

# THE COGNITIVE AND BEHAVIORAL IMPACT OF PROMOTION AND PREVENTION CONTRACTS ON TRUST IN REPEATED EXCHANGES

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Although contracts certainly facilitate exchange, scholars debate whether contracts and trust are complements or substitutes. Recent theoretical work suggests that contract frames influence the relationship between contracts and trust. We test and extend this theorizing by examining the effects of prevention and promotion contract frames on trust and some potential cognitive and emotional mechanisms responsible for them. We also explore how unexpected negative events affect trust developed under different contract frames. Experiment 1 found that promotion contracts fostered stronger attributions of benevolence than prevention contracts, but emotional experiences of the exchanges did not differ. Additionally, trusting intentions were higher following positive exchange experience under promotion than prevention contracts. Experiment 2 found that people were more willing to engage in trusting behavior following positive exchange experience under promotion than prevention contracts. However, violations of exchange expectations were more damaging to trust developed under promotion than prevention contracts. Together, the studies indicate that contract frames and whether exchange experiences are positive or negative affect the relationship between contracts and trust, likely because contract frames influence attributions of benevolence.

Both formal and informal governance mechanisms—such as contracts and trust, respectively—improve interfirm exchange effectiveness by increasing exchange participation; that is, contracts and trust both prompt active engagement in the exchange (Dyer & Singh, 1998; Ghoshal, & Moran, 1996; Williamson, 1985). However, there is no consensus on how these two forms of governance impact each other in repeated exchanges. Researchers debate whether contracts and trust act as substitutes or complements.

Proponents of the substitute view of the relationship between contracts and trust portray contracts as tools that are necessary in the absence of trust to guard against opportunistic behavior and ensure exchange participation (Barney & Hansen, 1994; Gulati, 1995). However, research also suggests that contractual safeguards trigger negative feelings toward the partner and impede trust development (Ghoshal & Moran, 1996; Sitkin & Roth, 1993). Thus, the substitute view contends that contracts allow the exchange to occur by mitigating opportunism, even as they undermine trust development. In contrast, proponents of the complement view of the relationship between contracts and trust portray contracts as tools that facilitate exchange by clarifying roles and rules of the exchange (Poppo & Zenger, 2002). From this perspective, contracts provide opportunities for partners to learn about each other and the exchange, which in turn assist trust development. Thus, the complement view contends that contracts create knowledge and exchange experiences that can lead to trust

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development. Surprisingly, empirical evidence has fueled rather than resolved the debate by supporting both the substitute (e.g., Crocker & Reynolds, 1993; Corts & Singh, 2004; Malhotra & Murnighan, 2002) and the complement views (e.g., Mayer & Argyres, 2004; Poppo & Zenger, 2002; Ryall & Sampson, 2009). This conflicting evidence suggests that the relationship between contracts and trust is more complicated than previously thought.

Weber and Mayer (2011) theorized that contract frames—differences in contract language—represent a contingency that affects the way people experience and respond to contracts. Drawing from regulatory focus theory (Higgins, 1997, 1998), they predicted how prevention and promotion contract frames should affect trust development in exchange relationships. This theory was an important first step toward understanding the psychological impact of contracts on exchange behavior and exchange relationships.

In the current paper, we report the first empirical tests of whether and how promotion and prevention contracts differently influence exchange behavior. We find that prevention contracts act as substitutes for trust, and promotion contracts act as complements. Our experiments also extend Weber and Mayer's (2011) theory by examining two novel aspects of using promotion and prevention contracts in exchanges. First, we identify a cognitive mechanism that underlies the impact of prevention and promotion contracts on trust. We theorize that promotion and prevention contracts prompt people to make different attributions for their exchange partner's behavior. We test this mechanism in addition to Weber and Mayer's assertion that emotional experiences of the exchange differ as a function of contract frame. We find that people are more likely to attribute benevolence to their exchange partner under promotion than prevention contracts, but we find no evidence for an emotional mechanism. Second, we consider the impact of unexpected negative events on exchanges. We find that unexpected negative events cause trust to drop more precipitously after prior positive exchanges under promotion than prevention contracts. Taken together, our studies demonstrate that promotion and prevention contracts elicit different cognitive and behavioral responses and highlight the strategic importance of selecting the appropriate contract frame to fit the exchange relationship as it unfolds over time.

## **CONTRACT FRAMES AND TRUST**

Relational trust is the willingness of one party to be vulnerable to the actions of another in the absence of control over the other party (Mayer, Davis, & Schoorman, 1995). Interfirm exchanges often feature moral hazard and behavioral uncertainty (Gulati & Sych, 2008), and relational trust is important because it can lower transaction costs and improve outcomes (Cummings & Bromiley, 1996). Relational trust develops over repeated, firsthand interactions (Dyer & Singh, 1998; McKnight, Cummings, & Chervany, 1998), but scholars debate whether contracts that govern these interactions substitute or complement trust development.

Scholars who maintain that contracts and trust act as substitutes for each other focus on how contractual safeguards enforce the exchange and mitigate opportunistic behavior (Williamson, 1985). In particular, the use of contracts reduces the need for trust and vice versa; the presence of one eliminates the need for the other (e.g., Dyer & Singh, 1998; Ghoshal & Moran, 1996; Gulati, 1995). Therefore, according to this view, numerous safeguards and contract details are necessary to mitigate opportunism early in an exchange relationship, but they become less important if trust develops, resulting in less detailed contracts over time. For example, Air Force procurement contracts and studies of the oil drilling industry indicate that parties with more prior interactions use contracts with fewer details (Corts & Singh, 2004; Crocker & Reynolds, 1993). However, laboratory experiments reveal that trust is lower between parties who used contracts compared to those who did not (Malhotra

& Murnighan, 2002). In sum, contractual safeguards prevent opportunistic behavior, but they also appear to slow trust development.

Scholars who argue that contracts and trust complement each other assert that contracts support trust development because they specify rules and roles, thereby limiting confusion and exposure to risk in the exchange (Poppo & Zenger, 2002; Ryall & Sampson, 2009). With contracts in place, parties then learn from the on-going exchange, which leads to the inclusion of more details in the contracts they use in subsequent transactions. For example, personal computing, telecommunications, and information services contracts become longer and more complex as partners work together over time (Mayer & Argyres, 2004; Poppo & Zenger, 2002; Ryall & Sampson, 2009). Also, telecommunications contracts are more likely to include more clauses as same-partner experience increases, which supports the complement view and directly counters predictions based on the substitute view (Ryall & Sampson, 2009). To the best of our knowledge, however, researchers have not directly shown that trust increases in repeated exchanges under contracts as is predicted by the complement view. In sum, support exists for both the substitute and complement views. Weber and Mayer (2011) offer one possible explanation for this apparent contradiction by theorizing that the relation between contracts and trust depends, in part, on contract frames.

### **Prevention and Promotion Contract Frames**

Regulatory focus theory asserts that, at a given point of time, people have either a promotion or prevention focus, which influences their interpretations, emotions, behaviors, and relationships (Higgins, 1997; 1998). These foci represent motivational mindsets generally oriented toward seeking pleasure or avoiding pain, respectively. Promotion and prevention foci lead to different perceptions and goal-pursuit behaviors without altering the goal itself; that is, two people with the exact same goal will think, feel, and act differently depending on whether they view the goal through a promotion or prevention lens.

Prevention focus prompts people to view goals as obligations that they must meet, inducing a strategic emphasis on preventing negative events or outcomes (Brendl & Higgins, 1996; Higgins, 1997, 1998). People with a prevention focus experience agitation-related emotions (e.g., tense, uneasy) if they miss a goal, and quiescence-related emotions (e.g., calm, relaxed) if they meet a goal (Higgins, Shah, & Friedman, 1997; Roney, Higgins, & Shah, 1995). The intrinsic drive to avoid the pain of agitation that stems from missing goals under prevention focus is greater than the drive to achieve the pleasure of quiescence that results from meeting the goal (Idson, Liberman, & Higgins, 2000). Thus, the range of emotional experiences under a prevention focus tends to be more painful to less pleasurable than under a promotion focus (Idson et al., 2000), which prompts vigilant behavior directed toward meeting obligations (Förster, Higgins, & Taylor-Bianco, 2003) and leads to the development of arms-length associations rather than committed relationships (Gross & John, 2003).

Promotion focus, in contrast, prompts people to view goals as ideals that they should strive to meet, inducing a strategic emphasis on achieving positive events or outcomes (Brendl & Higgins, 1996; Higgins, 1997, 1998). People with a promotion focus experience cheerfulness-related emotions (e.g., happy, satisfied) if they meet a goal, and dejection-related emotions (e.g., disappointed, discouraged) if they miss a goal (Higgins et al., 1997; Roney et al., 1995). The intrinsic drive to seek the pleasure of cheerfulness associated with meeting goals under promotion focus is greater than the drive to avoid the pain of dejection that stems from missing the goal (Idson et al., 2000). Thus, the range of emotional experiences under a promotion focus generally is more pleasurable and less painful than under a prevention focus (Idson et al., 2000). As a result, a promotion focus prompts eager behavior, such as creativity and flexibility, as means to attain the ideal goal (Förster et al., 2003; Galinsky, Leonardelli, Okhuysen, & Mussweiler, 2005). Also, the more pleasurable emotional

experiences that accompany exchange under promotion focus are likely to lead to greater personal closeness (Gross & John, 2003) and commitment in relationships (Winterheld & Simpson, 2011).

