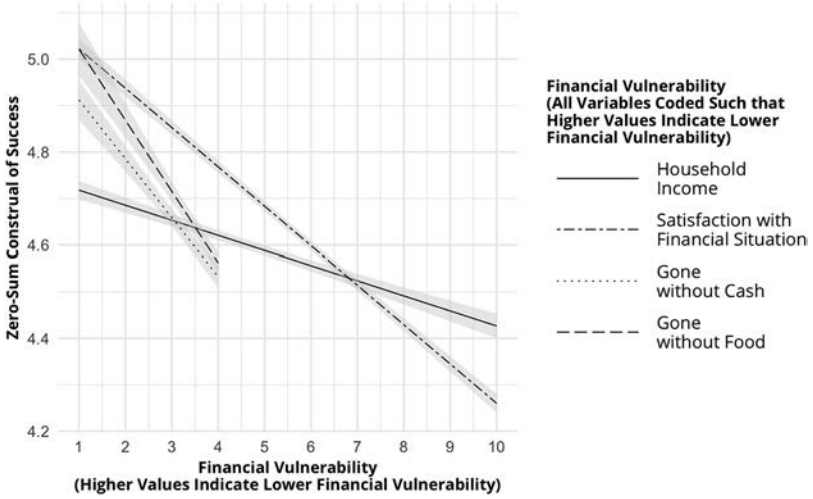


Figure 1. Study 1: Fitted linear regression line representing the association between financial vulnerability and zero-sum construal of success (95% confidence intervals are displayed).

Table 2
Study 1: Regression Analysis Results of Financial Vulnerability on Zero-Sum Construal of Success

Predictors	Model 1		Model 2		Model 3		Model 4	
	B	*SE*	*B*	*SE*	*B*	*SE*	*B*	*SE*
Constant	5.14***	(.03)	5.78**	(.11)	4.18***	(.09)	5.18***	(.13)
Gender	.12***	(.01)	.09***	(.02)	.12***	(.01)	.12***	(.01)
Age	−.01***	(.00)	−.00***	(.00)	−.01***	(.00)	−.01***	(.00)
Employment status	−.01	(.01)	−.03	(.02)	−.02	(.01)	−.01	(.01)
Education	−.02***	(.00)	−.02***	(.00)	−.02***	(.00)	−.02***	(.00)
Household income	−.06***	(.00)			−.05***	(.00)	−.06***	(.00)
Recoded household income			−.11***	(.01)				
N	191,648		113,253		191,648		191,648	
R^2	.08		.06		.02		.02	

	Model 5		Model 6		Model 7	
	B	*SE*	*B*	*SE*	*B*	*SE*
Constant	5.42***	(.03)	5.31***	(.05)	5.46***	(.06)
Gender	.12***	(.01)	.17***	(.02)	.17***	(.02)
Age	−.01***	(.00)	−.00***	(.00)	−.00***	(.00)
Employment status	−.02	(.01)	−.02	(.02)	−.02	(.02)
Education	−.03***	(.00)	−.04***	(.00)	−.04***	(.00)
Satisfaction with finance	−.09***	(.00)				
Gone without cash			−.11***	(.01)		
Gone without food					−.14***	(.01)
N	203,497		74,052		74,260	
R^2	.08		.08		.08	

Note. Gender: 0 = Male, 1 = Female; Employment Status: 0 = Unemployed, 1 = Employed. Model 1 uses robust OLS regression with fixed effects; Model 2 uses robust OLS regression with recalculated income reflecting purchasing power parity; Model 3 and Model 4 use 2-level and 3-level multilevel modeling; Model 5–Model 7 use robust OLS regression with additional proxies of financial vulnerability.
* $p < .05$. ** $p < .01$. *** $p < .001$.

Study 2a: Method

Study 2a manipulated salience of financial vulnerability, after which participants engaged in negotiation that afforded the opportunity for integrative value creation. We offered a financial incentive for performance (described in more detail later) to enhance mundane realism and test our implied negative consequences of the proposed theoretical process for the ability of the financially vulnerable to improve their financial standing through integrative value generation.

Sample and Study Design

We recruited 170 participants (M_{age} = 21.07; 50.00% female) through undergraduate business introductory classes at a large public university in the Mid-Atlantic region of United States. Participants were randomly assigned to conditions of a 2 (financial vulnerability: high vs. low) × 2 (financial incentive: present vs. not present) between-subjects design. The final number of dyads was 85. Participants were assigned to a partner of their own gender whenever possible.

