Contents lists available at ScienceDirect



Organizational Behavior and Human Decision Processes

journal homepage: www.elsevier.com/locate/obhdp

Getting to less: When negotiating harms post-agreement performance



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ARTICLE INFO

Keywords: Negotiation Productivity Conflict Reciprocity Services Motivation

ABSTRACT

The negotiation process can harm post-agreement motivation. For example, a homeowner might negotiate with a landscaper, but through the process of negotiating harm the landscaper's motivation to deliver high quality service. In contrast to prior work that has assumed that negotiated agreements represent the full economic value of negotiated outcomes, we demonstrate that the act of engaging in a negotiation can itself influence post-agreement behavior in ways that change the economic value of an agreement. Across six studies, we demonstrate that negotiations can harm post-agreement motivation and productivity on both effortful and creative tasks. Specifically, we find that wage negotiations can harm post-agreement performance, even when the negotiation has integrative potential or is conducted face-to-face. The negotiation process can increase perceptions of relational conflict, and these conflict perceptions mediate the relationship between negotiation and performance. Compared to not negotiating, individuals who negotiate may secure favorable deal terms, but risk incurring affective, relational, and economic costs after the agreement. Our investigation fills a critical gap in our understanding of post-agreement behavior, and has particular relevance for negotiations that involve services. Our findings suggest that individuals should enter negotiations with caution, and we call for future work to explore not only what happens prior to an agreement, but also what happens after an agreement has been reached.

1. Introduction

Negotiation is a fundamental interpersonal tool and managerial skill. Through negotiations, individuals obtain some of their most consequential outcomes, from salaries, to homes, to cars. Over the past 40 years, a substantial literature has developed our understanding of negotiations (Bazerman, Curhan, Moore, & Valley, 2000; Brett et al., 2007; De Dreu, Beersma, Steinel, & Van Kleef, 2007; Friedman et al., 2004; Galinsky & Schweitzer, 2015; Gunia, Brett, & Gelfand, 2016; Pinkley, Neale, & Bennett, 1994; Raiffa, 1982; Thompson, Wang, & Gunia, 2010). This work has developed critical insights into how the negotiation process impacts negotiated outcomes. Although scholars have also considered negotiators' satisfaction with their outcomes (Curhan, Elfenbein, & Xu, 2006; Galinsky, Seiden, Kim, & Medvec, 2002; Novemsky & Schweitzer, 2004; Oliver, Balakrishnan, & Barry, 1994), the extant literature has paid surprisingly little attention to what happens after an agreement has been reached (see review by Jang, Elfenbein, & Bottom, 2018). In fact, the dominant experimental paradigms used to study negotiations have presumed that the terms of a negotiated agreement fully reflect the economic value of a negotiation. Notably, none of the top-selling negotiation books by academics, such as "Negotiation Genius" (Malhotra & Bazerman, 2008), "Get Paid What You're Worth" (Pinkley & Northcraft, 2000), and "Getting to Yes" (Fisher, Ury, & Patton, 1991), discuss the possibility that the negotiation process itself might affect the quality of outcomes a negotiator receives after negotiating.

The extant body of negotiation scholarship offers a great deal of insight into factors that influence negotiated prices and negotiators' satisfaction. This literature, however, has failed to investigate how the negotiation process might influence post-agreement behavior that impacts the economic value of an agreement. For instance, a homeowner might negotiate with a house painter and obtain a better price, only to realize months later that the painter used poor quality paint.

Our limited understanding of what happens *after* a negotiation reflects the dominant experimental paradigm scholars have used to investigate negotiations: unfamiliar counterparts prepare for a negotiation, negotiate, reach an agreement or impasse, and then part ways. Consistent with this transactional approach to investigating negotiations, many studies have focused on negotiations involving goods, such as cars or real estate, rather than services (e.g., Ames & Mason, 2015; Anderson & Thompson, 2004; Bear & Babcock, 2017; Loschelder, Trötschel, Swaab, Friese, & Galinsky, 2016; Novemsky & Schweitzer,

https://doi.org/10.1016/j.obhdp.2019.09.005 Received 2 November 2017; Received in revised form 21 August 2019; Accepted 23 September 2019

Available online 24 October 2019

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2004). Post-agreement behavior may matter for negotiations involving goods, but it is critically important for service-based negotiations, because services are delivered after an agreement has been reached.

In practice, more than two-thirds of the world's GDP involves services (Soubbotina, 2004), and in developed nations, such as the United States, the service sector accounts for more than 80% of the economy. As a result, we should be very concerned with how the act of negotiating might affect the subsequent provision of a service. In a survey we conducted of negotiation studies across five journals (OBHDP, JPSP, Management Science, NCMR, and JESP) in the last five years (2013-2018), we found that 49% of studies involved services. Importantly, even in negotiation studies that involved a service or employment context (e.g., the "New Recruit" case: Amanatullah & Tinsley, 2013; Chambers & De Dreu, 2014; Schaerer, Schweinsberg, & Swaab, 2018; Shirako, Kilduff, & Kray, 2015), where post-agreement behavior should clearly matter, none of the studies considered how the negotiation process might influences post-agreement behavior. Once counterparts in these studies reach a deal - such as an agreement to hire a "new recruit" - they terminated their relationship immediately after completing a term sheet. In any real service interaction, most of the value is created after the term sheet has been signed. As a result, the value of the negotiated agreement may be very different if negotiators either bonded or harmed their relationship through the negotiation process. We depict this relationship in Fig. 1.

In this article, we challenge the implicit assumption in the extant literature that the terms of a negotiated agreement reflect the full economic impact of the negotiation process. Fisher et al. (1991, p. xvii) define negotiation as "back-and-forth communication designed to reach an agreement when you and the other side have some interests that are shared and others that are opposed." We highlight two key features of this definition. First, the objective of the negotiation process is to "reach an agreement." Second, negotiators have some interests that are opposed. In our investigation, we break new ground by investigating what happens after negotiators reach an agreement. We demonstrate that post-agreement motivation depends on the extent to which negotiators perceive their interests to be opposed with their counterpart's interests after they reach an agreement. We show that the negotiation process can impact these beliefs and profoundly influence post-agreement behavior and the ultimate economic value of the agreement. Our findings shape the way we conceptualize negotiations: Rather than focus on "reach[ing] an agreement," we demonstrate that the negotiation process impacts not only what deal terms the participants reach, but also how the participants act after an agreement has been reached.

In this article, we fill a substantial gap in our understanding of

negotiations, and qualify existing exhortations to negotiate (e.g., Neale and Lys, 2015, "Getting (More of) What You Want"). Although negotiators have the chance of "Getting More," the title of Diamond's (2010) guide to negotiation, in many cases individuals who enter negotiation risk getting less.

1.1. Negotiation

Negotiation scholars have identified a number of important factors that affect the terms of the negotiated agreement (Bazerman et al., 2000; De Dreu et al., 2007; Loschelder et al., 2016; Overbeck, Neale, & Govan, 2010; Pinkley et al., 1994; Schaerer, Loschelder, & Swaab, 2016; Thompson et al., 2010). In general, assertive strategies enabled negotiators to achieve better negotiated agreements in single-shot settings. For example, homeowners negotiating with house painters are likely to obtain a lower price if they start with a low initial offer (Ames & Mason, 2015; Loschelder et al., 2016; Mason, Lee, & Wiley, 2013; Schaerer, Swaab, & Galinsky, 2015), display negative emotions (Friedman et al., 2004; Van Kleef & De Dreu, 2010; Van Kleef, De Dreu, Pietroni, & Manstead, 2006), express aggression and power (Anderson & Galinsky, 2006; Kang, Galinsky, Kray, & Shirako, 2015; Magee, Galinsky, & Gruenfeld, 2007; Overbeck et al., 2010; Van Kleef et al., 2006), or have a reputation for being strict (Roth & Schoumaker, 1983). Of course, many cooperative strategies have also been linked with better economic outcomes, such as when negotiators approach the situation as a problem-solving task (Kilmann & Thomas, 1977; Pruitt, 1983), ask questions (Schweitzer & Croson, 1999), engage in perspective taking (Trötschel, Hüffmeier, Loschelder, Schwartz, & Gollwitzer, 2011), make concessions (Moran & Ritov, 2002; Ritov & Moran, 2008), display positive affect and cooperative signals (Anderson & Thompson, 2004; Filipowicz, Barsade, & Melwani, 2011; Friedman et al., 2004; Schroeder, Risen, Gino, & Norton, 2014; Shirako et al., 2015), engage in small talk (Morris, Nadler, Kurtzberg, & Thompson, 2002; Shaughnessy, Mislin, & Hentschel, 2015), or build relationships (Amanatullah & Morris, 2010; Brett et al., 2007; Drolet, Larrick, & Morris, 1998; Gelfand, Major, Raver, Nishii, & O'Brien, 2006; Tinsley, O'Connor, & Sullivan, 2002).

Taken together, the extant negotiation literature offers many prescriptions for improving the economic value of a negotiated agreement. Yet, in these negotiation studies the experiment ends when the parties reach an agreement. Strategies that improve negotiated final prices may fail to create economic value when we take into account negotiators' subsequent, post-agreement behavior. As a result, by failing to consider post-negotiation behavior, we may miscalculate the value of different

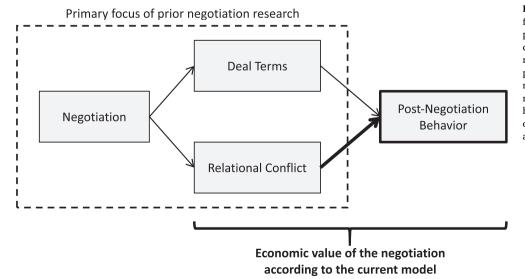


Fig. 1. Prior negotiation scholarship has focused on the influence of the negotiation process on deal terms and relational outcomes, and assumes that the deal terms fully reflect the economic value of the negotiation process. In this work, we consider how the negotiation process affects perceptions of relational conflict and post-agreement behavior, and as a result, the economic value of the negotiated agreement (see bolded arrow).

negotiation tactics. More broadly, we may misjudge the value of the negotiation process itself, and may substantially undervalue the decision not to negotiate.

1.2. Negotiator satisfaction and relational outcomes

Important work has investigated negotiator satisfaction (Amanatullah, Morris, & Curhan, 2008; Mislin, Boumgarden, Jang, & Bottom, 2015; Novemsky & Schweitzer, 2004; O'Connor & Arnold, 2001; Oliver et al., 1994; White, Tynan, Galinsky, & Thompson, 2004). This work has focused on affective and attitudinal measures, and much of it has found that counterparts' aggressive strategies (e.g., extreme offers, minimizing concessions, expressing anger) harm negotiators' satisfaction with the negotiated outcome and trigger negative emotional reactions (Hüffmeier, Freund, Zerres, Backhaus, & Hertel, 2014; Humphrey, Conlon, Ellis, & Tinsley, 2004; O'Connor & Arnold, 2001; Oliver et al., 1994; Schweinsberg, Ku, Wang, & Pillutla, 2012). Related work demonstrates that aggressive negotiation strategies harm relational outcomes, create negative impressions, and lower negotiators' willingness to engage in future interactions (Hüffmeier et al., 2014; Novemsky & Schweitzer, 2004; O'Connor & Arnold, 2001; Oliver et al., 1994; Tinsley et al., 2002; Van Beest, Van Kleef, & Van Dijk, 2008; Van Kleef & De Dreu, 2010). Although softer, more concessionary strategies may not lead to high economic outcomes, they often lead to better affective and relational outcomes than aggressive strategies (Hüffmeier et al., 2014; Kopelman, Rosette, & Thompson, 2006; Van Kleef & De Dreu, 2010; Van Kleef, De Dreu, & Manstead, 2004). Negotiators who have been cooperative and have collaborative reputations are afforded not only greater negotiation opportunities (Anderson & Shirako, 2008; Glick & Croson, 2001; Milinski, Semmann, & Krambeck, 2002), but may also obtain better economic outcomes (O'Connor, Arnold, & Burris, 2005; Tinslev et al., 2002).