Prevention and promotion focus can be situationally induced (Higgins et al., 1997). Loss-framed statements prompt people to adopt a prevention focus, and gain-framed statements prompt people to adopt a promotion focus (Roney et al., 1995; Shah, Higgins, & Friedman, 1998).<sup>1</sup> Therefore, contracts that frame goals as obligations and describe safeguards in terms of penalties may induce a prevention focus, and contracts that frame goals as opportunities and describe safeguards in terms of rewards may induce a promotion focus. However, it is essential to emphasize that any given contract can be framed in either prevention or promotion language; that is, economically equivalent goals and safeguards can elicit psychologically distinct mindsets. Therefore, Weber and Mayer (2011) theorize that contract frames should produce different regulatory foci that, in turn, lead to different emotions, behaviors, and relationships. We extend the theory below by identifying a potential cognitive mechanism as well.

### **Emotional and Cognitive Reactions to Prevention and Promotion Contracts**

**Emotional reactions to repeated positive exchanges.** The pleasure of meeting a goal under a promotion contract is greater than under a prevention contract (Idson et al., 2000). Thus, individuals should experience more pleasure (and less pain) in repeated positive exchanges under promotion than prevention contracts. More specifically, Weber and Mayer (2011) posit that people experience different types of positive emotions that are associated with different levels of pleasure when they meet goals under prevention and promotion contracts. Prevention contracts should prompt people to view exchange goals as obligations they must meet at all costs, leading to more quiescence (and less agitation) after meeting the exchange goal (Higgins et al., 1997; Roney et al., 1995). In contrast, promotion contracts should prompt them to view the same exchange goals as ideals they should strive to attain (Brendl & Higgins, 1996; Higgins, 1998), leading to more cheerfulness (and less dejection) upon meeting the same goal (Higgins et al., 1997; Roney et al., 1995).

Hypothesis 1a. People will experience more cheerfulness (less dejection) in repeated positive exchanges under promotion than prevention contracts.

Hypothesis 1b. People will experience more quiescence (less agitation) in repeated positive exchanges under prevention than promotion contracts.

**Attributions of trustworthiness in repeated positive exchanges.** We propose that promotion and prevention contracts may also differently influence trust because they may prompt

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<sup>1</sup>Prospect theory uses loss and gain frames to explain tendencies in risk-seeking and risk-averse behavior. However, regulatory focus theory is a more appropriate theoretical lens for our studies for several reasons. First, prospect theory makes predictions of behavioral decision-making under risk, which is quantified by known probabilities (Kahneman & Tversky, 1979). In our study, managers made investment decisions under uncertainty, not risk, because the probability of the returns from the strategic alliance is not knowable *ex ante*. Second, prospect theory builds on the premise that a given outcome is objectively positive (or negative) and considers the consequences of framing the objectively positive outcome in terms of gains versus foregone gains (or framing an objectively negative outcome in terms of losses versus avoided losses). It does not consider situations in which the outcome could be either positive or negative (a mixed gamble), which makes it difficult to apply prospect theory to the context of firm interactions (Bromiley, 2010). Third, both regulatory focus theory and prospect theory differentiate between gains and losses, but regulatory focus theory goes one step further by recognizing that any given goal can be experienced differently depending on what reference point is used (for a detailed discussion see Higgins, 1997; 1998).

people to make different attributions for their exchange partner's behavior in repeated positive exchanges. According to attribution theory, individuals generally attribute behavior to either internal/personal or external/situational causes (Heider, 1958). In exchanges, for example, people may attribute their partner's behavior to their partner's trustworthiness (a characteristic of the person or the firm) or the safeguards in the contract (a feature of the situation). The discounting principle suggests that people are likely to discount a cause for a specific effect when there are other plausible causes (Kelley, 1973; Martinko, Douglas, & Harvey, 2006). Thus, although people often exhibit a bias toward making personal attributions for behavior (Heider, 1958; Jones & Davis, 1965; Kelley, 1971; 1973; cf. Bauman & Skitka, 2006, 2010), they are more likely to make situational attributions when the situational constraints on others' behavior are salient and credible (Jones & Davis, 1965; Kelley, 1971; 1973). We expect that promotion and prevention contracts influence the attributions people make for their exchange partner's behavior in repeated positive exchanges because they affect the salience and credibility of the situational constraints on the behavior.

Promotion contract safeguards are framed as bonuses that reward positive partner behavior, and bonuses may affect attributions that underlie perceived trustworthiness for at least three reasons. First, people are generally less concerned about foregoing gains than incurring losses (Kahneman & Tversky, 1979; see also Baumeister, Bratslavsky, Finkenauer, & Vohs, 2001). Therefore, compared to penalties, they should be less apt to view bonuses as situational constraints when they evaluate the reasons for their partner's behavior during the exchange under a promotion contract. Second, promotion contracts construe some benchmarks as bonus worthy, which may increase the likelihood that people view exchange partners who go beyond the minimum acceptable threshold of exchange participation as acting on their own volition (i.e., exhibiting agency) and therefore seem more trustworthy. Third, bonuses highlight positive outcomes and may prompt individuals to infer that someone who opts to offer bonuses generally has goodwill toward them because they would willingly share the fruits of the exchange. In sum, promotion contracts are unlikely to interfere with individuals' tendencies to make dispositional attributions for positive exchange behavior because they will not prompt people to discount partner trustworthiness in a positive exchange, and they may even enhance attributions of partner trustworthiness.

In contrast, prevention contracts contain penalties to safeguard exchanges, which may also affect attributions that underlie perceived trustworthiness for multiple reasons. Penalties deter opportunistic behavior because unmet exchange specifications cause the transgressing firm to incur damages. People are more averse to losses than foregone gains and are therefore more apt to attend to penalties than bonuses (Kahneman & Tversky, 1979; see also Baumeister et al., 2001). Therefore, the focus in exchanges under prevention contracts is on avoiding loss (preventing the minimal exchange goal from being missed), and the potential punishment associated with the penalty clauses is salient. The salience of punishment also increases the accessibility of situational influences and may prompt people to discount partner trustworthiness when they consider potential reasons for their partner's behavior during the exchange under a prevention contract. Additionally, the mere existence of the penalties in the contract supports the view that the partner is potentially opportunistic (Weber & Mayer, 2011), which simultaneously discounts the credibility of partner trustworthiness as an alternative explanation for positive exchange behavior. In sum, prevention contracts should make situational constraints on behavior especially credible and salient, which leads people to discount partner trustworthiness and decreases the likelihood that they attribute exchange participation to this internal partner characteristic.

Although the rationale above applies to perceived trustworthiness in general, trustworthiness stems primarily from judgments about three distinct characteristics of the other party: ability, integrity, and benevolence (Colquitt, Scott, & LePine, 2007; Mayer et al., 1995). Ability is the capacity of trustees—based on their knowledge, skills, and wisdom—to direct their own behavior in a given

situation. In repeated positive exchanges, people are likely to assess the other party's ability in terms of the positive outcomes of the exchange, irrespective of the contract frame, because the other party has demonstrated enough skill to bring about positive outcomes when executing the on-going exchange. Therefore, it is unlikely that either contract frame will prompt individuals to discount attributions of ability as a reason for the exchange behavior. As a result, it is unlikely that there will be any difference in the attributions of the other party's ability under a prevention versus promotion contract.

Integrity is adherence to the duty to fulfill promises (i.e., doing what you say you are going to do). By definition, repeated positive exchanges are those in which parties honor the terms of the contract, and the other party in the exchange exhibits consistency in their actions. As a result, people are likely to assess the other party's integrity in terms of this consistent positive exchange behavior and have no reason under either contract frame to discount attributions of integrity as an explanation for the positive exchange behavior. Therefore, it is unlikely that there will any difference in attributions of the other party's integrity under promotion and prevention contracts.

Benevolence is the desire of trustees to do good to the trustor, independent of the trustees' self-interest. Because benevolence is about goodwill, rather than skills or consistency, attributions of benevolence should differ as a function of contract frame in repeated positive exchanges. There are two reasons for this prediction. First, the inclusion of bonuses or penalties in promotion and prevention contracts, respectively, seem most directly relevant to judgments about the other party's goodwill, as the party is seen as potentially rewarding or punishing individuals making the investment decisions. Thus, attributions of benevolence are more likely to occur under promotion contracts (rewarded through bonuses) than prevention contracts (punished through penalties) because prevention contracts will undermine attributions of partner benevolence. Second, promotion contracts draw attention to positive events, while prevention contracts focus on negative events. As a result, promotion contracts highlight positive partner behavior, which serves as the basis of attributions of benevolence; prevention contracts emphasize the absence of negative behavior instead and prompt managers to discount partner benevolence as an explanation for the positive exchange behavior. Therefore, we predict that prevention and promotion contracts should differently influence attributions of partner benevolence:

Hypothesis 1c. People will attribute more benevolence to their exchange partners over repeated positive exchange under promotion than prevention contracts.