Procedure and Materials

Financial vulnerability manipulation. To manipulate participants' perception of their financial vulnerability, we asked participants to write about an experience when they did not have enough money (high financial vulnerability condition), or when they had enough (low financial vulnerability condition). This episodic recall task has been used widely in studies examining resource and financial scarcity (e.g., Mehta & Zhu, 2016; Mittal & Griskevicius, 2014; Roux, Goldsmith, & Bonezzi, 2015), and is meant to induce the psychological experience of financial vulnerability and the associated concerns about material resources. In the low (high) financially vulnerable condition, participants were instructed,

> Using the text box below, please reflect on why your financial situation is (*not) good*.
>
> For example, you could reflect on the things that you are *fortunately able (unfortunately not able) to afford or similar other specific positive (negative) aspects* of your financial situation.

To check the effectiveness of the manipulation, we asked participants to indicate their agreement with the following three items (adapted from Roux et al., 2015): "I am concerned about material resources", "I worry about finances," and "I fear I might not have enough money" (α = .85). Dyads were composed such that both members recalled either lacking or having sufficient financial resources.

Integrative value generation measure. After reading the instructions and answering correctly three questions concerning their understanding of the purpose of the negotiation, participants started a 25-min negotiation. The negotiation task was similar to those used in prior negotiation research (de Dreu et al., 2000; Thompson & Hastie, 1990) and involved a buyer and a seller negotiating four issues relevant to the sale of a new car: price,

color, warranty, and delivery date. Each party's payoffs were defined by a payoff schedule provided by the experimenter. Integrative value creation was possible across two key issues (warranty and delivery date), which were of different importance to each party. The maximum joint gain was up to 8,000, or 2,400 more than if the two parties split each issue evenly. Of the remaining issues, one was distributive (i.e., the interests of the two parties were opposed) and one was compatible (i.e., the interests of the two parties were aligned). When a dyad reached an agreement, they signed the contract indicating the agreed-upon terms and completed the rest of the questions on the computer. For the materials used in the study, please see the Appendix.

Participants in half of the experimental sessions were informed that a $50 cash prize would be awarded to two individuals based on their negotiation performance (financial incentive condition), while participants in the other half of the sessions were not offered this potential reward (no financial incentive condition). Consistent with our theoretical and substantive focus on situations in which being high on financial vulnerability in itself prompts financially self-defeating behavior, our focus was primarily on the condition in which the negotiation had actual financial consequences. How people construe success in an effort to elevate their financial standing should matter less in situations that are irrelevant to the person's ability to advance economically (as was the case in the condition in which financial incentive was not present). Thus, while we had no firm a priori predictions regarding the financial incentive not present condition, we anticipated that our theory might be less relevant in this situation. Finally, this expectation was further based on prior work, which found less engagement in negotiation tasks when there were no incentives present (Daniels, 1967; Murnighan, Babcock, & Thompson, & Pillutla, 1999).

Study 2a: Results and Discussion

Manipulation Check

Participants in the high financial vulnerability condition reported feeling more financially vulnerable ($M = 3.36$, $SD = 0.97$) than did participants in the low financial vulnerability condition ($M = 2.94$, $SD = 1.11$), $b = 0.42$ $p = .009$. Thus, the manipulation was effective.

Hypothesis Test

We first examined the effect of the manipulation in the focal condition in which the negotiation financial incentive was present. Dyads in the high financial vulnerability condition realized less integrative value potential ($M = 3066.67$, $SD = 422.88$) than dyads in the low financial vulnerability condition ($M = 3388.89$, $SD = 509.40$), $b = -322.22$, $p = .032$. The results support Hypothesis 2.

In the condition in which financial incentive was not present, there was no difference in integrative value creation as a function of salience of financial vulnerability, $b = 104.00$, $p = .463$, and the difference in the effects as a function of the presence of financial incentive was significant, $b = -426.22$, $p = .039$ (see Figure 2 [left] for a depiction of the interaction). This finding is consistent with our argument that our theory applies primarily to how people construe situations that afford the opportunity to further their financial standing.