Notably, this research has conceptualized negotiator satisfaction and relational concerns as distinct dimensions of the negotiated outcome, and has focused on attitudinal measures in post-negotiation surveys (Curhan et al., 2006; Thompson, 1990). The predominant paradigm in this work has asked participants, immediately after the negotiation concludes, how much they like their counterpart and how willing they would be to interact with their counterpart again. These questions typically conclude the experiment. As a result, we know very little about actual post-negotiation behavior and how the negotiation process might directly impact the economic value of the negotiated agreement itself.

Surprisingly, only a few scholars have conducted studies to investigate negotiators' post-negotiation behavior (Beersma & De Dreu, 2005; Bottom, Holloway, Miller, Mislin, & Whitford, 2006; Campagna, Mislin, Kong, & Bottom, 2016; Kuang & Moser, 2011; Lau, Bart, Bearden, & Tsetlin, 2014; Mislin, Campagna, & Bottom, 2011; Morgan & Tindale, 2002). Consistent with prior work, these studies contrasted the effects of specific negotiation strategies and assessed post-negotiation behavior in unrelated domains. This important work has found that, compared to negotiating with counterparts who expressed neutral emotion, negotiating with counterparts who expressed anger during the negotiation diminishes trust (Bottom et al., 2006; Campagna et al., 2016; Mislin et al., 2011), harms profit in a subsequent negotiation (Van Kleef & De Dreu, 2010), and increases the likelihood that negotiators renege on an accepted deal by accepting a competing offer (Campagna et al., 2016; Morgan & Tindale, 2002). Aggressive bargaining tactics such as displaying anger (Campagna et al., 2016; Mislin et al., 2011) and issuing exploding offers (Lau et al., 2014) also diminish contributions in a subsequent game.

Our work is different from prior work in two key ways. First, rather than contrast the effects of different types of negotiation strategies, we contrast the influence of initiating a negotiation to not negotiating. This contrast is surprisingly absent in the negotiation literature. Second, we investigate how negotiating for the provision of a service influences the economic value of the negotiated agreement itself. That is, we explore how negotiating an agreement influences post-agreement motivation and behavior that impacts the economic value of the negotiated deal.

1.3. Motivation and conflict

Motivation is an individual's drive to perform well in a specific activity, and profoundly influences individuals' effort and performance (Gagné & Deci, 2005; Humphrey, Nahrgang, & Morgeson, 2007; Kanfer & Chen, 2016). In our investigation, we build upon existing work on motivation and job performance and assess motivation by measuring effortful, persistent performance (Deci, Koestner, & Ryan, 1999; Humphrey et al., 2007; van Knippenberg, 2000). In particular, we investigate post-negotiation motivation as individuals' performance in effortful tasks that benefit their negotiation counterpart. To our knowledge, our study is the first to explore how the negotiation process influences work motivation.

We postulate that the negotiation process influences post-negotiation motivation by changing counterparts' perceptions of their relationship. By construction, negotiators have opposing interests (Fisher et al., 1991). We postulate that the act of negotiating may highlight these opposing interests and cue perceptions of conflict, and in turn diminish post-agreement motivation and performance. Specifically, we expect the negotiation process to influence perceptions of relational conflict, which we define as subjective perceptions of the extent to which a counterpart is (a) a competitor with conflicting interests, and (b) someone with whom one is not interested in building a collaborative relationship. This definition includes key features of perceptual conflict and relationship conflict and builds on prior work that distinguishes task, process, and relationship conflict (Jehn, 1995; Jehn, Greer, Levine, & Szulanski, 2008) as well as work that has distinguished structural conflict, perceptual conflict, and personality-based conflict (Chambers & Melnyk, 2006; Halevy, Chou, & Murnighan, 2012).

In the context of negotiation, perceptions of conflict may diverge from structural features of a relationship (Bazerman & Neale, 1993; Halevy et al., 2012; Thompson & Hastie, 1990). For example, the mythical fixed pie bias reflects the exaggerated belief that one's own gains come at the expense of the other party (Bazerman & Neale, 1993; Chambers & De Dreu, 2014; Pinkley, Griffith, & Northcraft, 1995). In related work, Thompson and Hastie (1990) identify the incompatibility error, the mistaken belief that parties have misaligned interests. Taken together, individuals often construe negotiation as a competition and as a battle for dominance, rather than a problem-solving exercise (Halevy & Phillips, 2015; Halevy et al., 2012; Pietroni, Van Kleef, De Dreu, & Pagliaro, 2008). This competitive mindset may cause negotiators to focus on opposing, rather than compatible, interests with their counterpart. Indeed, individuals who negotiate about interests are more likely to have fixed-pie perceptions, have competitive rather than collaborative motivation (Harinck, De Dreu, & Van Vianen, 2000) and are less likely to reach mutually beneficial agreements even in integrative negotiations (Koole, Steinel, & De Dreu, 2000). We build on this work to postulate:

Hypothesis 1. In contexts involving salient opposing interests, compared to individuals who do not negotiate, individuals who do negotiate will perceive greater relational conflict with their counterpart.

Perceptions of relational conflict can diminish well-being and team satisfaction (De Dreu & Weingart, 2003), increase the value of power and personal success (Beersma & De Dreu, 2005; Pruitt, 1998), increase aggression, and reduce cooperation (Beersma & De Dreu, 2005; Halevy & Phillips, 2015; Liberman, Samuels, & Ross, 2004). In related work, scholars find that negative relationships harm motivation (Bear, Weingart, & Todorova, 2014; Deci & Ryan, 2000; Deci, Olafsen, & Ryan, 2017; Jehn et al., 2008; Kanfer & Chen, 2016), increase retaliation against other employees or the organization itself, and diminish

productivity (Aquino, Tripp, & Bies, 2006; Chambers & Melnyk, 2006; Colquitt et al., 2013; De Dreu, 2010; Kim, Cohen, & Panter, 2015; Skarlicki & Folger, 1997). More broadly, the motivation to help others depends on whether individuals perceive others as friends or foes (Galinsky & Schweitzer, 2015; Grant & Gino, 2010; Kanfer & Chen, 2016; Wiley, 1997).

Within the negotiation literature, scholars find that perceptions of conflict increase the frequency of contentious strategies, reduce negotiators' profits, and increase the likelihood that negotiators will reach an impasse (Chambers & Melnyk, 2006; De Dreu, 2010; Halevy & Phillips, 2015; Halevy et al., 2012; Keltner & Robinson, 1993; Schweitzer, DeChurch, & Gibson, 2005; Thompson & DeHarpport, 1998: Thompson & Hrebec, 1996: Tinsley et al., 2002: White et al., 2004). For example, when individuals perceive the negotiation process as a battle for dominance, they are more likely to use both ethical and unethical competitive negotiation tactics (Halevy et al., 2012; Schweitzer et al., 2005). Moreover, negotiators who expect conflict perform better in individual tasks, but worse in collaborative and creative tasks (Beersma & De Dreu, 2005; Carnevale & Probst, 1998). We expect the act of negotiating to profoundly shape perceptions of conflict, and in our investigation we focus on the relational influence of the negotiation process.

Hypothesis 2. Negotiation can harm post-agreement performance.

Hypothesis 3. Relational conflict mediates the relationship between negotiation and performance.

We note, however, that in addition to the negotiation effect on relational conflict, the negotiation process may boost perceptions of autonomy by giving individuals greater influence in crafting their outcomes. Prior work has linked autonomy with both motivation and job performance (Deci et al., 2017; Gagné & Deci, 2005; Humphrey et al., 2007; Tyler & Blader, 2003), and the ability to negotiate customized deal terms could increase not only negotiator satisfaction (Galinsky et al., 2002; Kray & Gelfand, 2009), but also post-negotiation motivation and performance. This may be particularly true for complex negotiations in which negotiators are given wide latitude to structure terms of an agreement.

Taken together, we integrate prior work that links negotiation with increased perceptions of relational conflict (Bazerman & Neale, 1993; Halevy et al., 2012; Pinkley et al., 1995; Thompson & Hastie, 1990) and motivation (Bear et al., 2014; Jehn et al., 2008; Kanfer & Chen, 2016). This work has found that relational conflict can diminish cooperative work performance (Aquino et al., 2006; Beersma & De Dreu, 2005; De Dreu & Weingart, 2003; Halevy & Phillips, 2015; Kim et al., 2015; Liberman et al., 2004), and we postulate that when negotiations promote relational conflict, the act of negotiating will harm post-agreement motivation and performance.

2. Overview of research

Across our studies, we explore how negotiating a wage – versus receiving a non-negotiable wage offer – influences post-agreement motivation and performance, and how relational conflict impacts the relationship between negotiation and performance. In Study 1, we explore motivation, productivity, and relational conflict. In Study 2, we extend our investigation to a very different and more engaging effort task that required creative writing. In Studies 3 and 4, we further explore the links among post-agreement motivation, relational conflict, and aspects of the negotiation process: who made the first offer (Study 3) and whether the negotiation occurs face-to-face or via a computer-mediated chat (Study 4). In Study 5, we examine the impact of negotiation in an integrative context. We use a multi-issue negotiation with the potential for reaching mutually-beneficial outcomes to investigate the relationship among negotiation, relational conflict, and motivation in an integrative context.

In Study 6, we show that resource depletion and fatigue cannot account for the impact of negotiation on performance. In Studies 5 and 6, we also investigate participants' trust, power, and subjective value as potential mediators of the influence of negotiation on performance in addition to relational conflict, and find that perception of relational conflict has the strongest link with performance.

3. Study 1

To explore how negotiating influences motivation and performance, we conducted a three-stage experiment. In the first stage of the experiment, participants agreed to a wage. In the second stage, participants worked at an effortful task. In the third stage, participants completed attitudinal measures. We randomly assigned participants to one of two conditions: In the Negotiation condition, we allowed participants to negotiate their wage; in the Control condition, we assigned participants to a non-negotiable wage. We use the term negotiate in this manuscript to describe an exchange of offers leading to a mutually agreed upon price, consistent with Fisher et al.'s (1991) definition of negotiation as "back-and-forth communication designed to reach an agreement." We use the term non-negotiable to describe a fixed wage that does not involve back-and-forth communication. In our studies, except for Study 3, we did not use the terms negotiate, negotiable, or non-negotiable. We report all of the experimental conditions, exclusion criteria, and the measures we analyzed in the method section of each study. We determined the sample size of each study in advance to guarantee at least 80% power in detecting small differences in postagreement performance.

3.1. Method

3.1.1. Participants

We recruited 211 participants (124 female; $M_{age} = 25$, SD = 10.1) from a Northeastern university to participate in a behavioral laboratory experiment. Participants received a \$10 fixed show-up payment, plus the opportunity to earn a bonus payment that averaged \$5.

3.1.2. Procedure

Each experimental session included between 12 and 18 participants. Upon arrival, we sat participants in separate cubicles in front of computers. Participants read the instructions and completed all of the experimental tasks via computer.

In our studies, we told participants that they would be paired with another participant. The negotiation dyads included an employer and an employee, which we termed "Player A" and "Player B" in our experiment. In reality, we paired participants with confederate employers. We assigned every participant to the role of Player B (the employee).

The study included three stages. First, participants' and their confederate counterpart determined the participant's wage via a computerized chat. In this stage of the experiment, we randomly assigned participants to one of two conditions: In the *Negotiation* condition, participants negotiated with their counterpart to determine the wage; in the *Control* condition, the counterpart presented a non-negotiable wage. Second, after determining the wage, participants worked on an effortful task that purportedly benefitted their counterpart: Counting occurrences of the letter "e" in letter strings (Yip, Schweitzer, & Nurmohamed, 2017). We presented participants with a screen including 100 strings such as the following (in this example, the correct answer is 6):

kdjfjdqkeiupvkceieiekeiquckkek

Participants could work on as many letter strings as they liked during the seven minutes allotted to the task. They were free to exit the counting task and continue with the remainder of the experiment at

Linear regression of number of correctly counted letter strings (Study 1, N=211).