## **Contract Frames and Trust**

**Trust development in repeated positive exchanges.** Prevention and promotion contracts should have different effects on trust development in repeated exchanges. Many researchers, including those interested in contracts, define trust as willingness to be vulnerable (e.g., Colquitt et al., 2007; Gulati & Sytch, 2008; Malhotra & Murnighan, 2002; Mayer et al., 1995). However, there is disagreement in the literature over whether trusting intentions (i.e., positive expectations for another party's behavior) or trusting behavior (i.e., a behavior that relinquishes an actor's control over outcomes the actor values) best captures the trust construct, and this disagreement stems, in part, from scholars' research questions and level of analysis (Bigley & Pearce, 1998; Lewicki & Bunker, 1995). To address this issue, we operationalize trust both as trusting intentions and trusting behavior in the studies reported below. However, we do not differentiate between the two conceptualizations in the following paragraphs because the rationale for our hypotheses is the same, irrespective of which conceptualization one may favor.

From an emotions perspective, positive emotions increase closeness and emotional satisfaction in relationships (Gross & John, 2003), which should support the development of trust between parties (Winterheld & Simpson, 2011). Weber and Mayer (2011) argue that parties should experience less pleasurable emotions under prevention than promotion contracts, which in turn should lead to less trust development under prevention than promotion contracts. Specifically, the comparably more painful agitation-related and less pleasurable quiescence-related emotions people should experience under a prevention contract are less likely to support trust development than the more pleasurable cheerfulness-related and less painful dejection-related emotions people should experience under a promotion contract (Winterheld & Simpson, 2011). In sum, the different emotions that people experience over repeated exchanges under prevention and promotion contracts should differently influence trust development and therefore cause them to report or exhibit different levels of trust if the contracts are removed.

From an attribution perspective, trust is likely to develop when people attribute exchange participation to actors' internal characteristics rather than to external sources, such as contractual safeguards (Ferrin & Dirks, 2003; Mayer et al., 1995; Weber, Malhotra, & Murnighan, 2005). As argued above, people should be less likely to attribute positive behavior to partner trustworthiness under prevention contracts than promotion contracts because the situational constraints created by the contracts should be more salient. Therefore, the different attributions people make for their exchange partner's behavior under promotion and prevention contracts should differently affect trust development and cause them to report or exhibit different levels of trust if the contracts are removed.

In sum, emotional and attributional accounts of how people experience exchange under promotion and prevention contracts predict less trust development under prevention than promotion contracts. Therefore, people should report less willingness to be vulnerable and be less willing to make their firm vulnerable when prevention contracts are removed, compared to when promotion contracts are removed.

Hypothesis 2a. People will report less willingness to be vulnerable following repeated positive exchange experience under prevention than promotion contracts.

Hypothesis 2b. When contracts are removed, people will exhibit less trusting behavior following repeated positive exchange experience under prevention than promotion contracts.

**Trust after unexpected negative events.** Written contracts contribute to the development of psychological contracts, which represent individuals' beliefs about the reciprocal obligations that two parties in an exchange have to each other (Robinson & Morrison, 2000; Rousseau, 1989; Schein, 1965). Psychological contracts are important because they act as schema that influence how people anticipate and interpret exchange behavior, including instances when breaches to psychological contracts may occur (Sherman & Morley, 2015). Breaches of psychological contracts are subjective and occur when one party perceives that the other party violated an implied promise (Robinson, 1996). Therefore, people may perceive breaches of psychological contracts when their exchange partners renege on agreements or simply when there is incongruence between parties' exchange expectations (assumptions about expectations are not necessarily shared; Robinson & Morrison, 2000).

Breaches of psychological contracts affect trust for at least two reasons. First, expectancy violation theory suggests that aggrieved parties experience strong negative emotions when exchange expectations are violated (Burgoon, 1993; see also Tykocinski, Higgins, & Chaiken, 1994), and these negative emotions should reduce peoples' willingness to continue to make themselves vulnerable to the other party. Second, people often attribute out-of-role behavior to internal causes, especially if it

is negative (Jones & Davis, 1965), and individuals should be less willing to make themselves vulnerable to untrustworthy than trustworthy people. In sum, research on psychological contracts, expectancy violation theory, and attribution theory all suggest that unexpected negative events should decrease trust.

Under prevention contracts, people should develop a schema for the exchange in which their exchange partner will potentially behave opportunistically if left unchecked (Weber & Mayer, 2011). From an emotional perspective, prevention contracts prompt individuals to sustain an arms-length relationship between partners in the repeated exchange because of the relative absence of pleasurable, cheerfulness-related emotions, even when exchange goals are met (Winterheld & Simpson, 2011). Of course, negative emotions will arise when exchange expectations are not met, even in arms-length relationships, but negative events are not entirely unanticipated, which helps mitigate the intensity of the reaction (Burgoon, 1993). Additionally, people may be less likely to attribute prior exchange participation under contracts to partner trustworthiness under a prevention contract, reinforcing expectations that the partner is potentially opportunistic (Weber & Mayer, 2011; see also Higgins, Friedman, Harlow, Idson, Ayduk & Taylor, 2001; Tykocinski et al., 1994). Therefore, although unexpected negative events are undesirable, they may not seem entirely uncharacteristic for the exchange partner.

Under promotion contracts, in contrast, people should develop a schema for the exchange that includes cooperation and partner benevolence. From an emotional perspective, promotion contracts help to create relational bonds between parties because repeated positive exchange can elicit pleasurable, cheerfulness-related emotions when exchange goals are met (Winterheld & Simpson, 2011). Negative events are unexpected and violate the positive schema that forms under promotion contracts, which elicits especially strong negative emotions and a sense of betrayal (Burgoon, 1993). Additionally, people may be more likely to attribute the unexpected negative event under promotion contracts to the exchange partner's malfeasance because it is both out-of-role and negative (Jones & Davis, 1965). Therefore, people should be less willing to make themselves vulnerable to untrustworthy than trustworthy partners. In sum, unexpected negative exchange events are likely to cause less damage to trust following repeated positive exchange experiences under prevention than promotion contracts.

Hypothesis 3. Unexpected negative exchange events will lead to a smaller decline in trust established under prevention than promotion contracts.

## **USING AN EXPERIMENTAL APPROACH**

Prior empirical research supports both the substitute (e.g., Crocker & Reynolds, 1993; Corts & Singh, 2004) and complement (e.g., Ryall & Sampson, 2009; Poppo & Zenger, 2002) views of the relation between contracts and trust. Although this work has not differentiated between promotion and prevention contracts, we believe that there are three methodological aspects of these studies that also may have contributed to these contradictory results. First, longitudinal data on trust in repeated interfirm relationships are very difficult to obtain, and studies that use a cross-sectional approach cannot examine the impact of trust at different stages of an on-going exchange. Second, large contract datasets rarely include direct measures of trust, which forces researchers to rely on imperfect proxy measures, such as the duration of the relationship (e.g., Crocker & Reynolds, 1993; Gulati, 1995). Third, studies that have directly assessed trust often use self-report measures about past exchanges (e.g., Poppo & Zenger, 2002; Zaheer, McEvily & Perrone, 1998), which are known to suffer from retrospective biases (Nisbett & Wilson, 1977) and do not always correlate strongly with trusting behavior (e.g., Mayer et al., 1995). In sum, the empirical literature on the relation between contracts and trust is methodologically sound, but all methods have strengths and limitations. We seek to

highlight some of the limitations of this work to illustrate how an experimental approach can complement the methods traditionally used in this area to further our understanding of the relationship between contracts and trust.

Malhotra and Murnighan (2002) reported perhaps the only controlled experiments on contracts and trust. They randomly assigned participants to exchanges that were or were not governed by a contract and operationalized trust behaviorally by observing how contracts affected individuals' willingness to place their resources under their exchange partners' control. Although experiments have their own limitations, this work complemented the existing research by using a direct behavioral measure of trust that was free from retrospective bias. We chose to build on Malhotra & Murnighan's approach to evaluate our hypotheses about promotion and prevention contracts by conducting two experiments that used an exchange context inspired by their study. Unique to our experiments, however, participants reviewed a contract for the exchange rather than merely being told that a contract was in place. Also, we included measures of potential underlying emotions and attributions, as well as trusting intentions. Finally, we modified the situation to create opportunities for unexpected negative exchange behavior as opposed to always conforming with exchange expectations.

All studies reported below used modified versions of the "Trust Game" (Dasgupta, 1988; Malhotra & Murnighan, 2002). In each decision round, players decided how to invest Company A's available resources. Investing in-house provided a low but guaranteed rate of return. Alternatively, investing in a joint venture (JV) with Company B had the potential to yield a better outcome but was uncertain; any resources Company A invested in the JV would grow at a high rate, but Company B would choose how much value, if any, to return to Company A. Therefore, players decided whether to settle for a modestly positive outcome by investing in-house or trust Company B and seek a potentially better outcome by investing in the JV.

## **STUDY 1: EMOTIONS, ATTRIBUTIONS OF BENEVOLENCE, AND TRUSTING INTENTIONS**

Study 1 examined the effects of promotion and prevention contracts on emotional experiences that accompanied the exchange, attributions for exchange behavior, and trusting intentions.