To examine if participants with different financial vulnerability differ in their motivation or ability in the negotiation, we tested participants' performance on distributive and compatible issues within each role. In line with the analyses above, we focused on participants in the condition in which financial incentive was present. Participants in the high financial vulnerability condition performed as well as those in the low financial vulnerability condition in relation to the distributive issue, $b = -37.04$, $p = .761$ (the results were comparable within each negotiation role), as well as the compatible issue, $b = 55.56$, $p = .494$. Additionally, the manipulation check, a scale measuring perceived financial scarcity, was not associated with performance in relation to the distributive issue, $b = 21.35$, $p = .579$, or the compatible issue, $b = 9.42$, $p = .713$. These results suggest that financial vulnerability did not hamper the motivation or ability of participants in the negotiation, which would be reflected in performance differences across all issues, but rather that the effect was specific to integrative issues (i.e., the primary ones for which a zero-sum construal of success presents an obstacle).

Taken together, the results show that participants for whom a sense of financial vulnerability was induced experimentally were less likely to realize integrative value potential in negotiations, compared to participants for whom a sense of financial security was induced. The difference in integrative value generation only emerged when there was financial incentive available. This provided preliminary support for our main argument that financial vulnerability hinders integrative value generation and that this effect may have implications for the ability to improve one's own economic outcomes. We also found that the effect was specific to integrative negotiation issues (the only kind for which a zero-sum

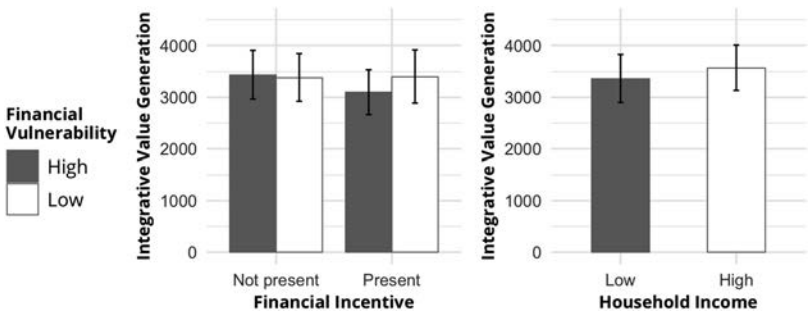


Figure 2. Study 2a (left) and Study 2b (right): Mean integrative value generated by conditions (95% confidence intervals).

construal of success is relevant) but not other issues (for which alternative mediators broadly capturing motivation or ability are also relevant). In the next study, we aim to replicate the finding with participants varying in their financial standing (and thus financial vulnerability), using the same negotiation paradigm.

Study 2b: Method

We recruited participants through the same undergraduate business introductory classes. Two weeks before the face-to-face negotiation, all students (around 500 in total) were asked to fill out a preliminary survey, which consisted of questions about their demographic information, including their household income, reported on a 30-level scale, with $10,000 intervals, as well as number of household members. Based on the information, we ranked the students according to their reported household income divided by number of people in the household (M = $40,001–$50,000). This captures the same main operationalization of financial vulnerability as reported in the IVS dataset (i.e., financial means). Most students in our sample relied on their family for financial support, and the measure of the financial situation of the household included any additional earnings of their own (e.g., from scholarships or jobs students had). As such, the measure of financial vulnerability captured students' situation in a comprehensive manner. Since we aimed for a sample size of 200 and expected a near-perfect response rate, we invited 110 participants from each end of the financial standing distribution from the original sample. We paired each participant with another participant from the same income group. Thus, participants negotiated with a partner similar in terms of household income. The final sample included 200 participants (M_{age} = 20.43; 46.00% female) and 100 dyads. We implemented the same negotiation paradigm as in Study 2a, with the only difference that we told all participants they can win the financial incentive, depending on their negotiation performance.

Study 2b: Results and Discussion

We found that the lower household income dyads realized significantly less integrative value potential (M = 3361.11, SD = 461.54) than the higher household income dyads (M = 3588.46, SD = 429.62), b = 227.35, p = .012 (Figure 2 [right]). This result replicated Study 2a results, supporting Hypothesis 2. We also examined how the average household income of dyads as a continuous variable was associated with dyads' integrative value gained. Specifically, the higher the average household income of the dyad, the more integrative value the dyad realized, b = 31.03, p = .040. We obtained similar results when using raw household income (not divided by the number of household members), b = 12.70, p = .004. Figure 3 shows the fitted linear regression of the relationship between household income and integrative value generation.