	(1)	(2)	(3)	(4)
Negotiation	-9.49**	-8.58*	-5.01	-5.00
	(3.37)	(3.36)	(3.21)	(3.25)
Received wage		-0.03	0.006	0.007
		(0.05)	(0.04)	(0.04)
PANAS-positive		4.58*	4.57**	4.92**
		(1.86)	(1.74)	(1.80)
PANAS-negative		-3.46	1.17	1.19
		(2.51)	(2.50)	(2.51)
Conflict			-12.09***	-12.08***
			(2.13)	(2.25)
Control variables	No	No	No	Yes
Gender				2.04
				(3.26)
Employment				-0.86
1 2				(1.88)
Constant	34.21***	37.79**	45.89***	45.75***
	(2.43)	(12.71)	(12.00)	(13.08)
Adj. R-squared	0.032	0.069	0.188	0.190

Note. *** $p \le .001$, ** $p \le .01$, * $p \le .05$.

their discretion.

Third, after participants completed these two key stages of the experiment, they answered post-experiment questions. In this final stage, participants completed both positive and negative schedules of the PANAS scale (Watson, Clark, & Tellegen, 1988) (Positive: Cronbach's α = 0.92; Negative: α = 0.81), and then rated their perception of their counterpart and the degree to which they perceived their interests to be in conflict with their counterpart. Specifically, participants answered questions about the extent to which they agreed with statements such as "I viewed the other participant as a competitor," and "The other participant and I had conflicting interests" (1: Strongly disagree; 5: Strongly agree). We present the full scale we used, adapted from Yip et al. (2017) and Curhan et al. (2006), in Appendix A. We averaged responses to these questions to create a composite "Conflict" measure ($\alpha = 0.80$). Finally, participants rated the importance and difficulty of the work task (1: Not at all; 5: Extremely), and answered demographic questions. At the end of the study, we paid participants the wage that had been determined in the first stage of the experiment.

3.1.2.1. Payment structure. We informed participants that their counterpart, Player A, had a budget of 500 points from which they could pay the participant (Player B) for working on a subsequent realeffort task. The participant (Player B) would receive only the fixed wage; their payment did not depend upon their effort in the work assignment. In contrast, Player A's (purported) payment at the end of the study was determined by their profit from Player B's work, in addition to their remaining budget after paying Player B. Player A received 5 points for each string Player B completed correctly (up to 100 strings). We converted every 50 points participants earned into \$1 bonus payment. We informed participants about this payment process and the exchange rate at the beginning of the study.

3.1.2.2. Stage 1: Wage chat. Participants chatted with the confederate for up to 5 min using a computerized instant messaging program. The computerized chat program had several features. First, it forced the parties to take turns sending messages. Second, the program forced participants to remain on the chat screen for at least one minute, but no longer than five minutes. Only after one minute had passed, could participants move on to the next stage of the experiment.

In the *Negotiation* condition, we informed participants that they had five minutes to reach an agreement regarding their wage. We told participants that if they do not reach an agreement, they would not receive any additional payment. The negotiation proceeded as follows. Player A (the confederate) always presented the initial wage offer of 150 points (out of 500), to which participants could agree or present a counter-offer. Our confederates followed a pre-determined concession plan and script. We depict this in Appendix B. At the end of the concession plan and script, the confederate Player A made a final offer of 250 points, and reiterated this offer until participants agreed to it or the allotted 5 min elapsed.

We note that in some cases, participants themselves suggested 250 (N = 37). In other cases, participants suggested an amount that was lower than or equal to the confederate's next offer (N = 19; $M_{wage} = 238.2$). In all of these cases, confederates accepted the participant's offer. In other cases, participants accepted one of the confederate's interim offers and obtained wages lower than 250 (N = 9; $M_{wage} = 176.1$). In all other cases, participants agreed to Player A's 250 wage offer (N = 45). Notably, all participants reached an agreement within the allotted time.

In the *Control* condition, participants engaged in a chat with the confederate via the same software platform. However, in this condition the confederate Player A communicated a non-negotiable wage of 250 points to Player B. We present a sample exchange in Appendix B.

Participants in the Negotiation condition spent 147.2 seconds on average (SD = 81.7) in the chat, and participants in the Control condition spent 82.9 seconds (SD = 42.8) in the chat.

3.1.2.3. Stage 2: Work task. Participants counted the occurrences of the letter "e" in up to 100 letter strings. Participants could exit this task and continue with the remainder of the experiment at any point in time before the seven minute time limit by scrolling to the bottom of the screen and clicking *next*. We focus our analyses on the key dependent variable of Accurate Completion, the number of correctly counted letter strings, but we also report results for the Quantity Attempted, the number of strings for which participants submitted a count; and Work time, the time participants spent on the task. The Quantity Attempted and Accurate Completion scores could range from 0 to 100, and work time could range from 0 to 420 s. All three measures were highly correlated ($r_{Accurate,Quantity} = 0.73$, p < .001; $r_{Accurate,Time} = 0.87$, p < .001; $r_{Quantity,Time} = 0.70$, p < .001).

3.2. Results

Participants in the Negotiation condition accurately completed an average of 24.7 (SD = 24.0) strings, whereas participants in the Control condition accurately completed 34.2 (SD = 25.0) strings. In Table 1, we report results from our regression model including controls for the wage, positive and negative PANAS scores. Taken together, negotiating had a significant negative effect on Accurate Completion (B = -8.58, *t* (206) = -2.55, *p* = .011; 95% Confidence Interval [CI] = [-15.20, -1.96]), supporting Hypothesis 2. We depict these results in Fig. 2. In online supplementary materials Fig. SI.1, we report distributions and non-parametric tests; the pattern of results and significance levels remain the same.

Although we intended participants' final wages to be equal across conditions, twenty-four participants indicated they received a different wage ($M_{wage} = 272.5$, SD = 106.8). When we control for the wage or exclude these participants from our analyses, we find the same pattern of results and significance level. We present these results in Table C1 in Appendix C.

We next analyzed the other dependent variables of work time and the quantity attempted. Across both time and quantity measures, we find a similar pattern of results: Compared to participants in the Control condition, participants in the Negotiation condition spent less time on the task ($M_{Control} = 272.6$ s, SD = 155.4; $M_{Negotiation} = 218.3$, SD = 157.9; t(206) = -2.20, p = .029; 95% CI = [-87.53, 4.73]), and attempted marginally fewer strings overall ($M_{Control} = 43.1$, SD = 30.2; $M_{Negotiation} = 35.6$, SD = 33.0; t(206) = -1.66, p = .099;

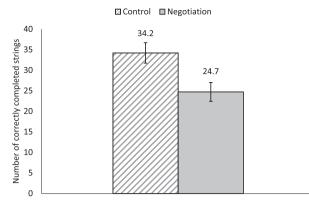


Fig. 2. Accurate Completion in the Negotiation and Control conditions (Study 1). *Note.* Negotiation (vs. no negotiation) decreases effort, measured by Accurate Completion (number of strings completed correctly; t(207) = -2.67, p = .008). Error bars represent ± 1 SE.

95% CI = [-16.03, 1.38]).

We also find that participants' positive affect (PANAS positive subscale) increased their Accurate Completion (t(206) = 2.46, p = .015), and time spent on the task (t(206) = 4.09, p < .001). Negative affect did not affect any of our effort DVs (all p's > 0.17).

3.2.1. Perceived conflict and mediation

Compared to participants in the Control condition, participants in the Negotiation condition perceived greater conflict with their counterpart ($M_{Control} = 2.09$, SD = 0.69; $M_{Negotiation} = 2.42$, SD = 0.84; t (209) = 3.06, p = .002), consistent with Hypothesis 1.

In our next set of analyses, we included perceived conflict in the regression predicting Accurate Completion. As depicted in column 4 in Table 1, perceived conflict decreased Accurate Completion (B = -12.08, SD = 2.25; t(203) = -5.37, p < .001), and the effect of negotiation condition was no longer significant when we control for conflict (t(203) = -5.00, p = .126). We use the indirect bootstrapping technique (Preacher & Hayes, 2008) to test for mediation, using 5,000 resamples. Negotiation had an indirect effect on effort through perceived conflict (B = -3.84, 95% CI = [-6.44, -1.23]). These results support Hypothesis 3.

3.2.2. Task importance

Participants in the Negotiation condition rated the task as marginally more important than participants in the Control condition ($M_{Control} = 3.84$, SD = 3.07; $M_{Negotiation} = 3.04$, SD = 3.28; t (209) = -1.82, p = .071). Our pattern of results remained unchanged when we include task importance in our model.

3.3. Summary

Participants who negotiated their wage were less productive and spent less time working than those who did not negotiate their wage (supporting Hypothesis 2). Participants' perception of conflict with their counterpart mediated the effect of negotiation on productivity. Negotiations increased perception of conflict, which in turn reduced performance (supporting Hypotheses 1 and 3): The more individuals felt that their interests and their counterparts' interests conflicted, the less accurate work they completed.

4. Study 2

In Study 2, we extend our investigation to a very different effort task. Rather than ask participants to engage in an uncreative, effortful task (e.g., counting letters as they did in Study 1), participants in Study 2 wrote essays about their opinions, thoughts, and experiences. This task was both more engaging and afforded wide discretion with respect to how much effort participants could exert. In this study, we also extend our investigation by eliciting participants' wage expectation. As in Study 1, we measured perceptions of conflict to explore the underlying mechanism.

4.1. Method

4.1.1. Participants

We recruited 162 participants (97 female; $M_{age} = 24.4$, SD = 7.5) from a Northeastern university to participate in a behavioral laboratory experiment. Participants received a \$10 fixed show-up payment, plus the opportunity to earn a bonus payment that averaged \$5.

4.1.2. Procedure

We used a procedure similar to the one we used in Study 1. Participants engaged in an on-line chat that determined their wage, completed the work task, and then answered a series of attitudinal questions including perceived conflict (1: Strongly disagree, 7: Strongly agree; $\alpha = 0.83$), and the difficulty and importance of the task (1: Not at all, 5: Extremely). In this study, we also measured expected wages. Specifically, after reading the instructions, and before the chat, we asked participants what wage they expect to receive from their counterpart (from 0 to 500 available points). In addition, in this study we did not include PANAS questions due to the length of the study.

As in Study 1, we randomly assigned participants to either a negotiable wage or a non-negotiable wage condition, and we had confederates communicate with each participant. We include the confederates' scripts in Appendix B. All participants in the negotiation condition reached an agreement in the allotted time. Participants in the Negotiation condition spent 149.7 s on average (SD = 76.8) in the chat, and participants in the Control condition spent 84.6 s (SD = 52.2) in the chat.

In the work task, we asked participants to write three short essays. In this stage of the experiment, we provided participants with three prompts (on the same screen) that we adapted from the writing section of the SAT exam ("Is using humor the best way to approach difficult situations and problems?", "Should we admire heroes but not celebrities?", "Should people focus on enjoying the present moment instead of following a plan for future achievement?"). During the writing portion of the experiment, participants could spend as much time as they liked, up to the allotted seven minutes. We told participants that a computer would rate their essays, and that these ratings could increase their counterpart's (Player A) payment by 0–500 points. This mirrors the effort-payment relationship in Study 1, but involves a more opaque measure of performance.

To gauge effort on the essay writing task, we focused on the number of words participants wrote. We also computed two additional measures: the time participants spent on the task and the readability of the essays. To measure readability, we used linguistic analysis to assess the Flesch Kincaid grade level of the essays (Kincaid, Fishburne, Rogers, & Chissom, 1975).