### **Method**

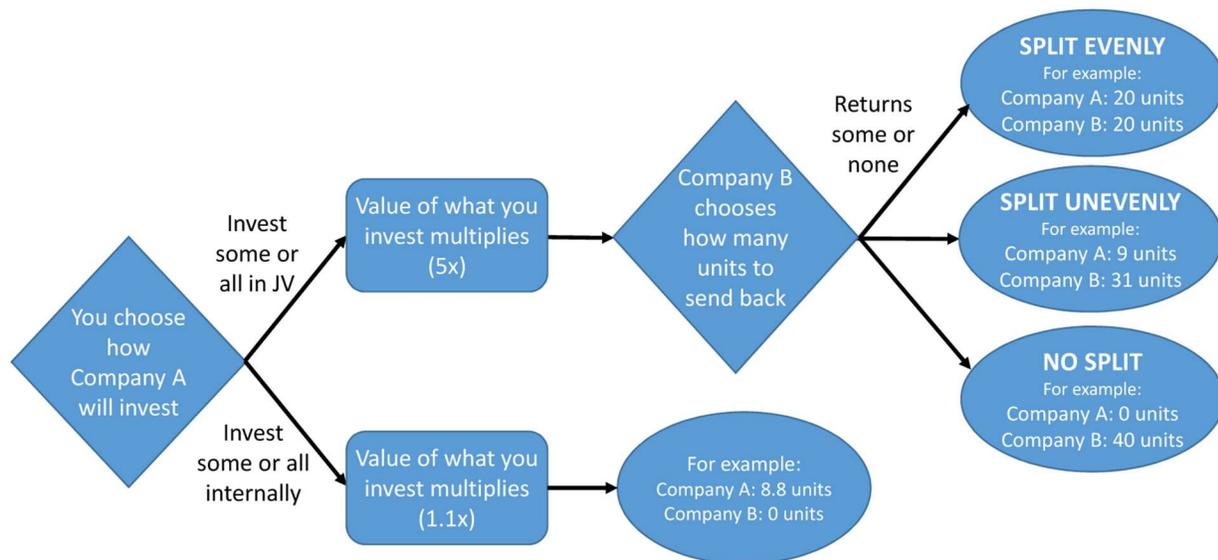
**Participants.** Participants were 140 adult residents of the United States (43% female) recruited from Amazon's Mechanical Turk. Mechanical Turk is commonly used in behavioral science research, including prior contracting studies in management (e.g., Harmon, Kim & Mayer, 2015). Mechanical Turk data is of comparable quality to data from other sources (Buhrmester, Kwang, & Gosling, 2011; Paolacci & Chandler, 2014), and it allowed us to test our predictions with a heterogeneous sample in terms of age ( $M = 35.51$ ,  $SD = 10.48$ ) and years of full-time work experience ( $M = 13.53$ ,  $SD = 10.21$ ). Participants earned \$1.00 base pay and up to \$4.00 bonus pay for their performance on a randomly selected decision round (cf. Malhotra & Murnighan, 2002). Behavior in tasks like this one does not differ as a function of whether a lottery procedure determines payment, as in this study, or payment is contingent on all responses (Bolle, 1990).

**Procedure.** All participants were assigned to play the role of a manager at Company A. Their explicit goal was to achieve the best possible outcome for their company. Participants were told that they would be paired with another Mechanical Turk Worker who would make decisions for Company B. In reality, Company B's responses were pre-programmed. Participants expected to complete multiple rounds of decision-making, but the study ended without warning after Round 2 so that participants'

responses would not be affected by concerns about the heightened potential for opportunistic behavior in the final round (Axelrod, 1980; Murnighan & Roth, 1983).

In each of the two decision rounds, participants decided how to invest eight resource units. Units invested internally would multiply by a factor of 1.1 (e.g., 8 units invested internally would yield 8.8 units). Units invested in the JV with Company B would multiply by a factor of 5 (e.g., 8 units invested in the JV would yield 40 units), but Company B would control how the resultant units would be redistributed between the companies. Ostensibly, the manager of Company B could choose to send some, none, or all the units back to Company A. Participants received a description of the rules and the flowchart in Figure 1.

**FIGURE 1**  
**A Flowchart of the Structure of Each Decision Round in Each Study**



The instructions explained that the two parties could decide to use contracts to manage uncertainty about the inputs and outputs of the JV. Using a contract would cost each company one unit, but the contract could specify how many units Company A would commit to the JV and how many units Company B would return. Ostensibly, Company B would decide whether to propose a contract, and participants could decide to accept or reject it. If a contract was proposed and accepted, an exchange would occur based on the terms of the contract. If Company B did not propose a contract or if the participant rejected it, then each manager would make decisions in the absence of a contract. Contract proposals varied between experimental conditions.

**Contract manipulation.** Participants were randomly assigned to either prevention or promotion contract conditions, and they received the same contract type in Rounds 1 and 2. The promotion and prevention contracts were economically equivalent; only the psychological frame of the contracts differed (Tables 1a and 1b provide the contract language and accompanying payout schedules). Irrespective of how many units participants intended to invest, it was in their economic self-interest to accept the contract because all payouts from investing in the JV under the contract were better than what Company A could earn if it invested all of the units internally. However, the contracts were structured so that participants would receive a higher rate of return as the size of their JV investment increased. Notably, the resources would be split equally when participants invested all eight units, which is likely to be perceived as fair and respectful (e.g., Güth, Schmittberger, & Schwarze,

1982; Straub & Murnighan, 1995). As expected based on self-interest, very few participants rejected contracts ( $n = 5$  in the promotion condition;  $n = 4$  in the prevention condition). Data from nine participants who did not invest any units in the JV in Round 1 or Round 2 (i.e., when no exchange took place) were removed from analyses.

**TABLE 1a**  
**Promotion Contract Language and Payout Schedule**

The goal of this contract is to promote understanding and cooperation between Company A and Company B. Company A will achieve rewards from Company B for investing greater than 2 units of resources in the JV in each round. When Company A invests 2 units of resources in a round, Company B will pay out a baseline rate of 3.5 units; however, if Company A invests more units per round, Company B will reward Company A with bonus units for the investing resources in the JV. Also, the bonus percentage increases as the size of the investment increases. A detailed payment schedule will follow. In short, this contract aims to encourage cooperation between both companies and support progress toward a successful JV.

Units Invested	Units of JV Output	Bonus for Additional Cooperation	% Returned to Company A	Units Returned to Company A
2	10	+0%	35%	3.5
4	20	+5%	40%	8
6	30	+10%	45%	13.5
8	40	+15%	50%	20

**TABLE 1b**  
**Prevention Contract Language and Payout Schedule**

The goal of this contract is to accurately specify Company A's investment obligations and Company B's pay out duties for this JV. Company A must invest 8 units of resources per round to prevent losses imposed by Company B. If Company A invests 8 units of resources in a round, Company B is required to pay 20 units of resources to Company A; however, if Company A fails to invest 8 units in a round, Company B will penalize Company A for withholding resources from the JV by reducing the payout to Company B. Furthermore, the penalty percentage inflates as the size of the investment decreases. A detailed payment schedule will follow. In short, this contract aims to prevent negative behavior by either party and avoid underperformance in the JV.

Units Invested	Units of JV Output	Penalty for Under Investment	% Returned to Company A	Units Returned to Company A
2	10	-15%	35%	3.5
4	20	-10%	40%	8
6	30	-5%	45%	13.5
8	40	-0%	50%	20

A pilot study tested whether our contract manipulation influenced regulatory focus as intended. One hundred adult residents of the United States recruited from Amazon's Mechanical Turk earned \$0.50 for completing the study. The sample was 32% female, and heterogeneous in terms of age ( $M = 33.77$ ,  $SD = 9.52$ ) and years of full-time work experience ( $M = 11.74$ ,  $SD = 9.17$ ). Pilot study

participants were randomly assigned to either prevention or promotion contract conditions and completed the exact same task as participants in Study 1 until the investment decision in Round 1. That is, pilot study participants reviewed the rules of the trust game and expected to play multiple rounds in the role of the manager for Company A. Instead of making any investment decisions, however, pilot study participants completed measures of their current promotion and prevention focus after they received a contract in Round 1. The study then terminated.

Participants completed twelve items adapted from Ferris, Johnson, Rosen, Djurdjevic, Chang, and Tan (2013). Six items assessed promotion focus: (1) This contract can help fulfill the potential of the JV to the fullest, (2) I am focused on the successful experiences this contract can provide, (3) In general, I am thinking about the positive aspects of this contract, (4) I see this contract as a way to fulfill my hope, wishes, and aspirations for this situation, (5) I think about the positive outcomes that this contract can bring me, (6) I feel happy about what this contract can help me accomplish. Six items assessed prevention focus: (1) I am focused on the potential failures that can occur under this contract, (2) I am worried about failing to prevent negative outcomes in this situation, (3) In general, I am thinking about the negative aspects of this contract, (4) I think about the negative outcomes that this contract can bring, (5) My goal in this exchange is to prevent negative outcomes, (6) I feel anxious about this contract. Confirmatory factor analysis that used an oblique rotation and specified a two-factor solution verified that the six promotion focus items loaded together on one factor and the six prevention focus items loaded together on the other,  $\chi^2(43) = 73.59, p = .003$ . In short, the results of the pilot study matched the structure we expected based on Ferris et al. (2013). We therefore averaged the six promotion focus ( $\alpha = .95$ ) and prevention focus ( $\alpha = .90$ ) items to create separate indices for each construct.