As in Study 2a, we did not find a difference between the lower and higher household income dyads in their performance in relation to the distributive issue, b = −8.01, p = .883 (the results were comparable within each negotiation role), as well as the compatible issue, b = −96.15, p = .077. There was also no association between the (continuous) household income score of the dyad on performance in relation to either the distributive issue, b = −0.80, p = .922, or the compatible issue, b = −10.16, p = .217. Thus, we again found that financial vulnerability did not hamper the motivation or ability of participants in the negotiation, but rather that the effect was specific to integrative issues (i.e., the primary ones for which a zero-sum construal of success presents an obstacle).

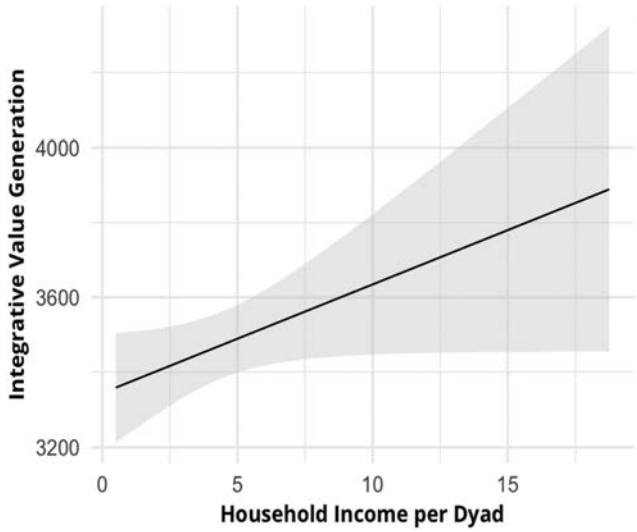


Figure 3. Study 2b: Fitted linear regression line with confidence intervals of dyad household income predicting integrative value generated.

Study 3: Method

In Studies 2a and 2b, we found that financial vulnerability, either induced as a psychologically sense of vulnerability or measured using participants' actual household income as a proxy, hampers integrative value generated in negotiations. In the final two studies, we sought to test the hypothesized and potential alternative mediators using a two-stage design, such that in the first data collection we examined the effect of household income on potential mediators, and in the second data collection we examined the association between the potential mediators and integrative value generation. The two-step strategy is consistent with recommended approaches to testing mediation (Spencer, Zanna, & Fong, 2005), with the exception that we operationalized mediators through measurement rather than manipulation in the second stage. The reason for this approach was that we had various potential mediators, so attempting to manipulate only participants' zero-sum sum construal of success would not constitute a fair test (Cooper & Richardson, 1986).

First Stage: Financial Vulnerability and Zero-Sum Construal of Success

We recruited participants through the same undergraduate business introductory classes. We sent out an invitation to 200 students to fill out an online survey via e-mail. Upon receiving the e-mail, students can opt in to complete the survey by clicking a link. The final sample was 188 people (M_{age} = 21.14; 48.40% female).

Financial vulnerability. As in Study 2, participants reported their household income on a 30-level scale, with $10,000 intervals, from $0,000 to $10,000 to more than $300,000, and they also

reported the number of people in their household. We calculated a per capita household income by dividing the total household income by the number of household members (M = \$40,001–\$50,000).

Zero-sum construal of success. We measured the extent to which participants construed success in a zero-sum manner using four items adapted from prior work (Esses et al., 1998): "When some workers make economic gains, others lose out economically," "People who want to get ahead economically must do so at the expense of others," "The more employees a company employs, the harder it is for existing employees to advance," and "More good jobs for some employees means fewer good jobs for other employees." Participants indicated the extent to which they agreed with the items using a scale ranging from *strongly disagree* (1) to *strongly agree* (5). The items were internally consistent ($\alpha = .74$).

Alternative Mediators

General self-efficacy. We measured self-efficacy using three items from an established measure (Chen, Gully, & Eden, 2001). Participants used a scale ranging from *strongly disagree* (1) to *strongly agree* (5) to indicate their agreement with the following three items: "I will be able to achieve most of the goals that I have set for myself," "When facing difficult tasks, I am certain that I will accomplish them," and "Compared to other people, I can do most tasks very well" ($\alpha = .89$).

Sense of power. We measured sense of power using three items from an established measure (Anderson, John, & Keltner, 2012). Participants used a scale ranging from *strongly disagree* (1) to *strongly agree* (5) to indicate their agreement with the following three items: "I can get other people to listen to what I say," "I can get other people to do what I want," and "I think I have a great deal of power" ($\alpha = .79$).