4.2. Results

As in Study 1, participants in the negotiation condition completed less work than did participants in the non-negotiable condition. Participants in the Negotiation condition wrote an average of 96.4 words overall (SD = 84.1), compared with 132.6 words (SD = 83.1) written by participants in the Control condition. In Table 2, we report results from our regression model, including controls for both the received wage and the expected wage. Taken together, we find that negotiation significantly diminished the number of words participants wrote (B = -38.78, t(158) = -2.89, p = .004; 95% CI = [-65.27, -12.28]). We depict this finding in Fig. 3. In Fig. SI.2 in the online supplementary materials, we report distributions and non-parametric

Linear regression of number of words written for all three essays (Study 2, N = 162).

	(1)	(2)	(3)	(4)
Negotiation	- 36.20 ** (13.14)	-38.78** (13.41)	- 19.06 (13.58)	- 18.81 (13.55)
Received wage	()	-0.19 (0.18)	-0.04 (0.17)	-0.04 (0.17)
Expected wage		- 0.19***	-0.12^{*} (0.06)	-0.12^{*} (0.06)
Conflict		(0.00)	- 25.24*** (5.97)	- 25.01*** (5.98)
Control variables	No	No	No	Yes
Gender				6.15 (11.76)
Employment				11.08 (7.06)
Constant	132.60*** (9.29)	228.97** (44.69)	253.52*** (42.87)	127.13** (48.77)
Adj. R-squared	0.039	0.113	0.199	0.202

Note. *** $p \le .001$, ** $p \le .01$, * $p \le .05$.

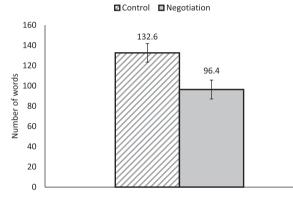


Fig. 3. Performance (total number of words) in the Negotiation and Control conditions (Study 2). *Note.* Negotiation (vs. no negotiation) decreases the total number of words participants wrote (t(158) = -2.89, p = .004). Error bars represent ± 1 SE.

tests; the pattern of results and remains the same. We also find similar results across the three essays.

Consistent with our findings regarding the number of words participants wrote, participants in the Negotiation condition spent less time on the work task than did participants in the Control condition ($M_{Control} = 247.3 \text{ s}$, SD = 137.0; $M_{Negotiation} = 209.5 \text{ s}$, SD = 155.7; t (158) = -2.16, p = .032; 95% CI = [-97.54, -4.44]).

Notably, participants' essay complexity was similar across conditions, as measured by the Flesch-Kincaid grade level score ($M_{Control} = 9.68$, SD = 3.58; $M_{Negotiation} = 9.74$, SD = 4.99; t(140) = -0.16, p = .872), and the Flesch Reading Ease score ($M_{Control} = 56.51$, SD = 16.32; $M_{Negotiation} = 53.53$, SD = 20.50; t(140) = 0.36, p = .723). That is, participants wrote similarly readable essays across conditions—they merely wrote less and spent less time in the Negotiation condition.

4.2.1. Perceived conflict and mediation

Participants in the Negotiation condition perceived greater conflict than did participants in the Control condition ($M_{Control} = 3.26$, SD = 1.03; $M_{Negotiation} = 3.93$, SD = 1.18; t(160) = -3.82, p < .001). Perceived conflict was also closely related to the total number of words participants wrote (B = -25.01, SD = 5.98; t(155) = -4.18, p < .001) and the time they spent on the task (B = -50.34, SD = 10.32; t(155) = -4.88, p < .001). When we include perceived conflict in our model (see Table 2), the effect of negotiating was no longer significant for either effort measure (all p's > 0.099). To test for mediation, we used the indirect bootstrapping technique for words written and time spent, using 5,000 resamples. Negotiating had an indirect effect on effort through perceived conflict on both dependent variables (Words: B = -19.46, 95% CI = [-31.85, -7.08]; Time: B = -39.18, 95% CI = [-63.35, -15.00]).

4.2.2. Wage expectations and final offers

We next consider expectations and actual wages. Across conditions, participants expected similar wages ($M_{Control} = 247.5$, SD = 131.5; $M_{Negotiation} = 258.6$, SD = 96.7; t(160) = 0.61, p = .541). We do find, however, that participants who expected higher wages wrote shorter essays (t(158) = -3.37, p = .001) and spent less time on the task (t (158) = -2.58, p = .011).

As in Study 1, although we intended participants to receive similar wages across conditions, some participants in the Negotiation condition suggested or agreed to wages lower than 250 (N = 36, M_{wage} = 198.2, SD = 30.6). Our pattern of results and significance levels remained unchanged when we control for wage or exclude these participants from the analyses. We report results including only participants who reported a wage of 250 in Table C2 in Appendix C.

4.2.3. Task importance

Participants in both conditions were equally likely to perceive the task as important ($M_{Control} = 1.69$, SD = 0.86 versus $M_{Negotiation} = 1.74$, SD = 0.90) and difficult ($M_{Control} = 2.74$, SD = 1.15 versus $M_{Negotiation} = 2.48$, SD = 1.25) (both rated on a scale from 1: Not at all to 5: Extremely; both *p*'s > 0.17). Our pattern of results remained unchanged when we include task importance and difficulty in our model.

4.3. Summary

In this study, we extend our investigation by using a more intrinsically interesting, essay writing task. We also measure wage expectations and find that differences in wage expectations cannot account for our key finding. As in Study 1, compared to not negotiating a wage, negotiating a wage decreased effort, supporting Hypothesis 2. We measured perceptions of conflict and again find that perceptions of conflict mediate the relationship between negotiation and effort, supporting Hypotheses 1 and 3. Participants who negotiated their wage were more likely to perceive conflict with their counterpart, and this diminished their effort.

In this study, we assessed effort with an essay writing task. We designed this task to be more engaging than counting target letters within letter-strings, but it was not a highly self-relevant task. In this study, participants' short essays were characterized by high language complexity. This suggests that participants were engaged in the task.

5. Study 3

In Study 3, we extend our investigation in four key ways. First, we changed the structure of the negotiation. Rather than having the (confederate) employer make the first offer in the negotiation condition (as they did in Studies 1 and 2), we prompted participants to make the first offer. This broadens the scope of our investigation, and enables us to account for the potential influence the first offer may have on the negotiation processes. For example, first offers can anchor subsequent counter-offers (Ames & Mason, 2015; Loschelder et al., 2016; Schweinsberg et al., 2012) and influence perceptions of assertiveness and power (Anderson & Galinsky, 2006; Galinsky, Rucker, & Magee, 2015; Magee et al., 2007).

Second, in contrast to Studies 1 and 2, we explicitly told participants across conditions that the wage was either "negotiable" or "non-negotiable." This change made the opportunity to either negotiate or the inability to negotiate very salient.

Third, we used a different participant pool. Our first two studies involved participants from a University subject pool and these participants completed the study in the behavioral laboratory. In this study, we recruited adult participants through Amazon Mechanical Turk (MTurk). Fourth, we used a different effortful task. In this study, rather than count letters or write essays, participants moved sliders (Gill & Prowse, 2012).

5.1. Method

5.1.1. Participants

Three hundred and nine MTurk participants (133 female; $M_{age} = 33.8$, SD = 10.5) completed the study. Participants received a \$0.10 fixed completion payment, plus the opportunity to earn a bonus payment that averaged \$1.30. In this study, we paid participants \$1 bonus payment for every 200 points they earned.

We excluded 50 participants (26 in the Negotiation condition and 24 in the Control condition) who did not respond to the confederate's first chat message: it is impossible for us to know whether these participants were unable to enter the chat platform or did not see the message due to technical difficulties, or simply did not wish to answer. Thus, we report analyses for the remaining 259 participants (114 female; $M_{ase} = 33.8$, SD = 10.4).

5.1.2. Procedure

We used a procedure similar to the one we used in Study 1. As in Studies 1 and 2, we randomly assigned participants to either a negotiable wage or a non-negotiable wage condition, and we had confederates communicate with each participant. That is, we told participants they would either negotiate their wage with their counterpart, or that the counterpart will inform them of a non-negotiable wage. We include the confederates' scripts in Appendix B.

Prior to the chat, participants wrote their wage expectation. They then engaged in an on-line chat to determine their wage, completed the effortful task, and then answered the same attitudinal questions they answered in Study 1. In the Negotiation condition, confederates started the chat by asking participants for their first offer. If participants suggested a wage higher than 250, the confederate countered with a lower wage (see the script we used in Appendix B). In some cases, participants themselves suggested a wage of 250 (N = 62), or a lower amount (that is, a better deal for the counterpart; N = 7, $M_{wage} = 186.4$). In these cases, the confederate would agree, and this concluded the negotiation. Four participants did not reach an agreement within the allotted time. Our results remain unchanged when we exclude these participants. We used a similar Control condition to the one we used in Study 1, in which the counterpart opened the chat and informed the participant that the wage is 250 points. Due to a technical error, we did not record the time participants spent in the chat (up to the 5 allotted minutes).

The effort task we used in this study involved asking participants to move sliders to specified positions (Gill & Prowse, 2012). We presented participants with a screen that included 100 sliders, and we indicated the goal position next to each slider. We told participants that their counterpart would earn 5 points for each correctly placed slider. To gauge participants' effort, we focus our analyses on Accurate Completion, the number of correctly placed sliders. We also report results for two additional measures: Quantity Attempted, the number of sliders that participants moved, and Work time, the time participants spent on the task. As in Study 1, all three measures were highly correlated ($r_{Accurate,Quantity} = 0.90$, p < .001; $r_{Accurate,Time} = 0.88$, p < .001; $r_{Quantity,Time} = 0.86$, p < .001).

5.2. Results

As in Studies 1 and 2, participants in the Negotiation condition completed less work than did participants in the Control condition. Participants in the Negotiation condition accurately completed an average of 37.9 sliders (SD = 28.7), compared to 44.0 sliders (SD = 36.8) accurately completed by participants in the Control

Table 3

	(1)	(2)	(3)	(4)
Negotiation	- 8.10 (5.10)	- 10.41 * (4.87)	2.05 (4.50)	2.07 (4.51)
Received wage		-0.31 (0.18)	-0.18	-0.22 (0.16)
Expected wage		-0.03 (0.02)	-0.002 (0.02)	-0.004 (0.02)
PANAS-positive		9.72*** (2.61)	4.36 (2.36)	3.73 (2.39)
PANAS-negative		-11.76*** (3.97)	-1.60	-1.52
Conflict		(0.97)	- 21.70*** (2.60)	- 22.53*** (2.70)
Control variables	No	No	No	Yes
Gender Employment				- 2.23 (4.28) - 3.71 (2.56)
Constant	44.01*** (3.47)	114.75* (46.76)	133.51*** (40.79)	(2.30) 154.17*** (42.54)
Adj. R-squared	0.007	0.154	0.361	0.368

Note. *** $p \le .001$, ** $p \le .01$, * $p \le .05$.

condition. In Table 3, we report the regression model of Accurate Completion (the number of correctly placed sliders) by condition, with controls for received wage, positive and negative PANAS scores, and wage expectation. Participants in the Negotiation condition completed less work (B = -10.41, t(216) = -2.14, p = .034; 95% CI = [-20.02, -0.80]). We depict this result in Fig. 4. In online supplementary materials Fig. SI.3, we report distributions and non-parametric tests; the pattern of results remains the same.

We find a similar result pattern of results for work time and the quantity of sliders attempted: Compared to participants in the Control condition, participants in the Negotiation condition spent less time on the task ($M_{Control} = 259.9$ s, SD = 168.4; $M_{Negotiation} = 214.5$, SD = 175.0; *t* (215) = -3.12, p = .002; 95% CI = [-113.74, -25.60]), and attempted fewer sliders overall ($M_{Control} = 47.8$, SD = 37.1; $M_{Negotiation} = 42.1$, SD = 40.0; *t*(215) = -2.08, p = .039; 95% CI = [-20.60, -0.56]).