OLS regression indicated that promotion focus was significantly higher for participants in the promotion ( $M = 5.75, SD = 1.22$ ) than prevention contract conditions ( $M = 5.13, SD = 1.35$ ),  $B = .63, t(98) = 2.43, p = .017$ . Another OLS regression found that prevention focus was significantly higher for participants in the prevention ( $M = 4.32, SD = 1.47$ ) than promotion contract conditions ( $M = 3.33, SD = 1.23$ ),  $B = .99, t(98) = 3.64, p < .001$ . In sum, results verified that the contract stimuli influenced participants' regulatory focus as intended.

## Dependent Measures

After Round 2 and before being told that the game had ended, participants completed a survey that assessed how they felt about the exchange and their exchange partners.

**Emotions.** Participants rated their emotional reactions to the exchange on 12 items used by Higgins et al. (1997). Six dejection-cheerfulness items asked participants how strongly they felt happy, satisfied, disappointed, discouraged, low, and sad. Six agitation-quiescence items asked participants how strongly they felt calm, relaxed, agitated, on edge, uneasy, and tense. Participants responded on 7-point scales that ranged from 1 = *not at all* to 9 = *extremely*. The two cheerfulness and two quiescence items were reverse scored (Higgins et al., 1997; see also Carroll, Yik, Russell, & Barrett, 1999), and responses were averaged to create indices of dejection-cheerfulness ( $\alpha = .91$ ) and agitation-quiescence ( $\alpha = .89$ ).<sup>2</sup>

To provide a comprehensive evaluation of the effect of contract frames on emotions, we also constructed six alternative emotion indices: (1) the *positive emotions index* included happy, satisfied, calm, and relaxed ( $\alpha = .87$ ); (2) the *cheerfulness index* included happy and satisfied ( $\alpha = .90$ ); (3) the *quiescence*

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<sup>2</sup> We conducted confirmatory factor analysis with an oblique rotation and specified a two-factor solution to assess whether the relations among the 12 emotion items in our data set corresponded to the dimensions we expected based on regulatory focus theory and prior empirical research (e.g., Higgins et al., 1997). The results indicated that one factor comprised the eight negative emotions, and the other factor comprised the four positive emotions,  $\chi^2(43) = 361.74, p < .001$ . Therefore, the results were inconsistent with what regulatory focus theory would predict.

*index* included calm and relaxed ( $\alpha = .87$ ); (4) the *negative emotions index* included disappointed, discouraged, low, sad, agitated, on edge, uneasy, and tense ( $\alpha = .96$ ); (5) the *dejection index* included disappointed, discouraged, low, and sad ( $\alpha = .96$ ); (6) the agitation index included agitated, on edge, uneasy, and tense ( $\alpha = .92$ ).

**Attributions.** Participants rated their attributions of exchange partner's benevolence using five items adapted from Mayer and Davis (1999). Specifically, participants read the following statement stem, "I believe the other party in this exchange has acted the way they have so far because..." and indicated how strongly they agreed or disagreed to the following endings: (1) "... they are very concerned with my welfare;" (2) "...my needs and desires are very important to them;" (3) "...they would not do anything to hurt me;" (4) "...they really look out for what is important to me;" (5) "...they will go out of their way to help me." Participants responded on 7-point scales that ranged from 1 = *strongly disagree* to 7 = *strongly agree*. Higher numbers indicated that participants attributed more benevolence to the other party. Responses were averaged for analysis ( $\alpha = .95$ ).

Participants rated their exchange partner's integrity using five items adapted from Mayer and Davis's (1999) scale. Specifically, participants read, "I believe the other party in this exchange has acted the way they have so far because..." and indicated how strongly they agreed or disagreed to the following endings: (1) "...they have a strong sense of justice;" (2) "I never have to wonder whether they will stick to their word;" (3) "...they try hard to be fair in dealing with others;" (4) "...I like their values;" (5) "...sound principles seem to guide their behavior." Participants responded on 7-point scales that ranged from 1 = *strongly disagree* to 7 = *strongly agree*. Higher numbers indicated that participants attributed more integrity to the other party. Responses were averaged for analysis ( $\alpha = .71$ ). Given the acceptable but low reliability of the scale, we tested the effect of contract condition on each of the integrity items. None of the results were significant,  $p > .10$  in all cases.

Participants rated their exchange partner's ability using six items adapted from Mayer and Davis's (1999) scale. Specifically, participants read, "I believe the other party in this exchange has acted the way they have so far because..." and indicated how strongly they agreed or disagreed to the following endings: (1) "...they are very capable of performing their job in this exchange;" (2) "...they are probably successful at the things they try to do;" (3) "...they have much knowledge about how to manage an exchange like this one;" (4) "...I feel very confident about their skills;" (5) "...they have specialized capabilities that can increase our performance in this exchange;" (6) "...they are well qualified for this task." Participants responded on 7-point scales that ranged from 1 = *strongly disagree* to 7 = *strongly agree*. Higher numbers indicated that participants attributed more ability to the other party. Responses were averaged for analysis ( $\alpha = .91$ ).

**Trusting intentions.** Participants rated their willingness to be vulnerable to their exchange partner by indicating how strongly they agreed or disagreed to the following four items adapted from Mayer and Davis (1999): (1) "If I had my way, I wouldn't let the other party in this exchange have any influence over outcomes that are important to me;" (2) "I would be willing to let the other party in this exchange have complete control over my future in this exchange;" (3) "I really wish I had a good way to keep an eye on the other party in this exchange;" (4) "I would be comfortable putting the other party in this exchange in charge of important decisions that affect me, even if I could not monitor their actions." Participants responded on 7-point scales that ranged from 1 = *strongly disagree* to 7 = *strongly agree*. Items were scored so that higher numbers indicated more trust. Responses were averaged for analysis ( $\alpha = .76$ ).

## Results

**Emotions.** Hypothesis 1a predicted that participants would feel more cheerfulness (less dejection) under promotion than prevention contracts, and Hypothesis 1b predicted that participants

would feel more quiescence (less agitation) under prevention than promotion contracts. OLS regression indicated that scores on the dejection-cheerfulness index were the same in the prevention ( $M = 1.84$ ) and promotion ( $M = 1.77$ ) conditions,  $B = 0.07$ ,  $t(130) = 0.31$ ,  $p = .76$ . Similarly, scores on the agitation-quiescence index were the same in the prevention ( $M = 1.85$ ) and promotion ( $M = 1.98$ ) conditions,  $B = .13$ ,  $t(130) = 0.58$ ,  $p = .57$ . Moreover, analyses of the six alternative operationalizations of the emotion indices found no statistically significant results (see Table 2). In sum, the results did not support Hypothesis 1a or 1b.

**TABLE 2**  
**Means, Standard Deviations, and ANOVA Comparison Statistics for the Alternative Emotion Indices in Study 1**

Emotion Index	Promotion Condition	Prevention Condition	B	<i>t</i>	<i>p</i>
Positive emotions	7.05 (1.39)	6.96 (1.48)	.09	.36	.72
Cheerfulness	7.08 (1.65)	6.84 (1.77)	.24	.82	.42
Quiescence	7.02 (1.55)	7.08 (1.57)	-.06	-.22	.83
Negative emotions	1.87 (1.32)	1.85 (1.52)	.02	.08	.94
Dejection	1.74 (1.29)	1.79 (1.49)	-.05	-.02	.83
Agitation	2.00 (1.44)	1.91 (1.66)	.09	.33	.74

Note: Standard deviation of the mean in parentheses

**Attributions.** Hypothesis 1c predicted that participants would attribute more benevolence to their exchange partners after exchange experience under promotion than prevention contracts. In support of Hypothesis 1c, OLS regression indicated that attributions of benevolence were greater in the promotion ( $M = 4.34$ ) than prevention ( $M = 3.57$ ) contract condition,  $B = .78$ ,  $t(130) = 3.41$ ,  $p = .001$ .

We also explored the effect of contract experience on attributions of integrity and ability, but it was not significant in either case, as we had expected. Attributions of integrity did not differ between the promotion ( $M = 5.00$ ) and prevention ( $M = 4.78$ ) contract conditions,  $B = .12$ ,  $t(130) = 1.32$ ,  $p = .19$ . Attributions of ability did not differ between the promotion ( $M = 5.53$ ) and prevention ( $M = 5.42$ ) contract conditions,  $B = .06$ ,  $t(130) = 0.62$ ,  $p = .54$ .

**Trusting intentions.** Hypothesis 2a predicted that participants would report less willingness to be vulnerable to their exchange partners after exchange experience under prevention than promotion contracts. In support of Hypothesis 2a, OLS regression indicated that trusting intentions were lower in the prevention ( $M = 3.70$ ) than promotion ( $M = 4.20$ ) contract condition,  $B = -.50$ ,  $t(130) = -2.38$ ,  $p = .02$ .