Affect. We measured affect using The Positive and Negative Affect Schedule (Watson & Clark, 1992). Participants reported the extent to which they experienced positive affective states (e.g., excited, enthusiastic, proud; $\alpha = .73$) and negative affective states (e.g., nervous, irritable, ashamed; $\alpha = .81$) at that moment on a scale ranging from *very slightly or not at all* (1) to *extremely* (5).

Construal level. We asked participants to complete a widely used task (Navon, 1977) to measure their construal level. This task consists of four figures, each with a capitalized letter made up of smaller letters. Participants were asked to report what they notice first in the picture, the large letter (indicative of a high construal level) or the smaller letter (indicative of a low construal level), and we summed the four responses.

Control variables. To keep this study consistent with Study 1, we also included the same control variables, gender and age. Because of the nature of the sample, we did not include employment status and level of education (as they did not vary). The results were substantively the same with or without the control variables.

Second Stage: Effect of Zero-Sum Construal on Integrative Value Generation

We recruited participants through the same undergraduate business introductory classes. Two weeks before the face-to-face negotiation, participants were asked to fill out a preliminary survey, which included the same measures of zero-sum of construal and of all potential alternative mediators administered in the first stage. The final sample included 536 participants (M_{age} = 21.47; 43.10% female). This was an independent sample from the first stage of the study to minimize demand effects. The face-to-face negotiation followed the same negotiation paradigm as in Study 2a and Study 2b, including the potential for winning a financial incentive depending on the negotiation outcomes for all participants.

Study 3: Results and Discussion

Variable summaries and correlations are shown in Tables 3 and 4. Regression analysis results presented in the left-hand column of Table 5 show that household income was negatively associated with zero-sum construal of success, controlling for general self-efficacy, sense of power, affect, and level of construal, $b = -0.06$, $p = .008$. Again, this result did not change when we used raw household income (not divided by the number of household members), $b = -0.01$, $p = .032$. Lower household income, and thus higher levels of financial vulnerability, were associated with a more the zero-sum construal of success, supporting Hypothesis 1.

As shown in the right-hand column in Table 5, integrative value generated during the negotiation was negatively associated with zero-sum construal of success, controlling for the same set of alternative mediators: general self-efficacy, sense of power, affect, and construal level, $b = -169.79$, $p = .010$, such that the stronger the zero-sum construal, the less integrative value dyads realized. Figure 4 shows the fitted linear regression line for both stages. Additionally, we examined if zero-sum construal of success impacted other issues in the negotiation. We did not find that it affected performance in relation to either the distributive, $b = 4.26$, $p = .924$, or the compatible issue, $b = -49.17$, $p = .216$ (controlling for the same variables). Taken together, the results support Hypotheses 2 and 3.

General Discussion

Across five studies we found support for our theory that financial vulnerability hinders integrative value generation in negotiated business deals by promoting a more zero-sum construal of success. In Study 1, using data from 191,648 respondents collected across 90 countries and 25 years, we found that several proxies of financial vulnerability are associated with a more zero-sum construal of success. In Studies 2a and 2b, we found that both objective financial vulnerability and an induced sense of financial vulnerability hinder integrative value generated in face-to-face negotiations. Financial vulnerability rendered participants less likely to improve their economic outcomes through integrative value generation, suggesting a vicious cycle of financial vulnerability. We also found no effect of financial vulnerability on distributive or compatible issues negotiated, making it unlikely that the effect was driven by differences in motivation or ability. Rather, only performance on integrative issues, for which a zero-sum construal of success is particularly important, was affected. In Study 3, we used a two-stage design to test the role of a zero-sum construal of success, as well as various potential alternative mediators. In the first stage, we found that financial vulnerability is associated with a more zero-sum construal of success, and in the second stage, we found that a more zero-sum construal of success

Table 3
Study 3a: Variable Summaries and Correlations (Stage 1)

Variables	*M*	*SD*	1	2	3	4	5	6	7	8
1. Zero-sum construal of success	2.78	.74								
2. Household income	4.51	2.43	−.17*							
3. General self-efficacy	4.11	.54	−.19**	.03						
4. Sense of power	3.63	.64	−.11	−.01	.47***					
5. Negative affect	1.38	.62	.07	−.05	−.30***	−.13				
6. Positive affect	2.53	.84	−.14*	.01	.28***	.23***	.08			
7. Construal level	2.87	1.02	.07	−.04	−.07	.06	.11	.02		
8. Gender	1.48	.50	−.11	−.17*	−.05	−.06	−.09	−.12	.07	1
9. Age	21.14	1.28	−.03	−.16	.12	.04	.00	.17*	−.02	−.04