5.2.1. Perceived conflict and mediation

Compared to participants in the Control condition, participants in the Negotiation condition perceived greater conflict with their counterpart ($M_{Control} = 2.43$, SD = 0.81; $M_{Negotiation} = 3.05$, SD = 1.04, *t* (257) = -5.24, *p* < .001). Perceived conflict also influenced performance (B = -21.70, SD = 2.60; *t*(214) = -8.35, *p* < .001). In a model predicting performance, including a control for perceived conflict (see Table 3) caused the direct effect of negotiating to no longer be

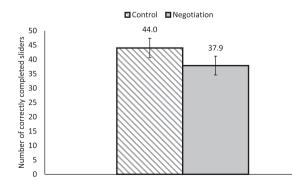


Fig. 4. Accurate Completion in the Negotiation and Control conditions (Study 3). *Note.* Negotiation (vs. no negotiation) decreases Accurate Completion (number of correctly placed sliders; t(217) = -2.06, p = .041). Error bars represent ± 1 SE.

significant (t(214) = 0.45, p = .650). To test for mediation, we used the indirect bootstrapping technique, using 5,000 resamples. Negotiating had an indirect effect on effort through perceived conflict (B = -12.61, 95% CI = [-18.26, -6.96]). These findings provide further support for Hypotheses 1 and 3.

5.2.2. Wage expectations

Participants in the Negotiation condition expected marginally higher wages than participants in the Control condition ($M_{Control} = 245.7$, SD = 139.1; $M_{Negotiation} = 275.2$, SD = 128.4; t (257) = 1.77, p = .078). In our regression, participants' expectation only marginally diminished Accurate Completion (t(215) = -1.67, p = .096), and did not affect work time, or quantity attempted (both p's > 0.25).

5.2.3. Final offers

We intended participants to earn the same wage across conditions. However, seven participants in the Negotiation condition agreed to a lower wage ($M_{wage} = 186.4$, SD = 41.3). Our pattern of results remains unchanged when we control for received wage in our regressions or exclude these participants from the analyses. We report results including only participants who reported a wage of 250 in Table C3 in Appendix C.

5.2.4. Task importance

Participants in both conditions perceived the task to be similarly important ($M_{Control} = 2.21$, SD = 2.58 versus $M_{Negotiation} = 1.83$, SD = 2.43), and difficult ($M_{Control} = 5.29$, SD = 3.65 versus $M_{Negotiation} = 4.50$, SD = 4.14) (*p*'s > 0.10). Our pattern of results remains unchanged when we include task importance and difficulty in our model.

5.3. Summary

As we found in Studies 1 and 2, participants in the negotiation condition exerted less effort and perceived greater conflict than did participants in the control condition. In addition, we again find that perceptions of conflict mediate the relationship between negotiation and effort: Participants who negotiated their wage were more likely to perceive that their interests conflicted with their counterpart, and they completed less work (supporting Hypotheses 1–3).

In this study, we extend our investigation in several ways that build confidence in our findings. First, we allowed participants to make the first offer. This affords greater external validity of our findings and shows that negotiations can harm motivation when either the service provider or the employee make the first offer. Second, we used the terms negotiable and non-negotiable in this study. Prior work has found that the term "negotiation" can shift behavior (Small, Gelfand, Babcock, & Gettman, 2007), and results from this study demonstrate that our findings are robust to terminology. Third, we replicate our findings with a very different adult sample and a different effortful task.

6. Study 4

In Study 4, we explore the impact of communication medium on the relationships among negotiation, performance, and perceived conflict. In particular, we investigate how face-to-face negotiations and computer-mediated negotiations influence post-agreement motivation and performance. Face-to-face interactions afford greater access to nonverbal cues and mental states than text interactions (Kruger, Epley, Parker, & Ng, 2005; Schroeder, Kardas, & Epley, 2017). This greater access to a counterpart's affective and cognitive states may enhance negotiators' understanding of their counterpart, and diminish perceived conflict. Indeed, prior scholarship has found that negotiating face-to-face (versus in a computer mediated interaction) increases joint gains and builds greater rapport when negotiators do not have explicit

competitive or cooperative motives (Drolet & Morris, 2000; Hollingshead, Mcgrath, & O'Connor, 1993; Swaab, Galinsky, Medvec, & Diermeier, 2012). In addition, prior work has found that when interacting in person, rather than via electronically-mediated communication, negotiators use fewer aggressive strategies (Galin, Gross, & Gosalker, 2007). Building on this prior work, we explore whether or not face-to-face negotiations mitigate perceptions of conflict compared to computer-mediated negotiations. Specifically, in Study 4 we consider whether face-to-face communication will moderate the harmful effects of negotiating on post-agreement performance that we observe in Studies 1–3.

6.1. Method

6.1.1. Participants

We recruited a sample of 190 participants (109 female, $M_{age} = 24.9$, SD = 9.6) from a Northeastern university to participate in a behavioral laboratory experiment. We assigned participants to one of four experimental conditions: 2-(Negotiation: Yes/No) × 2-(Medium: Face-to-Face/Computer). Participants received a \$10 fixed show-up payment, plus the opportunity to earn a bonus payment that averaged \$5. Participants had not taken part in any of the previous studies.

6.1.2. Procedure

Each experimental session included between 4 and 14 participants, and between 2 and 6 confederates. Confederates in the Face-to-Face condition came to the lab similar to regular participants. Upon arrival, we sat participants and confederates in separate cubicles in front of computers. Participants completed all of the experimental tasks, except the negotiation, via computer. Approximately half of the participants in each session interacted face-to-face with a confederate, in a nearby study room¹; the remaining participants engaged in an on-line chat with a confederate who was not present in the lab, following the same procedure we used in prior studies. Notably, we did not tell participants whether they would interact with their counterpart in person or chat via the computer.

As in previous studies, we randomly assigned participants to either a negotiable wage or a non-negotiable wage condition. We told participants they would either discuss their wage with their counterpart, or that the counterpart will inform them of the (non-negotiable) wage. Confederates followed the same scripts and negotiation concession plan in the Face-to-Face and Computer conditions; we include the confederates' scripts in Appendix B.

Prior to the chat, participants wrote their wage expectation. Once participants reached the chat stage, lab assistants paired each confederate with one participant and led each pair to a nearby study room. The remaining participants continued to the computerized chat, in which they negotiated with a confederate. In this study, all participants were required to spend the time allotted (five minutes) in the interaction (chat) stage. That is, participants in all of the conditions spent five minutes interacting with their counterpart before they returned to the lab to complete the effortful task.

The effort task we used in this study was the same as the one we used in Study 1: Participants counted the number of occurrences of a letter ("e") in letter strings. We presented participants with a screen that included 150 strings and reminded them of the payment scheme. We again focus our analyses on Accurate Completion, the number of correctly completed strings. We also report results for two additional measures: Quantity Attempted, the overall number of strings participants attempted, and Work time, the time participants spent on the task. All three measures were highly correlated ($r_{Accurate,Quantity} = 0.49$,

¹ The number of participants assigned to the Face-to-Face condition in each session depended on the number of participants in the session and the number of available confederates in that time slot. Within session, participants were randomly assigned to one of the conditions.

Linear regression of number of correctly counted letter strings (Study 4, N = 190).

	(1)	(2)	(3)	(4)
Negotiation	-5.50* (2.48)	- 5.88* (2.52)	-1.55 (2.37)	-1.42 (2.39)
Face-to-Face	3.76 (2.48)	3.36 (2.55)	-1.31 (2.41)	-1.12 (2.43)
Negot * Face	- 3.27	-3.47 (2.47)	- 3.53 (2.22)	- 3.81 (2.26)
Received wage	(2.10)	-0.03 (0.03)	(2.22) -0.02 (0.02)	-0.02 (0.02)
Expected wage		-0.02 (0.01)	(0.02) - 0.001 (0.01)	(0.02) -0.000 (0.01)
Conflict		(0.01)	(0.01) - 5.60*** (0.85)	(0.01) - 5.91*** (1.23)
Control variables	No	No	No	Yes
Gender Employment				0.66 (2.18) -1.44 (1.39)
Constant	26.68*** (2.48)	39.15*** (7.73)	54.63*** (7.36)	63.60* (24.48)
Adj. R-squared	0.029	0.040	0.219	0.211

Note. *** $p \le .001$, ** $p \le .01$, * $p \le .05$.

p < .001; $r_{Accurate,Time} = 0.83,$ p < .001; $r_{Quantity,Time} = 0.49,$ p < .001).

At the final stage of the study, participants answered several postexperiment questions. Participants answered the 7-item conflict measure ($\alpha = 0.86$; see Appendix A), rated the difficulty and importance of the task, and answered demographic questions. They received their payment for the study and thanked for their participation.

6.2. Results

Participants in both Negotiation conditions (Face-to-Face and Computer) completed less work than did participants in the two Control conditions. Participants in the Negotiation conditions accurately completed an average of 21.5 strings (SD = 16.8; M_{Computer} = 21.2, SD = 17.3; $M_{Face-to-Face} = 21.7$, SD = 16.7), compared to 26.4 strings $(SD = 17.0; M_{Computer} = 23.4, SD = 17.4; M_{Face-to-Face} = 30.4,$ SD = 15.8) completed by participants in the Control conditions. In Table 4, we report results from a regression model of Accurate Completion (the number of correctly completed strings) by condition, including controls for wage expectation and received wage. Taken together, we find that participants in the Negotiation condition accurately completed significantly fewer strings than did participants in the Control conditions (B = -5.88, t(184) = -2.33, p = .021;95% CI = [-10.86, -0.90]). We found no significant differences in accurate completion rates between the Face-to-Face and the Computer mediated conditions (B = 3.36, t(184) = 1.32, p = .189;95% CI = [-1.67, 8.39]). Moreover, the interaction effects of negotiation medium and negotiation was not significant (B = -3.47, t (184) = -1.41, p = .161; 95% CI = [-8.34, 1.39]). In Fig. SI.4 in online supplementary materials, we report distributions and nonparametric tests that depict very similar pattern of results.

We note that many participants in this study provided answers for all of the letter strings (e.g., answering "99" for every string). We find no effect of negotiation or medium condition on the number of string attempted or the time spent on the task (all p's > 0.10).

6.2.1. Perceived conflict and mediation

Compared to participants in both Control conditions, participants in the Negotiation conditions perceived greater conflict with their counterpart, supporting Hypothesis 1. Notably, participants who interacted with their counterparts face-to-face perceived less conflict with their counterparts than did participants who chatted via computer (Computer: $M_{Control} = 3.95$, SD = 1.26; $M_{Negotiation} = 4.75$, SD = 1.31; Face-to-Face: $M_{Control} = 3.15$, SD = 1.53; $M_{Negotiation} = 3.88$, SD = 1.27). An ANOVA with perceived conflict as the dependent variable revealed both a Negotiation effect (*F*(1, 186) = 15.26, *p* < .001) and a Face-to-Face effect (*F*(1, 186) = 17.87, *p* < .001); the interaction was not significant (*F*(1, 186) = 0.02, *p* = .857).

Perceived conflict influenced accurate completion (B = -5.60; *t* (183) = -6.57, *p* < .001). In a model predicting accurate completion, controlling for perceptions of conflict caused the direct effect of negotiating to no longer be significant (*t*(183) = -0.65, *p* = .515; see Table 4). To test for mediation, we used the indirect bootstrapping technique, using 5,000 resamples. Negotiating had an indirect effect on effort through perceived conflict (B = -4.34, 95% CI = [-6.90, -1.78]), supporting Hypothesis 3. The effect of negotiation medium and its interaction with negotiation condition remained non-significant (both *p*'s > 0.51).

6.2.2. Wage expectations

Participants in all four conditions expected similar wages (averages were between 257 and 287 points; all p's > 0.30). In our regression analyses, participants' expectation did not affect Accurate Completion, or quantity attempted (both p's > 0.16), and diminished the time spent working (B = -0.21, t(184) = -1.98, p = .049).