## Discussion

Study 1 supported the prediction that contract frames differently impact attributions of exchange participation to partner benevolence (Hypothesis 1c), but it did not support the hypothesis that exchange participation under prevention and promotion contracts lead to different positive emotions (Hypothesis 1a and 1b). Study 1 also found that trusting intentions were lower following exchange experience under prevention than promotion contracts (Hypothesis 2a). Thus, the study indicates that attributions, but not emotions, may underlie differences in trust as a function of contract frames.

## STUDY 2: TRUSTING BEHAVIOR AFTER POSITIVE AND NEGATIVE EXCHANGE EVENTS

Study 2 examined trusting behavior following repeated positive exchange experiences under promotion and prevention contracts. However, it also investigated how unexpected negative events affect trust that developed under promotion and prevention contracts.

### Method

**Participants.** Participants were full-time or part-time MBA students ( $N = 116$ ). Analyses found no differences as a function of MBA program. Therefore, this variable is omitted below.

**Experimental Design and Procedure.** Participants completed the study via computer during class in one of the final sessions of their course. The task was presented as a decision-making exercise. As in Study 1, all participants read that they were a manager at Company A, which was considering a joint venture (JV) with Company B. Their goal was to achieve the best possible outcome for their company. Participants were told that they would be paired with another student in the class who would make decisions for Company B, but the two parties' identities would remain unknown to each other, even after the exercise was over. In reality, Party B's responses were pre-programmed.

The structure of the decision context (e.g., resource units, investment options, and rates of returns) was the same as in Study 1. However, there were three important differences. First, participants were randomly assigned to one of three contract conditions (promotion contract, prevention contract, no contract). That is, Study 2 added a no contract condition to provide additional comparisons. Second, participants completed five decision rounds rather than two. To avoid raising concerns about opportunism impeding the end of the exchange relationship, participants were told that the exercise would comprise six rounds, but the study ended abruptly after Round 5. Third, all participants faced an exchange without a contract in Round 3, and all participants received a poor outcome in Round 3 (i.e., the first round without contracts for participants in the promotion and prevention contract conditions). In Rounds 1 and 2, JV outcomes were always positive relative to what participants could have earned by investing resources internally, irrespective of contract condition. In Round 3, however, Company B only returned the amount Company A invested in the JV, which resulted in a small net loss for the round ( $< 1$  unit) when accounting for opportunity costs. Therefore, the outcome was substantially worse than what participants had achieved in the prior rounds and well below the threshold typically perceived as acceptable or fair (e.g., Güth, Schmittberger & Schwarze, 1982; Straub & Murnighan, 1995).

### Dependent Measure

**Trusting behavior.** Following Malhotra and Murnighan (2002), we operationalized trusting behavior as JV investment in the absence of a contract.<sup>3</sup> Thus, trusting behavior could only be assessed in Rounds 1 and 2 under the no contract condition, and in Rounds 3, 4 and 5 in all conditions. More JV investment indicated more trusting behavior.

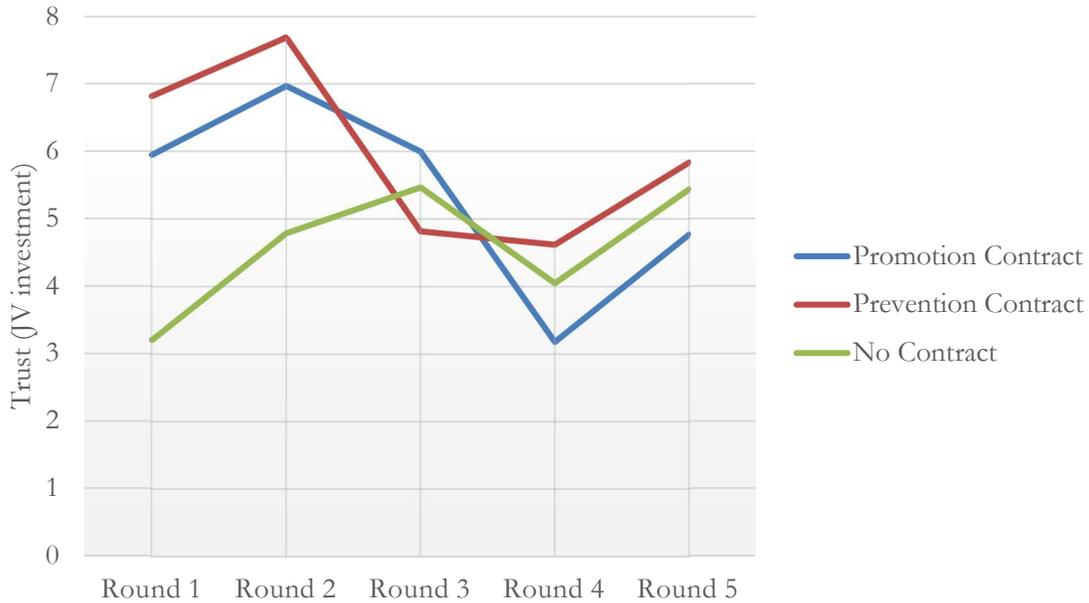
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<sup>3</sup> Trusting behavior is distinct from behavioral measures of risk, which traditionally involve gambles with choices between defined probabilities. Also, trusting behavior and behavioral measures of risk often do not correlate, which indicates that they are distinct constructs (Eckel & Wilson, 2004). Trusting behavior is also distinct from reciprocity. Reciprocity arises from feelings of obligation (Eisenberger, Cotterell, & Marvel, 1987), which do not occur when people feel that they got what they deserved (Pillutla, Malhotra & Murnighan, 2003). Parties who invest in the JV likely feel entitled to a fair return, so reciprocity is not conflated with trust in this measure.

## Results

Figure 2 shows JV investment in each round as a function of contract condition. Results of regression analyses are described below. See the supplemental materials for the results of equivalent tests using ANOVA.

**FIGURE 2**  
**Mean Levels of Exchange Participation and Trusting Behavior as a Function of Decision Round and Contract Condition in Study 2**



Condition	Round				
	1	2	3	4	5
Promotion	5.95 (2.41)	6.97 (1.83)	6.00 (2.38)	3.18 (2.89)	4.77 (3.17)
Prevention	6.84 (2.49)	7.74 (1.06)	4.79 (2.77)	4.53 (3.24)	5.84 (2.84)
No contract	3.11 (1.94)	4.72 (2.44)	5.39 (2.78)	4.17 (3.00)	5.44 (2.42)

Note: Standard deviations in parentheses

**Trust after repeated positive exchanges.** Hypothesis 2b predicted that people will exhibit less trusting behavior after repeated positive exchanges under prevention than promotion contracts. We tested Hypothesis 2b in three ways. We first took a longitudinal approach and examined change in JV investment across Rounds 2 and 3 (i.e., the change between the last round with a contract and the first round without a contract). We also examined trust cross-sectionally in Round 3 and compared trust in Round 3 to baseline trust.

*Longitudinal approach.* We compared changes in JV investment between Round 2 (under promotion, prevention, or no contract, depending on experimental condition) and Round 3 (when no contract was used in all conditions). Because larger decreases in JV investment indicate less trust following the removal of the contract, we expected a larger drop in JV investment between Rounds 2

and 3 in the prevention than promotion condition. To assess change over rounds, we used panel regression analysis with fixed effects for individuals to control for omitted variables that vary across individuals but do not change over time for individuals (Stock & Watson, 2003). We used dummy variables for decision round (i.e., Round 2, 3) and contract condition (i.e., whether promotion, prevention, or no contract governed Rounds 1 and 2), and allowed round and contract condition to interact (see Table 3a). This effectively estimated average effects for each combination of round and contract condition.

Participants in the promotion contract condition invested significantly less in the JV in Round 3 ( $M = 6.00$ ) than Round 2 ( $M = 6.97$ ). Participants in the prevention contract condition also invested significantly less in the JV in Round 3 ( $M = 4.79$ ) than Round 2 ( $M = 7.74$ ). However, a test of differences confirmed that the drop in JV investment across Rounds 2 and 3 was larger in the prevention than promotion contract conditions,  $p = .006$ . Therefore, the longitudinal results supported Hypothesis 2b.

*Cross-sectional approach.* We examined JV investment in Round 3 to compare how prior experience with different contracts affected trusting behavior after the contract was removed (see Table 3b). OLS regression indicated that trusting behavior in Round 3 was significantly higher in the promotion ( $M = 6.00$ ) than prevention condition ( $M = 4.82$ ). Therefore, cross-sectional analysis of behavior in Round 3 also supports Hypothesis 2b.

We also compared trusting behavior following the removal of a promotion or prevention contract and baseline trusting behavior by comparing Round 3 JV investment in the promotion and prevention conditions to Round 1 JV investment in the no contract condition. OLS regression indicated participants in the promotion contract condition exhibited more trusting behavior in Round 3 ( $M = 6.00$ ) than participants in the no contract condition in Round 1 ( $M = 3.21$ ). Participants in the prevention contract condition also exhibited more trusting behavior in Round 3 ( $M = 4.82$ ) than participants in the no contract condition in Round 1, but a test of differences indicated that the size of the effect was significantly smaller,  $p = .03$ . In other words, participants exhibited more trusting behavior after two rounds of exchanges governed by promotion than prevention contracts. These results again support Hypothesis 2b.