Note. Gender: 0 = Male, 1 = Female.
* $p < .05$. ** $p < .01$. *** $p < .005$.

was associated with lower integrative value generated (in both stages controlling for the different potential alternative mediators). Taken together, our results suggest that those most in need, financially vulnerable individuals, are least likely to reap the benefits of integrative value generation, and in that way facilitate their economic advancement, due to a psychological barrier inherent in financial vulnerability itself and specific to situations affording the opportunity for integrative value generation.

Implications for Research

Our findings contribute to negotiation research by identifying a large-scale factor with major social implications predicting the extent to which people construe success in a zero-sum manner and their ability to realize integrative value generation potential in negotiations. Although the tendency to construe outcomes in a zero-sum manner is believed to be a major obstacle to value generation in negotiations, past work identified relatively few reasons why people exhibit this tendency, most notably culture (Gelfand & Christakopoulou, 1999), time pressure (De Dreu, 2003), emotions (Adam & Brett, 2015; Pietroni et al., 2008), mental models (Liu, Liu, & Zhang, 2016), and accountability (Peng et al., 2015). None of the antecedents identified in past work is systematically correlated with socioeconomic disadvantage, which is why zero-sum construal of success has so far not been considered as a factor relevant to social justice, mobility, and equality of opportunity. Our findings that the psychological experiences of disadvantaged individuals might alter their assumptions about success in ways that make them less able to improve their financial standing in the future may have implications for understanding barriers to economic advancement faced not just by financially vulnerable individuals, but also various other disadvantaged groups. For example, women, minorities, and physically less attractive people are systematically deprived of economic opportunities (Kite & Whitley, 2016). It is possible that their psychological experiences of reduced economic opportunities similarly put them in a more zero-sum mindset and in that way create a psychological pathway that reproduces their disadvantage further.

Relevant to this possibility, in Study 1, we find that women report a more zero-sum construal of success. However, in Study 3 we find the opposite effect. One possible reason for this is that Study 1 is conducted across many countries, while Study 3 was conducted only in the U.S., where the position of women might be better than in many countries included in Study 1 sample. The heterogeneity in the effect of gender (and potentially other social groups) across countries presents an interesting avenue for future research, but on average there seems to be a clear association between being a member of a disadvantaged group (e.g., lower-income, or female) and having a more zero-sum construal of success, suggesting that the theoretical process proposed here in relation to financial vulnerability might apply more broadly and might explain the role of a zero-sum construal of success in reproducing disadvantage of different social groups. Future re-

Table 4
Study 3b: Variable Summaries and Correlations (Stage 2)

Variables	*M*	*SD*	1	2	3	4	5	6	7	8
1. Integrative value generated	3393.23	486.06								
2. Zero-sum construal of success	3.10	.45	−.17**							
3. General self-efficacy	3.91	.44	.07	−.05						
4. Sense of power	3.56	.49	.16**	−.09	.47***					
5. Negative affect	1.59	.46	−.10	.13*	−.22***	.03				
6. Positive affect	2.50	.71	.10	−.02	.17**	.21***	.33***			
7. Construal level	2.82	.79	−.02	−.07	.00	−.03	.09	.07		
8. Gender	1.21	.66	−.14*	.04	−.03	−.08	.09	−.00	−.01	
9. Age	21.44	2.63	−.10	−.14*	.06	.03	.06	.23***	.03	.1

Note. Because the focal study dependent variable (Integrative Value Generated) is a dyad-level construct, all variables are expressed as dyad averages. Gender is coded 0 = Male, 1 = Female. The dyadic gender is an average of the two parties.
* $p < .05$. ** $p < .01$. *** $p < .005$.