6.2.3. Final offers

We intended participants to receive the same wage across conditions. However, five participants in the Computer Negotiation condition agreed to a lower wage ($M_{wage} = 190.0$, SD = 22.4), as did twenty participants in the Face-to-Face negotiation condition ($M_{wage} = 189.0$, SD = 53.7). Our pattern of results remains unchanged when we control for received wage in our regressions or exclude these participants from the analyses. We report results including only participants who reported a wage of 250 in Table C4 in Appendix C.

6.2.4. Task importance

Participants in the two Face-to-Face conditions perceived the task to be more important ($M_{Face-to-Face} = 2.71$, SD = 1.22 versus $M_{Computer} = 2.35$, SD = 1.27; F(1,186) = 4.05, p = .046). Participants in the Negotiation and Control conditions perceived the task to be equally important ($M_{Control} = 2.55$, SD = 1.28 versus $M_{Negotiation} = 2.49$, SD = 1.23), and equally difficult ($M_{Control} = 1.52$, SD = 0.87 versus $M_{Negotiation} = 1.61$, SD = 0.98) (both p's > 0.37). Our pattern of results remained unchanged when we included task importance and difficulty in our model.

6.3. Summary

In this study, we replicate our key finding that participants who negotiated their wage performed worse than participants who did not negotiate, across both in-person and computer-mediated interactions. We again find that participants in the negotiation conditions perceived greater conflict with their counterparts, and that relational conflict mediated the relationship between negotiation and performance.

This study broadens our investigation to include face-to-face interactions. Prior work finds that face-to-face interactions provide a richer social context, in which negotiators can observe both verbal and nonverbal cues (Filipowicz et al., 2011; Schweitzer, Brodt, & Croson, 2002; Thompson, 2005). Our findings show that although participants perceived greater conflict and greater task importance after interacting face-to-face with their counterpart, their performance levels did not differ from participants who interacted via text. Importantly, we again document a significant effect of negotiating on post-agreement perceptions of conflict and performance, and find that negotiating can harm motivation across communication media.

7. Study 5

In this study, we broaden our investigation in two key ways. First, instead of negotiating a single-issue distributive issue, participants in this study negotiated an integrative, three-issue contract (adapted from Brooks & Schweitzer, 2011; similar to negotiations used by de Dreu & van Lange, 1995; Van Kleef et al., 2004). This negotiation context affords a more conservative test of our thesis, because negotiators not only distribute surplus (claim value), but can also create value by identifying opportunities for joint gains. As a result, the negotiation process can involve both competition and collaboration (Galinsky & Schweitzer, 2015), and cause less relational harm than purely distributive negotiations. That is, in this study we investigate whether integrative potential moderates the influence of negotiating on perceived conflict and post-agreement performance.

Second, in this study we extend our investigation of the link between negotiation and relational outcomes. In Studies 1–4, we document a robust relationship between negotiation and relational harm. In this study, we consider additional relational measures to assess the impact of negotiation on perceptions of power, subjective value, and trust. By including these measures, we link our investigation to prior work that has found that perceptions of power differences and trust influence conflict and cooperation (Anicich, Fast, Halevy, & Galinsky, 2016; Campagna et al., 2016; Halevy & Phillips, 2015; Mislin et al., 2011; Van Kleef, 2009), as well as work that has linked negotiation behavior with subjective value measures of the negotiation process and outcome (Curhan et al., 2006).

7.1. Method

7.1.1. Participants

We recruited a sample of 193 participants (122 female, $M_{age} = 23.8$, SD = 9.5) from a Northeastern university to participate in a behavioral laboratory experiment. We excluded 5 participants who did not chat for technical reasons. We report the data of 188 participants (120 female, $M_{age} = 23.9$, SD = 9.6). Participants received a \$10 fixed show-up payment, plus the opportunity to earn a bonus payment that averaged \$5. Participants had not taken part in any of the previous studies.

7.1.2. Procedure

We used a similar procedure to Study 1. We randomly assigned participants to either a negotiable contract or a non-negotiable contract condition, and we had confederates communicate with each participant. That is, we told participants they would either negotiate their contract with their counterpart, or that the counterpart will inform them of a non-negotiable contract.

The contract comprised three issues: Wage, letter to be counted, and the letter strings' length. We adapted the payoff matrix used in prior work (Brooks & Schweitzer, 2011; de Dreu & van Lange, 1995; Van Kleef et al., 2004) such that the distributive issue (also the most important issue) referred to "wage"; the other two issues, with integrative potential, referred to "letter to count" and "string length".² We provided participants with a payoff chart, which showed their own payoffs associated with nine different levels of outcomes for each of the three issues. We depict the participants' (Player B-employee) payoff chart in Table 5. We followed the concession plan delineated by Van Kleef et al. (2004), and include the confederates' scripts in Appendix B. The final offer was the same in the Negotiation and Control conditions (see Table 5). In this study, to account for the negotiation complexity, participants could chat for up to 10 min. Participants in the Negotiation condition spent an average of 283.1 s (SD = 193.0) in the chat, compared to 110.5 s (SD = 107.1) in the Control condition.

Table 5 Participants' (Player B – employee) payoff chart (Study 5).

	WAGE		LETTER		LENGTH	
#	Wage	Points	Letter	Points	Length	Points
1	100	400	а	120	30	240
2	90	350	b	105	31	210
3	80	300	с	90	32	180
4	70	250	d	75	33	150
5	60	200	e	60	34	120
6	50	150	f	45	35	90
7	40	100	g	30	36	60
8	30	50	ĥ	15	37	30
9	20	0	i	0	38	0

Note. Points were exchanged to dollars at the end of the study. Every 70 points = \$1.00.

Bold indicates the final offer in both Negotiation and Control conditions: {WAGE = 50; LETTER = e; LENGTH = 35}. The confederate—Player A's concession plan is presented in Appendix B.

Prior to the chat, participants wrote their contract expectation: The wage they expected, the letter they expected to count, and the expected string length. Participants then engaged in an on-line chat with the confederates to determine the contract. Next, they completed the effortful task, and answered post-experiment questions.

The effort task we used in this study was the same as in Studies 1 and 4: Participants counted the number of occurrences of a letter ("e") in letter strings. We presented participants with a screen that included 100 strings. We told participants that their counterpart would earn 5 points for each correctly completed string. To gauge participants' effort, we focus our analyses on Accurate Completion, the number of correctly completed strings. We also report results for two additional measures: Quantity Attempted, the overall number of answers that participants provided, and Work time, the time participants spent on the task. As in Study 1, all three measures were highly correlated ($r_{Accurate,Quantity} = 0.55$, p < .001; $r_{Accurate,Time} = 0.83$, p < .001; $r_{Quantity,Time} = 0.48$, p < .001).

At the final stage of the study, participants answered several postexperiment questions. As in our previous studies, participants answered the 7-item conflict measure ($\alpha = 0.85$; see Appendix A) and the PANAS scale (Positive: $\alpha = 0.89$; Negative: $\alpha = 0.72$). In this study, participants also answered questions about their trust in their counterpart by rating their agreement with statements such as "I trust the other participant" and "The other participant has a great deal of integrity" (Mayer & Davis, 1999; we present the full scale in Supplementary Information; $\alpha = 0.95$). In addition, participants completed two subscales of the Subjective Value Inventory (SVI; Curhan et al., 2006; see Supplementary Information for the items we used): Instrumental value (R = 0.21, p = .003) and Process $(\alpha = 0.59)$. The Conflict, Trust, and SVI items were rated on a 7-point scale, from 1: "strongly disagree" to 7: "strongly agree". Participants also answered two questions about who had more power in determining the contract and in determining the final payment (both questions rated on a 7 point scale from 1: "The other participant had all the power" to 7: "I had all the power").

7.2. Results

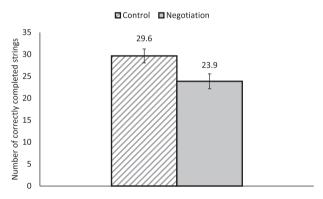
Participants in the Negotiation condition completed less work than did participants in the Control condition. Participants in the Negotiation condition correctly completed an average of 23.9 strings (SD = 16.7), compared to 29.6 strings (SD = 15.1) completed by participants in the Control condition. In Table 6, we report results from a regression model of Accurate Completion (the number of correctly completed strings) by condition, including controls for PANAS score and contract expectation. Taken together, we find that participants in the Negotiation condition completed significantly fewer strings

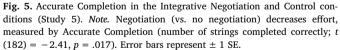
² We multiplied the dollar amounts from Brooks and Schweitzer (2011) by 50 to form our point payment matrix.

Linear regression of number of correctly counted letter strings (Study 5, N = 188).

	(1)	(2)	(3)	(4)	(5)
Negotiation	-5.78* (2.33)	-5.41* (2.32)	-2.61	0.18	2.05
			(2.20)	(2.57)	(2.48)
PANAS-pos		1.49	-1.46	0.65	0.17
		(1.41)	(1.40)	(1.56)	(1.49)
PANAS-neg		-3.96*	2.23	-2.45	1.01
		(1.95)	(2.11)	(2.02)	(2.08)
Expect-wage		-0.43	-0.08	-0.31	-0.19
		(0.65)	(0.60)	(0.62)	(0.59)
Expect-letter		0.74	0.54	0.71	0.33
		(0.71)	(0.66)	(0.69)	(0.66)
Expect-length		-0.99	-0.77	-0.98	-0.76
		(0.56)	(0.52)	(0.54)	(0.52)
Conflict			-5.57*** (0.98)		-5.67*** (1.29)
Control variables	No	No	No	Yes	Yes
SVI-Instrum.				-1.31	-1.27
				(0.88)	(0.84)
SVI-Process				-0.02	-0.36
				(1.07)	(1.02)
Trust				4.69*** (1.15)	0.74
					(1.42)
Power in decision				-3.61*** (1.04)	-3.61*** (0.99)
Power in final pay				0.54	0.68
				(0.55)	(0.53)
Gender				2.37	3.01
				(2.38)	(2.27)
Employment				2.24	2.09
				(1.34)	(1.28)
Constant	29.65*** (1.67)	37.87*** (5.92)	51.62*** (5.98)	24.20	52.86*** (10.08)
				(9.91)	
Adj. R-squared	0.027	0.044	0.185	0.160	0.240

Note. *** $p \le .001$, ** $p \le .01$, * $p \le .05$.





(B = -5.41, t(181) = -2.33, p = .021; 95% CI = [-9.98, -0.83]). We depict this result in Fig. 5. In Fig. SI.5 in the online supplementary materials, we report distributions and non-parametric tests; the pattern of results remains the same.

We find a similar result pattern of results for work time: Compared to participants in the Control condition, participants in the Negotiation condition spent less time on the task ($M_{Control} = 257.1$ s, SD = 84.5; $M_{Negotiation} = 210.9$, SD = 112.8; t(182) = -3.21, p = .002; 95% CI = [-75.35, -17.61]). We note that participants in the Control and Negotiation conditions attempted a similar number of strings overall ($M_{Control} = 35.2$, SD = 18.7; $M_{Negotiation} = 33.9$, SD = 26.8; t (182) = -0.27, p = .788).

7.2.1. Perceived conflict and mediation

Compared to participants in the Control condition, participants in

the Negotiation condition perceived greater conflict with their counterpart ($M_{Control} = 3.79$, SD = 1.36; $M_{Negotiation} = 4.33$, SD = 1.27; t (186) = -2.82, p = .005). Perceived conflict influenced accurate completion rates (B = -5.24, SD = 0.91; t(181) = -5.76, p < .001). In a model predicting accurate completion, including a control for perceived conflict causes the effect of negotiation to no longer be significant (t(181) = -1.24, p = .216; see Table 6). To test for mediation, we use the indirect bootstrapping technique, using 5,000 resamples. Supporting Hypothesis 3 and consistent with the findings in our prior studies, negotiating had an indirect effect on effort through perceived conflict (B = -2.87, 95% CI = [-5.03, -0.72]).