**Trusting behavior after unexpected negative exchange events.** To test Hypothesis 3, we used both longitudinal and cross-sectional analyses to assess whether violations of exchange expectations led to a smaller decline in trusting behavior in relationships established under prevention than promotion contracts.

*Longitudinal approach.* We compared JV investment in Rounds 3 and 4 to assess trusting behavior following an unexpected negative event as a function of exchange experience under different types of contracts. Because larger decreases in JV investment indicate less trusting behavior, we expected a larger drop in JV investment between Rounds 3 and 4 in the promotion than prevention condition. To assess change over rounds, we used panel regression analysis with fixed effects for individuals to control for omitted variables that vary across individuals but do not change over time for individuals (Stock & Watson, 2003). We used dummy variables for decision round (i.e., Round 3, 4) and contract condition (i.e., whether promotion, prevention, or no contract governed Rounds 1 and 2), and allowed contract condition and round to interact (see Table 3a). This effectively estimated average effects for each combination of round and contract condition.

Participants with promotion contract exchange experience exhibited less trusting behavior in Round 4 ( $M = 3.18$ ) than Round 3 ( $M = 6.00$ ). Participants with prevention contract exchange experience exhibited the same amount of trusting behavior in Round 3 ( $M = 4.79$ ) and Round 4 ( $M = 4.62$ ). A test of differences confirmed that the drop in trusting behavior across rounds was larger in the promotion than prevention condition,  $p < .001$ . Thus, the results support Hypothesis 3.

*Cross-sectional approach.* We also compared JV investment in Round 4 to assess how prior experience with different contract types affected trusting behavior following an unexpected negative event (see Table 3b). OLS regression indicated that trusting behavior in Round 3 was significantly lower in the promotion ( $M = 3.18$ ) than prevention condition ( $M = 4.62$ ). Therefore, these results also support Hypothesis 3.

**Table 3a**  
**Longitudinal Analysis in Study 2**

	Trusting Behavior (Hypothesis 2b)		Trusting Behavior (Hypothesis 3)	
	Round 2	Round 3	Round 3	Round 4
	JV investment	JV investment	JV investment	JV investment
Prevention	--	-2.87***	--	-0.21
Promotion	-0.72	-1.69***	1.18†	-1.64*
No Contract	-2.90***	-2.22***	0.65	-0.77
Overall $R^2$	0.19		0.10	
Wald $\chi^2$	54.26***		23.99***	

Panel regression analysis with fixed effects for individuals using two dummy variables to represent the contract condition manipulation. The reference category for each analysis is indicated by the double dash, and coefficients indicate differences in JV investment relative to JV investment in that condition and Round.

†  $p = 0.10$ ; \*  $p < 0.05$ ; \*\*\*  $p \leq 0.001$

**Table 3b**  
**Cross-sectional Analyses in Study 2**

	Trusting Behavior (Hypothesis 2b)		Trusting Behavior (Hypothesis 3)
	Round 3 JV investment	Round 3 JV investment vs. baseline	Round 4 JV investment
Promotion	1.18*	1.18*	-1.44*
No Contract	0.65	-1.61*	-0.56
$R^2$ (adj. $R^2$ )	0.03 (0.02)	0.19 (0.18)	0.04 (0.02)
$F$ -value	1.97	13.27***	2.18

Two dummy variables represented the contract condition manipulation with the prevention contract condition acting as the reference category. Therefore, positive coefficients for the promotion and no contract dummy variables indicate more JV investment relative to JV investment in the prevention condition.

†  $p = 0.10$ ; \*  $p < 0.05$ ; \*\*\*  $p \leq 0.001$

## Discussion

Study 2 found robust support for the prediction that contract frames differently impact trusting behavior in repeated exchanges (Hypothesis 2b). Longitudinal analysis that examined changes in JV investment between rounds before and after a contract was removed found smaller declines in JV investment following the removal of promotion than prevention contracts. Cross-sectional analysis

also indicated that trusting behavior was higher immediately after the removal of promotion than prevention contracts. Moreover, people with prior exchange experience under promotion contracts exhibited more trusting behavior after the contract was removed than baseline (i.e., people with no prior exchange experience with their partner and no contract). People with prior exchange experience under prevention contracts also exhibited more trusting behavior than baseline, but less trusting behavior was exhibited under prevention than promotion contracts. Therefore, the analyses provide convergent evidence that more trust develops under promotion than prevention contracts. In sum, Study 2 consistently indicated that trusting behavior is more likely to develop under promotion than prevention contracts when exchange experiences are positive. In short, promotion contracts complement trust, and prevention contracts substitute for it.

Another goal of Study 2 was to examine how promotion and prevention contracts shape the way people respond to unexpected negative events during the course of a repeated exchange. Results indicated that trusting behavior dropped more sharply (i.e., JV investments declined more) following unexpected negative events when the initial rounds of the exchange had been governed by promotion rather than prevention contracts. Thus, unexpected negative exchange events substantially reduced trust that had developed under promotion contracts.

## GENERAL DISCUSSION

Across two experiments, we found that prevention and promotion contracts have different strengths and liabilities at different stages of a repeated exchange. These results indicate a more nuanced interaction between contracts and trust than is typically depicted in the complement-substitute debate. Promotion contracts better support trust development over repeated positive exchanges, likely due to differences in attributions of benevolence for exchange participation under promotion and prevention contracts. However, unexpected negative events have more destructive effects on trust established under promotion than prevention contracts. Taken together, our results do not suggest that promotion contracts are better than prevention contracts or vice versa. Instead, our studies indicate that contract frames differently support trust development and preservation at different times in the exchange and should be used accordingly.

The first important contribution of our research is that we provide direct evidence that contract frames influence trust developed in prior positive exchanges. Our results indicate that trust develops from positive exchange experiences under both promotion and prevention contracts (Study 2). However, the magnitude of trust development was substantially greater under promotion than prevention contracts (Studies 1 and 2). In sum, promotion contracts facilitate trust development more than prevention contracts and should be used when rapid trust development is an important goal.

A second major contribution of our research is that it investigated potential mechanisms that could underlie differences in trust development under prevention and promotion contracts. We theorized and found evidence that managers are more likely to attribute benevolence to their exchange partners for positive exchange behavior under promotion than prevention contracts. Although our study design did not allow us to firmly establish the causal relation between attributions of benevolence and trust, we did observe that attributions of benevolence and trusting intentions covary. Given that benevolence is a key antecedent of trustworthiness (Mayer et al., 1995), we expect that attributions of benevolence are a critical process in trust development. Therefore, we identify cognitive attributions as a potentially important avenue for future contract research.

Our studies also provided the first empirical test of Weber and Mayer's (2011) prediction that people should have different positive emotional experiences during exchanges under promotion than prevention contracts. We found no evidence of this effect. However, one should always be cautious when interpreting a null result; task type, strength of the prevention and promotion contract language,

and length of the repeated exchange, for example, all may influence whether or how strongly emotions influence exchanges. Thus, future research may still want to consider when emotions may play a role in trust development under different contract frames.

Finally, the paper contributes to the contracting and trust literature by including unexpected negative events in repeated exchanges. We find that trust developed under promotion contracts drops dramatically in response to unexpected negative exchange events, returning to baseline levels (i.e., the amount of trust present in the initial exchange). In contrast, the modest amount of trust that developed in the on-going exchange under prevention contracts does not drop as precipitously. That is, trust that develops under promotion contracts is more vulnerable to unexpected negative exchange events than that developed under prevention contracts. Therefore, both parties should be aware of the fragility of trust developed under promotion contracts and actively work to preserve as much trust as possible when an unexpected negative exchange event occurs. Future research should explicitly examine how trust may be re-established under these circumstances by investigating whether there are differences from using prevention and promotion contracts in this process.

### **Contributions to Theory and Research**

The current research makes several important contributions to the governance and contracting literatures and to strategy theory in general. Our results inform the complement-substitute debate by providing evidence of the impact of an important contingency variable (contract frames) on trust development. It also demonstrates a cognitive mechanism that likely underlies this effect, thereby identifying new variables of interest for contracting studies. More generally, our findings highlight the importance of augmenting strategy theory with psychology and illustrate how experiments can complement traditional methods in strategy research.

**Complement-substitute debate.** The current studies provide empirical support for a new perspective on the longstanding debate of whether contracts are complements or substitutes to trust. Prior research produced indirect empirical support for both sides of this debate (using the proxy of contract length; e.g., Corts & Singh, 2004; Crocker & Reynolds, 1993; Mayer & Argyres, 2004; Poppo & Zenger, 2002) and direct support for the substitute view (using an experiment; Malhotra & Murnighan, 2002), but none of these studies examined whether or how the content of the contracts affected the exchange or on-going relationship between the partners.