Table 5
Study 3: Regression Analysis Results

Predictors	Stage 1: Zero-sum construal of success		Stage 2: Integrative value generated	
	B	*SE*	*B*	*SE*
Constant	4.52***	(.58)	3829.29***	(392.63)
Self-efficacy	−.19	(.12)	−54.70	(78.04)
Negative affect	−.00	(.09)	−135.54	(71.30)
Positive affect	−.10	(.07)	102.33*	(45.95)
Construal level	.05	(.05)	−13.79	(36.94)
Sense of power	−.04	(.09)	141.07*	(67.76)
Gender	−.25*	(.11)	−69.86	(44.29)
Age	−.01	(.04)	−26.14*	(11.43)
Household income	−.06**	(.02)		
Zero-sum construal			−169.79*	(65.35)
N	188		266	
R^2	.06		.07	

Note. Standard errors in parentheses. Gender is coded 0 = Male, 1 = Female.
* $p < .05$. ** $p < .01$. *** $p < .001$.

search is warranted to test this possibility in a comprehensive manner and map out the role of a zero-sum construal of success in socioeconomic disadvantage more broadly.

Our findings also present a contribution to the literature on psychological challenges experienced by financially vulnerable individuals (Haushofer & Fehr, 2014; Mullainathan & Shafir, 2013). Researchers have been investigating psychological consequences of financial vulnerability that make it difficult for individuals to make economically sound decisions and improve their situation. For example, Haushofer and Fehr (2014) review evidence that financial vulnerability induces short-sighted and risk-averse decision making, creating a vicious cycle whereby financial vulnerability reproduces itself through its effects on individual psychology and decisions. Our results indicate that a more zero-sum construal of success and ultimately lower integrative value generation brought about by financial vulnerability likely constitute another such pathway that makes it difficult for financially vulnerable individuals to improve their economic situation. As such, our results show that the pernicious psychological effects of financial vulnerability seem to extend beyond basic individual economic decisions, which have been the focus of past work, and also shape one of the core social activities (i.e., economic exchange) that underlie value generation in organizations and economic systems. This finding opens up avenues for future research to investigate other economically relevant implications of a zero-sum mindset (and potentially other beliefs underlying productive economic social exchanges) brought about by financial vulnerability. For example, productive business endeavors oftentimes require a person to collaborate and share their success with others. Given that financial vulnerability makes people construe success in a zero-sum manner, it might make them reluctant to share success with others, which might in some cases deter them from embarking on economically profitable collaborations.

In addition, the finding that financial vulnerability makes people construe success in a more zero-sum manner and makes them less likely to jointly generate value through integrative business deals might have additional downstream negative implications for the ability of financially vulnerable individuals to improve their economic situation. Productive economic exchanges and joint value generation may lead to professional as well as personal relationship development (Dwyer, Schurr, & Oh, 1987; Gelfand & Brett, 2004; Gui, 2000). To the extent that financially vulnerable individuals are less likely to develop positive ties through acts of joint value generation, they might receive fewer economic opportunities down the line, further amplifying the vicious cycle of financial vulnerability documented in our studies. Future work is needed to investigate such a broader set of consequences of financial vulnerability for the development of economically opportune relationships.

In the current set of studies, we focused on economic exchanges between people who are similar in terms of their financial vulnerability. Future work is needed to examine economic exchanges between parties experiencing different levels of financial vulnerability. As noted above, we believe that, to the extent that even one party construes success in a zero-sum manner, that should still hamper the extent to which the dyad is able to realize integrative value potential of the situation, even if the other party is less financially vulnerable. This is the case because uncovering integrative potential requires collaboration between both parties and the level of information exchange that might not occur if even only one party feels there is little to be gained from information sharing and a collaborative approach.

Furthermore, work on cross-class interactions suggests that people who are similar in terms of their socioeconomic position get along more easily and collaborate more fluently than do people coming from different socioeconomic strata (Côté et al., 2017). This would suggest that the impact of an individual's vulnerability (and the resulting zero-sum construal of success) on dyad-level outcomes might be even more pronounced in dyads experiencing different levels of financial vulnerability. Interestingly, the same research also found that pairs of individuals who are at either extreme of the socioeconomic spectrum (i.e., low or high) affiliate more readily than do pairs drawn from the middle of the spectrum, the explanation being that at the either extreme (compared to the middle), one's financial standing is more salient, highlighting similarity and becoming a basis for affiliation (Byrne, 1971). This suggests that even our pairing of individuals experiencing a high degree of financially vulnerability might have led to more collaborative dynamics (as their experienced vulnerability is also a strong basis for affiliation) than would a pairing of individuals