7.2.2. Wage expectations

Participants in both conditions expected similar contracts (Wage option: $M_{Control} = 7.18$, SD = 2.28; $M_{Negotiation} = 7.07$, SD = 2.03; Letter option: $M_{Control} = 7.09$, SD = 2.25; $M_{Negotiation} = 7.16$, SD = 2.02; Length option: $M_{Control} = 6.47$, SD = 2.74; $M_{Negotiation} = 6.79$, SD = 2.38; all *p*'s > 0.39). In our regression, participants' expectation did not affect Accurate Completion, work time, or quantity attempted (all *p*'s > 0.083).

7.2.3. Subjective value, power, and trust

Participants in the Negotiation condition felt better about the decision process than participants in the Control condition $(M_{Control} = 2.87, SD = 1.28; M_{Negotiation} = 3.31, SD = 1.21; t$ (186) = 2.46, p = .015). Participants in the Negotiation condition also felt they had more power in the contract decision than participants in the Control condition ($M_{Control} = 1.70$, SD = 1.15; $M_{Negotiation} = 3.00$, SD = 1.17; t(186) = 7.65, p < .001).

There were no differences between conditions in participants' evaluation of the instrumental outcome ($M_{Control} = 3.30$, SD = 1.34; $M_{Negotiation} = 3.28$, SD = 1.34; t(186) = -0.09, p = .925), or in perceived power in determining the final payment ($M_{Control} = 3.59$,

SD = 2.32; M_{Negotiation} = 3.98, SD = 1.89; t(186) = 1.25, p = .212). In addition, participants in the Control and Negotiation conditions thought their counterparts were similarly trustworthy (M_{Control} = 2.95, SD = 1.29; M_{Negotiation} = 2.69, SD = 1.05; t(186) = 1.53, p = .127).

We next included subjective value (process and outcome), power in setting the contract, power in determining the final payment, and trust in addition to the negotiation condition, PANAS score, contract expectations, and perceived in our regression model predicting accurate completion (see Table 6).³ Our pattern of results for perceived conflict and its mediating effect on the relationship between negotiation and effort held when we controlled for subjective value, power, emotions, and trust.

7.2.4. Task importance

Participants in both conditions perceived the task to be similarly important ($M_{Control} = 2.59$, SD = 1.26 versus $M_{Negotiation} = 2.32$, SD = 1.29), and difficult ($M_{Control} = 1.72$, SD = 1.00 versus $M_{Negotiation} = 1.58$, SD = 0.80) (both *p*'s > 0.13). Our pattern of results remained unchanged when we included task importance and difficulty in our model.

7.3. Summary

In this study, we extend our investigation to an integrative negotiation context. Consistent with our prior studies, we find that negotiation harmed effortful performance compared to a non-negotiated agreement, and that this effect was mediated by perceptions of relational conflict. These results affords greater external validity for our findings, and identify the harmful effects that negotiation may have on individuals' motivation and relationships even in an integrative context. These findings support our postulation that the subjective perception of the negotiation – perhaps more than its objective nature – is a critical factor for post-agreement motivation.

8. Study 6

In this study, we consider alternative explanations for our key findings. Specifically, we explore depletion and the total time spent negotiating. In our prior studies, participants spent more time conversing with their counterpart in the Negotiation condition than they did in the Control condition. Quite possibly, the time and effort negotiators invested in the negotiation may have prompted them to feel as if they had already "worked," and as a result caused negotiators to invest less effort in the subsequent performance task.

In this study, we also consider the possibility that the act of negotiating may be resource depleting. If participants in our negotiation condition are more fatigued or depleted than participants in the control condition, this could account for the difference we observe in performance; a substantial literature has found that depleted individuals are less motivated and exert less self-control (Baumeister & Vohs, 2007; Baumeister, Bratslavsky, Muraven, & Tice, 1998). We designed Study 6 to test these alternative explanations.

8.1. Method

8.1.1. Participants

Two hundred and forty-six MTurk participants (94 female; $M_{age} = 35.0$, SD = 9.6) completed the study. Participants received a \$0.60 fixed completion payment, plus the opportunity to earn a bonus payment that averaged \$1.16. In this study, we paid participants \$1 bonus payment for every 200 points they earned. We excluded 14 participants (3 in the Negotiation condition and 11 in the Control

condition) who did not answer the first chat message, as we cannot tell if they had technical issues with the chat and thus did not receive our Negotiation manipulation. We report the analyses for the remaining 232 participants (87 female; $M_{age} = 34.7$, SD = 9.3).

8.1.2. Procedure

We used a largely similar procedure to Study 1, except we added two individually-completed tasks to the front end of the study, as described below. We randomly assigned participants to either a negotiable wage or a non-negotiable wage condition, and we had confederates communicate with each participant.

In the first stage of the study, before reading about their joint task and wage conditions, participants completed an effortful task as a baseline measure of performance: Moving items on screen to a target position. They could spend up to 2 min on the task, moving as many items as they wished, from 0 to 100 possible. Next, participants wrote short essays for given prompts. To counteract the different time participants will spend chatting with the counterpart in the wage decision stage, participants in the Negotiation condition wrote two 1-minute essays (for a total of two minutes), and participants in the Control condition wrote four 1-minute essays (for a total of four minutes).

After these individually-completed tasks, our procedure follows Study 1. Participants wrote their wage expectation and then chatted with a confederate counterpart. In this chat, they either negotiate the wage, or receive a non-negotiable offer from the confederate (see scripts in Appendix B). Participants in the Negotiation condition spent on average 170.9 s (SD = 93.5) in the chat, and participants in the Control condition spent an average of 135.0 s (SD = 85.9).

Participants next completed the effortful work assignment, which can benefit their counterpart. This work task was similar to the work task participants did at the beginning of the study – moving items to a target position – except that this time, each item moved adds 5 points to the counterpart's bonus (as in Studies 1,3,4, and 5). To gauge participants' effort, we focus our analyses on the second work task, benefitting their counterpart. We assess the number of items moved to a target position (from 0 to 100 possible). We also report results for the time spent in the work task (up to 2 min). These two measures were highly correlated (r = 0.71, p < .001).

Finally, participants answer post-experiment questions, including their perceptions of conflict with the counterpart ($\alpha = 0.78$; see Appendix A).

8.2. Results

As we found in our prior studies, participants in the Negotiation condition performed worse on the work task (M = 31.0 items moved, SD = 39.8) than did participants in the Control condition (M = 40.7 items; SD = 43.1). In Table 7, we report results from a regression model of work done (items moved) by Negotiation condition, including controls for wage expectation, work in Stage 1, and time spent in the study up to the work task. Taken together, we find that participants in the Negotiation condition completed less work (B = -14.80, SD = 6.00; t (226) = -2.47, p = .014; 95% CI = [-26.63, -2.98]). We depict these results in Fig. 6. In online supplementary materials Fig. SI.6, we report distributions and non-parametric tests; the pattern of results remains the same.

Although participants in the Negotiation condition spent marginally less time in the work task (M = 34.9 s, SD = 36.7) than participants in the Control condition (M = 44.4, SD = 41.2; t(230) = -1.86, p = .064), the negotiation effect was non-significant when we controlled for wage expectation (B = -6.76, SD = 5.56; t(225) = -1.22, p = .226). We return to this point below.

8.2.1. Time spent in study

Participants in the Negotiation condition spent more time in the study prior to starting the work assignment $(M_{Negotiation} = 356.0 \text{ s},$

 $^{^{3}}$ We find very little multicollinearity among the explanatory variables (all VIF values < 2.6).

Linear regression of number of items moved to target position (Study 6, N = 232).

	(1)	(2)	(3)	(4)
Negotiation	-9.68 (5.45)	-14.80* (6.00)	-3.46 (6.00)	-4.13 (5.67)
Expected wage	. ,	-0.05* (0.02)	-0.01 (0.02)	-0.01 (0.02)
Received wage		-0.02 (0.04)	-0.04 (0.04)	-0.03 (0.04)
Time in study before work task Conflict		-0.08** (0.03)	(0.02) (0.02) -14.43^{***} (1.99)	-0.05 (0.02) -14.49^{***} (1.99)
Control variables	No	Yes	Yes	Yes
Stage1 performance		0.29*** (0.07)	0.28*** (0.07)	0.29*** (0.07)
Gender		(0.07)	(0.07)	-0.57
Employment				(4.69) - 4.86
Constant	40.66*** (3.95)	85.29*** (15.05)	122.38*** (14.52)	(3.74) 129.86*** (15.61)
Adj. R-squared	0.009	0.092	0.261	0.260

Note. *** $p \le .001$, ** $p \le .01$, * $p \le .05$.

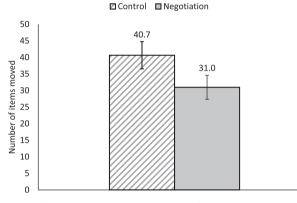


Fig. 6. Work performance in the Negotiation and Control conditions (Study 6). *Note.* Negotiation (vs. no negotiation) decreases effort irrespective of time spent in study, measured by number of items moved to target position (t (226) = -14.80, p = .014). Error bars represent ± 1 SE.

SD = 108.7; M_{Control} = 450.4, SD = 103.1; t(230) = 6.77, p < .001). Participants who spent more time in the study before the work task completed less work (B = -0.08, SD = 0.03; t(226) = -3.07, p = .002). Notably, we find our negotiation effect on the number of completed items when controlling for this duration.

8.2.2. Perceived conflict and mediation

Compared to participants in the Control condition, participants in the Negotiation condition perceived greater conflict with their counterpart ($M_{Control} = 4.18$, SD = 1.37; $M_{Negotiation} = 4.82$, SD = 1.16; t (230) = 3.85, p < .001). In a regression model predicting work performance, we controlled for perceived conflict in addition to condition, expected and received wage, time spent in the study before work, and Stage 1 work. Perceived conflict diminished work performance (B = -14.43, SD = 1.99; t(225) = -7.24, p < .001; see Table 7), and including it in the model caused the effect of negotiating to no longer be significant (t(225) = -3.46, p = .539). To test for mediation, we use the indirect bootstrapping technique, using 5,000 resamples. As before,

we find that negotiating had an indirect effect on effort through perceived conflict (B = -11.34, 95% CI = [-17.41, -6.23]).

8.2.3. Wage expectations

Participants in the Negotiation condition expected higher wages than participants in the Control condition ($M_{Control} = 318.6$, SD = 136.4; $M_{Negotiation} = 359.8$, SD = 111.0; t(230) = 2.53, p = .012). Participants who expected higher wages completed less work (B = -0.05, SD = 0.02; t(226) = -2.00, p = .046), and spent less time on the task (B = -0.05, SD = 0.02; t(225) = -2.33, p = .021). Notably, as we noted above, when we included wage expectation in the model predicting time spent working, the negotiation effect was no longer significant (p = .226). Mediation analysis showed full mediation of the negotiation effect on time worked by wage expectation (B = -3.95, p = .040; 95% CI = [-7.79, -0.72]), and marginally significant mediation of the negotiation effect on work performance (B = -3.42, p = .068; 95% CI = [-7.37, -0.19]).

8.2.4. Final offers

We intended participants to receive the same wage across conditions. However, twenty-eight participants in the Negotiation condition indicated they agreed to a lower wage ($M_{wage} = 168.9$, SD = 62.3), as did two participants in the Control condition ($M_{wage} = 110.0$, SD = 155.6). Our pattern of results remains unchanged when we control for received wage in our regressions or exclude these participants from the analyses. We report results including only participants who reported a wage of 250 in Table C5 in Appendix C.

8.2.5. Task importance

Participants in both conditions perceived the task to be similarly important ($M_{Control} = 2.55$, SD = 1.51; $M_{Negotiation} = 2.64$, SD = 1.50; t (230) = 0.43, p = .669), but more difficult ($M_{Control} = 1.39$, SD = 0.93 versus $M_{Negotiation} = 1.69$, SD = 1.18; t(230) = 2.12, p = .035). Our pattern of results was similar when we included task importance and difficulty in the analyses.