Our studies are the first empirical test we know of that provides direct support for the complement view (as opposed to relying on a proxy measure), by demonstrating that both trusting intentions and trusting behavior increase in repeated positive exchanges under a promotion contract. Perhaps more importantly, however, we provide empirical evidence for an important contingency variable, contract frames, which had not been tested in previous empirical studies in the complement-substitute debate. Our studies provide the first empirical tests of the impact of contract frames on trust, and we demonstrate that prevention contracts act as substitutes and promotion contracts act as complements to trust in repeated positive exchanges.

Our research extends Weber and Mayer's (2011) theory in two important ways. First, we theorize and find evidence for a novel cognitive mechanism underlying the impact of contract frames on trust development. We hypothesize and demonstrate that people are more likely to attribute benevolence to their exchange partner following a positive outcome under promotion than prevention contracts, which likely plays an important role in why these two contract frames have different effects on trust development. However, we did not find evidence for the emotional mechanism proposed by Weber and Mayer; we observed no differences in the emotions people experienced over repeated positive exchanges under prevention and promotion contracts.

Second, our studies also identify a new variable of interest for understanding when contracts act as complements or substitutes for trust. We introduce unexpected negative events into the study of trust in repeated exchanges, which challenges the assumption in the literature that trust increases in a linear fashion with length of a relationship with the same party (e.g., Crocker & Reynolds, 1993; Gulati, 1995). Although Weber and Mayer (2011) discuss selecting the appropriate contract in instances when one anticipates negative exchange events (e.g., the likelihood of not meeting exchange expectations or working with a known opportunist), it is often difficult to know *ex ante* when these negative conditions exist. Our research acknowledges this difficulty and instead examines how unexpected exchange events impact trust developed under prevention and promotion contracts. This approach provides evidence for what is likely to occur in real-life situations.

**The role of psychology in strategy theory.** Our research is also the first to demonstrate that contract language has important cognitive and behavioral consequences on exchanges that directly influence the transaction outcome. Traditionally, contracts have been studied using economic or sociological lenses. Psychological influences, such as contract frames, are underrepresented in the interfirm exchange literature. Our research shows how incorporating psychological processes into theory can help in the development of a more complete understanding of how contracts affect interfirm exchanges and the on-going exchange relationship. When taken into account, psychological processes can lead to more nuanced predictions than traditional economic or sociological strategy theory alone.

The current studies, however, just scratch the surface on the broad opportunity that incorporating psychological elements into strategy theory can offer. We examine only one of many potential dimensions of contract framing (e.g., Levin, Schneider & Gaeth, 1998), each of which may have a significant impact on trust and exchange participation. For example, contract language could potentially induce ego preservation biases that are theorized to impact managerial decision making in other contexts (e.g., Nickerson & Zenger, 2008). Additionally, contract language may affect exchange partners' tendencies to focus on either broad or narrow aspects of the relationship, which are known to have important consequences for judgment and behavior in exchange contexts and other social interactions (e.g., De Dreu, Giacomanonio, Shalvi, & Sligte, 2009; Giacomanonio, De Dreu, Shalvi, Sligte, & Leder, 2010).

**Augmenting traditional strategy methods.** Our research also demonstrates how non-traditional methods can help shed light on both new and old issues. Specifically, it provides an example of how the dynamics of trust in an ongoing relationship can be examined using a direct and in situ measure of trust, as opposed to relying on proxy measures of trust or retrospective self-report measures. Some proxy measures of trust are based on the assumption that trust develops linearly with relationship length or number of interactions (e.g., Gulati, 1995). However, this assumption may not accurately reflect the dynamics of the trust development process that typically unfolds during interfirm exchanges, as it may not account for the impact of unexpected negative events on trust development. Self-report measures about past exchanges also have limitations because they are subject to retrospective bias (Nisbett & Wilson, 1977; Searle, 2015). In contrast, studies that directly measure trusting intentions and trusting behavior in situ offers an unbiased view of trust at a given point in the exchange (McGrath, 1982; Searle, 2015), and therefore complement large contract data set studies that use proxy or retrospective self-report measurements. Moreover, introducing a behavioral measure of trust to the contracting literature allows researchers to capture trust in terms of its impact on the exchange, irrespective of whether it is at an individual or organizational level (or both).

Our experiments also made it possible to examine potential emotional and cognitive mechanisms underlying the development of trust under different contract frames. Using this method, we were able to investigate whether different contract frames influence the emotions that accompanied the exchange and the attribution processes that contributed to manager's assessments

of the other party's trustworthiness. In contrast, studies of large data sets in the contracting literature cannot examine these psychological processes because the data is simply not available. Thus, experiments offer a complementary approach that allows researchers to examine underlying mechanisms.

In this vein, our studies also provide an example of how experimental methods can augment our understanding of topics that have already been studied extensively using traditional strategy methods. An experimental approach provides a level of precision that is difficult to achieve with traditional approaches in the strategy field (Croson, Anand & Agarwal, 2007). For example, in an experimental context, it is possible to isolate the impact of trust on the exchange independent of the contract. Because contracts and trust coexist in the real world, it is difficult to cleanly isolate only the level of trust in the exchange. Additionally, attempting to investigate the impact of unexpected negative exchange behavior on trust in a large contract database is difficult due to data availability and the idiosyncratic nature of the relationship between the firms in the dataset. However, introducing an unexpected negative event in an experimental setting is much more controlled and therefore more precise. The experimental method also allowed us to observe how trust evolved over time, allowing for both positive and negative interactions between the parties. As a result, we are able to ask different questions using this method, allowing us to provide novel evidence that complements and extends prior work. By using both experimental and traditional approaches, we can develop a more complete understanding of the true impact of contracts on exchanges and interfirm relationships.

### **Implications for managers**

Our studies also have practical implications for managers. Our results point to the importance of selecting the appropriate contract frame to fit the exchange relationship. More specifically, they suggest that different contract frames will have different effects as the relationship progresses, so choosing the most effective frame at the initiation of the relationship is not sufficient. Instead, contract framing is one important element of exchange that needs to be actively managed as the relationship unfolds over time. That is, instead of just accepting the consequences of a particular contract frame, managers can use them strategically to increase exchange performance and enhance the relationship between exchange partners throughout the on-going exchange.

### **Limitations and future directions**

As with any research, there are limitations to our approach. First, our studies are designed to examine how contract frames influence an organizational boundary spanner's trust development (see Gulati & Sytch, 2008), but they are not designed to address questions about whether the trust developed is at the organizational or interpersonal level (or both). That said, our studies nevertheless provide an accurate view of how trust impacts the interorganizational exchange, irrespective of whether the trust is toward the other organization or the other decision-maker. However, future experiments could examine trust at both the individual and organizational level by varying whether the representative for one of the organizations changed over the course of the exchange relationship, keeping constant the organizations involved in the exchange. This manipulation would allow researchers to examine the extent to which the trust that is developed with one representative transfers to the new representative in the same organization. If trust persisted after the change, it would indicate organizational trust developed. If trust disappeared after the change, then it would indicate individual trust resulted.

The current studies are also limited in that they examine trust that developed based on exchange outcomes. The studies do not examine trust that develops from other sources, such as

deeper knowledge acquired through exchange or identification with the partner or partner firm. That said, our experimental paradigm provides a vehicle that could be used to address other factors that affect trust. For example, it could be modified to provide opportunities for participants to share information with each other or to examine the effects of firm or decision-maker identity on trust. These additions could ultimately aid in the development of a more complete understanding of how trust develops under different contract frames in repeated exchanges (e.g., Zaheer et al., 1998).

Finally, our studies examine the impact of unexpected exchange events on trust, but they do not address whether or how trust can be repaired. Future studies can measure trust development when contracts are instituted following unexpected negative events. Additionally, explanations for unexpected negative behavior (e.g., Kim, Dirks, & Cooper, 2009; Kramer & Lewicki, 2010) and different types of apologies can influence attributions and therefore trust repair under prevention versus promotion contracts (Weber, 2017). As such, a natural extension of the current studies would be to provide opportunities for participants to offer explanations or apologies and measure trust in subsequent exchanges.

## CONCLUSION

Our research indicates the importance of understanding why and how contract frames impact trust development in repeated exchanges in three ways. First, it provides a more nuanced approach to the complement-substitute debate by testing the psychological and behavioral impact of a potential moderator variable (contract frames) that previously have not been considered. Second, it introduces the concept of timing into the discussion of the relation between contracts on trust and shows that contract frames are differently able to develop and preserve trust as the relationship between parties unfolds. Third, it theorizes and provides evidence of cognitive attribution processes as mechanisms that underpin differential trust development under contract frames. As a result, it highlights new phenomena to study, even in well-examined topics. More broadly, these studies demonstrate the importance of psychological factors in strategy research, and also illustrate how experimental methods can provide precision and control that complements traditional methods.

From a practical perspective, our studies suggest that if firms do not attend to how they frame their contracts, they are forgoing opportunities to influence their relationship with their exchange partners and instead may have to deal with unintended consequences of inadvertent contract frames. By understanding how contract frames impact organizational actors' cognition and behavior, managers can proactively use contract frames as tools to improve both their exchanges and their ongoing relationships with their partners. However, they must also be aware of the fragility of trust developed under promotion contracts. Thus, using these insights, managers can develop contract framing capabilities that can lead to sustained exchange performance.

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