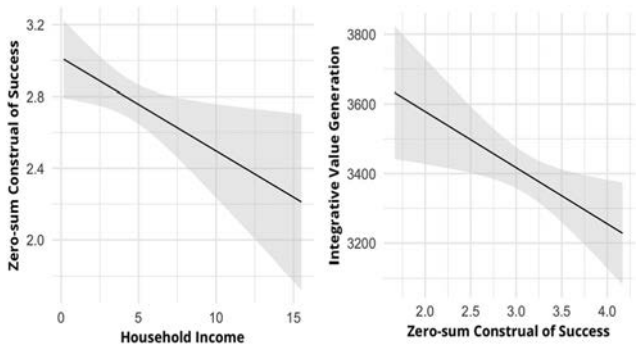


Figure 4. Study 3a (left) and Study 3b (right): Fitted linear regression line with 95% confidence intervals.

experiencing different degrees of financial vulnerability (e.g., from different socioeconomic strata).

The current studies examined several mechanisms other than zero-sum construal of success that could explain the phenomenon. Although these alternative mechanisms, namely, general self-efficacy, sense of power, affect, and construal level, did not play a significant mediating role in the relationship between financial vulnerability and negotiation outcomes in Study 3, we are cautious about ruling out completely these alternative explanations. Due to limited time available with the participants, we implemented simple scales to measure these variables, and the associated measurement error might have led to an underestimation of the role of these constructs. Further research on these potential alternative mechanisms might be useful because, if these additional psychological pathways play a role in the phenomenon we documented, they might inform additional measures through which to attempt addressing the problem (e.g., boosting self-efficacy among the financially vulnerable, in addition to trying to reduce the extent to which they view success as zero-sum).

Implications for Practice

The most direct implication of our findings for practice is to target financially vulnerable individuals in terms of social interventions and organizational training programs aimed at helping individuals overcome the influence of their generalized zero-sum construal of success in negotiations and instead engage in information sharing and multiissue evaluations to harness the benefits of integrative economic exchanges. There is growing interest in interventions that can help financially vulnerable individuals make better decisions. For example, Campos et al. (2017) found that a training focused on promoting personal initiative among vulnerable entrepreneurs yields better results than a training focused on developing formal business skills. Our results may be used to complement such interventions focused on altering psychological and behavioral tendencies of financially vulnerable individuals to also change how they construe success and how they approach economic exchanges.

In addition, organizations should be mindful of the zero-sum construal of success among financially vulnerable workers when negotiating with such workers (e.g., during salary negotiations). To help financially vulnerable workers realize that there are potential benefits of approaching the negotiation in an integrative manner, organizations might want to combine sharing somewhat more information than usual concerning their priorities and emphasizing to the workers that while negotiations might seem distributive there might nevertheless be integrative value generation potential. This strategy might help financially vulnerable workers adjust their generalized belief about the extent to which outcomes in the situation are zero-sum and hopefully both generate more value for their organization as well as secure better outcomes for themselves.

Conclusion

The current research identified a large-scale and socially important factor—financial vulnerability—explaining why a large segment of the workforce might be psychologically inhibited in situations that are essential to value generation both for them as well as for their broader organizational and economic systems. Our findings draw attention to overlooked social implications of negotiations and advance the understanding of microlevel processes underlying issues related to inequality and reproduction of disadvantage. We hope that our findings motivate practitioners and scholars to dedicate more effort to understanding and managing issues experienced by financially fragile workers.

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Appendix

Pay-Off Schedules for Buyers and Sellers

Profit Schedules for Buyer

Price	Color	Warranty	Delivery
$24,000 (0)	Chili Red (0)	6 months (0)	5 weeks (0)
$23,000 (400)	Light White (600)	12 months (1000)	4 weeks (400)
$22,000 (800)	Earl Grey (1200)	18 months (2000)	3 weeks (800)
$21,000 (1200)	Starlight Blue (1800)	24 months (3000)	2 weeks (1200)
$20,000 (1600)	Crystal Silver (2400)	30 months (4000)	1 week (1600)

Profit Schedule for Seller

Price	Color	Warranty	Delivery
$24,000 (1600)	Chili Red (0)	6 months (1600)	5 weeks (4000)
$23,000 (1200)	Light White (600)	12 months (1200)	4 weeks (3000)
$22,000 (800)	Earl Grey (1200)	18 months (800)	3 weeks (2000)
$21,000 (400)	Starlight Blue (1800)	24 months (400)	2 weeks (1000)
$20,000 (0)	Crystal Silver (2400)	30 months (0)	1 week (0)

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