8.3. Summary

In this study we consider and rule-out two alterative explanations for our findings. We find that both the total time spent in the study and depletion cannot account for the decrement in performance we observe in the Negotiation condition versus the Control condition. In particular, in this study Control participants, who did not negotiate, spent more total time in the study than did participants in the Negotiation condition, and yet participants in the Negotiation condition. That is, time spent in the study cannot account for negotiators' worse performance in this study and suggests that it is not the driving feature of performance in our prior studies. In addition, we find that measures of depletion were not different across conditions (see also Supplementary Study 1 in the online Supplementary Materials).

In this study, unlike our previous studies, participants in the Negotiation condition expected higher wages than Control participants, although Control participants had spent more time in the study leading up to that point (due to our essay task manipulation). This difference in expectation also mediated the impact of negotiation on participants' work time, but did not affect the negotiation impact on work performance. Notably, replicating our prior results, participants' perceptions of conflict again had the strongest link with their post-agreement performance and work time, and mediated the effect of negotiation on these two measures of work motivation.

9. General discussion

Across six studies, we demonstrate that the negotiation process can profoundly influence post-agreement motivation and behavior. In our studies, participants who engaged in a negotiation were less motivated and created less value for their counterpart compared to participants who did not negotiate. We demonstrate that negotiation diminished participants' motivation to work for their counterpart, and not their ability or overall attentional resources; the longer time and possibly greater effort exerted in the negotiation conversation, compared to the control condition, cannot explain the harmful effect we observe of negotiation on participants' subsequent performance as evidenced by our results in Study 6 and a supplementary study (see Online Supplementary Materials). Importantly, across all of our studies, we find that negotiators (compared to participants who did not negotiate) perceived greater relational conflict with their counterpart, and these perceptions mediated the harmful impact of negotiation on performance. That is, the negotiation process altered the final economic value of negotiated agreements. Using different performance measures and negotiation settings, we demonstrate that the negotiation process foments perceptions of conflict and harm post-agreement performance.

Participants' wage expectations were largely unaffected by the prospect of negotiation. Across the negotiation and no-negotiation conditions, participants who expected higher wages were less motivated and created less value, but wage expectations did *not* affect the relationship between negotiation and motivation. These findings are consistent with prior work which has demonstrated that social perceptions and relationships affect motivation (Bear et al., 2014; Jehn et al., 2008; Kanfer & Chen, 2016) independently from economic outcomes. In our investigation, we demonstrate that the detrimental impact of negotiation on performance is mediated by relational conflict.

9.1. Contributions and implications

Our findings challenge an implicit assumption of the negotiation literature, that the terms of a negotiated agreement reflect the economic value of an agreement. This assumption reflects a focus on negotiations for goods, rather than services, and it also reflects the experimental paradigm that has been used to study negotiations: a singleshot negotiation experience that concludes with a negotiated agreement (for a review, see Jang et al., 2018). Even when the negotiation context explicitly involves a service (Amanatullah & Tinsley, 2013; Chambers & De Dreu, 2014; Schaerer et al., 2018; Shirako et al., 2015), unlike any actual service interaction, the interaction ends with the conclusion of the negotiation - and the complete accounting of the value of the deal is calculated from a deal sheet. In contrast to the implicit, and often explicit, assumption of this experimental paradigm-that the deal terms reflect the complete economic impact of a negotiation-our findings show that the negotiation process can fundamentally alter the value of the negotiated agreement. Our findings underscore the importance of conceptualizing and studying negotiations as part of an ongoing relationship. Though important for any negotiation context, our findings are particularly important for services, which account for the vast majority of western economies.

Our work also challenges an implicit assumption of the Dual Concern model (Pruitt & Rubin, 1986). According to the Dual Concern framework, negotiators care about two, orthogonal dimensions: Advancing their own economic interests and advancing the interests of their counterpart. Although these dimensions may be orthogonal and separable in some contexts, such as negotiations for some types of goods, we find that these dimensions are not separable whenever value is created after an agreement has been reached, which is broadly the case for negotiations involving services. We show that for negotiations involving a service, negotiators who fail to build a collaborative relationship limit their ability to advance their economic interests. Notably, post-negotiation behavior may matter not only for prototypical services (e.g., housekeeping) but also for exchanges of consumer goods that have a service element. For example, sellers of consumer goods may choose the quality of product provided, or the date and type of delivery they provide the buyer. That is, many deals include postagreement implementation decisions that are likely to affect the overall economic value of the negotiated agreement.

In addition, we investigate the critical and understudied contrast between negotiating and not negotiating. The negotiation literature has focused on contrasting different strategies within a negotiation (e.g., expressing anger in a negotiation versus neutral emotion in a negotiation; Magee et al., 2007; Overbeck et al., 2010; Van Kleef et al., 2006). As a result, this literature has overlooked the important and obvious contrast: Negotiating versus Not negotiating. This contrast merits greater attention: As we demonstrate, the experience of engaging in a negotiation can alter post-negotiation motivation and behavior. Whereas the existing literature has pointed to the potential for reaching better deal terms by negotiating in specific ways (and offered a rich array of strategies to improve the terms of a negotiated agreement), we identify a potential critical cost of *the choice to engage in negotiation*.

Our findings also inform a number of practical implications. In a service-based economy, post-negotiation motivation is critical. Our investigation suggests that unqualified exhortations to negotiate ("Get to Yes", "Getting More", "Lean In") may be misguided. In some cases, negotiations may cause more harm than good, or may be less beneficial once post-negotiation behavior and productivity are taken into account. In our studies, we identify an important cost to negotiating, and we underscore the importance of choosing whether, when, and how to negotiate. As a result, managers and employers should be cautious with respect to how negotiable they characterize terms of employment, how aggressively they endorse negotiation, and how assertively they negotiate. For instance, aggressive negotiation strategies may improve negotiated final prices, but destroy economic value. We call for future work to investigate how different negotiation strategies, such as adopting a problem-solving mindset, influence negotiator motivation, productivity, and long-term relationships.

9.2. Limitations and future research

In our studies, we demonstrate a potential harmful effect of negotiating, compared to receiving a non-negotiated agreement, on subsequent performance. The magnitude of the effect we identify may depend on specific aspects of the negotiation we used. In particular, the negotiation effect we observe is likely to reflect the nature of the negotiation. In our studies, the negotiations involved a salient distributive issue and exchanges that may have seemed aggressive to participants. In supplemental analyses, we had raters code the aggressiveness of the negotiation and control chats in our studies. We found that observers also perceive more conflict in the negotiation than in the control chats, and that this conflict mediates the influence of negotiation on performance. We describe this analysis in our Supplementary Materials. We also note, however, that we observe the same pattern of results in an integrative negotiation context (Study 5), demonstrating that perceptions of conflicting interests - rather than objective conflict of interests may be the main factor underlying post-agreement motivation and performance.

Notably, in a supplementary study (see Online Supplementary Materials), we find that friendly negotiation strategies mitigate the harmful effect of negotiation on motivation. These findings suggest that negotiation strategies that emphasize concern for others and underscore a willingness to compromise and build rapport (e.g., De Dreu, Weingart,

& Kwon, 2000; Kilmann & Thomas, 1977; Pruitt, 1983; Weingart, Olekalns, & Smith, 2004) may diminish perceptions of relational conflict (Moore, Kurtzberg, Thompson, & Morris, 1999; Morris et al., 2002; Shaughnessy et al., 2015). Quite possibly, rapport building strategies may not only mitigate the impact of negotiation on performance, but they could also improve relationships and perhaps even boost postagreement performance.

Another limitation in our studies is our use of confederates. Our use of confederates ensured high experimental control, but perhaps the use of confederates influenced the magnitude of the effect we document. Quite possibly, an exchange between two interdependent parties who react reciprocally and both stand to gain or lose in the negotiation may develop in a different way than our script allowed. Broadly, although in our studies we demonstrate that negotiation can promote relational conflict, the negotiation process has the potential to both promote and harm relationships (Galinsky et al., 2002; Kray & Gelfand, 2009; Schweitzer & Gomberg, 2001; Schweitzer & Kerr, 2000).

In addition, the impact of negotiation on post-agreement performance may vary with the attractiveness of the initial and final offers, and potential benefits from the task itself. In our studies, participants received approximately half of their counterpart's budget, which is likely perceived to be a fair amount. This potential fairness of the outcome makes our test a conservative one. Future research should assess how negotiation (versus a non-negotiable offer) affects work motivation and performance when the offers are more or less appealing and fair (Schweitzer & Gibson, 2008). Potentially, if offers are very low, individuals' dissatisfaction with their outcome would outweigh any impact of the allocation process; conversely, low outcomes may exacerbate the impact of negotiation on motivation by increasing perceived conflict. Another feature of our setting is that we assessed participants' motivation via their performance on effortful and creative tasks that benefit only their counterpart. As a result, the impact of negotiation and conflict on subsequent performance may be moderated when negotiators are personally motivated or incentivized to perform well.

Individuals' post-negotiation motivation may also depend on their a-priori expectations about the negotiation process (Bowles, Babcock, & McGinn, 2005; Kray & Gelfand, 2009; Oliver et al., 1994). For instance, an individual who expects to negotiate, but receives a non-negotiable

outcome may experience relational conflict and diminished motivation. Notably, in our studies, the opportunity to negotiate (vs. receive a nonnegotiable offer) was dictated by a third party, the experimenter. Thus, there is an explicit expectation imposed by a third party that dictates whether participants have the opportunity to negotiate. This setting mirrors contexts such as government employment, law, and consulting, where there is often an explicit no-negotiation policy. Notably, these situations are qualitatively distinct from non-negotiable ultimatums (e.g., "take it or leave it") made by a counterpart when negotiations are both common and expected (Hüffmeier et al., 2014; Lau et al., 2014; Pruitt, 1983). Future research should investigate how negotiation norms and policies affect parties' reactions to negotiating and their post-agreement behavior, and perhaps compare productivity and turnover in companies that enact such a policy (e.g., Reddit, Jet) and companies in which employees are allowed - and expected - to negotiate. Broadly, we call for future work to explore how the negotiation process, negotiation context, and expectations influence post-agreement attitudes and behaviors.

9.3. Conclusion

Our investigation examines post-negotiation motivation and performance and challenges the way we conceptualize negotiations: The impact of the negotiation process does not end when the negotiators leave the negotiation table. Though the dominant experimental paradigm in the negotiation literature considers the negotiated agreement as the final outcome of the negotiation, our findings reveal that negotiators' actions following a negotiation can profoundly affect the value of the agreement itself. As individuals decide whether and how to enter negotiations, they should be mindful that negotiations afford opportunities not only to "get more," but also to get less.

Acknowledgements

The authors wish to thank the Wharton Behavioral Lab for financial support, Alexander Hirsch and Sara Sermarini for help in running the experiments, and Alison Wood Brooks, Brad Bitterly, Nazli Bhatia, and Rachel Campagna for helpful comments.

Appendix A. Conflict measure

We created the conflict measure by adapting statements from Yip et al. (2017) and Curhan et al. (2006). In Studies 3, 5, and 6 the items were rated on a 7-point scale from 1: "strongly disagree" to 7: "strongly agree". Due to technical reasons, in Studies 1, 2, and 4 the statements were rated on a 5-point scale, from 1: "strongly disagree" to 5: "strongly agree". We reverse-coded items marked with (R).

- 1. The other participant sent aggressive messages
- 2. I viewed the other participant as a competitor
- 3. The other participant and I had similar interests (R)
- 4. Helping this person was important to me because of our interaction (R)
- 5. Harming this person was important to me because of our interaction
- 6. The other participant and I had conflicting interests
- 7. I would want to work with the other participant again (R)

Appendix B. Chat scripts

See Fig. B1 and Table B1.

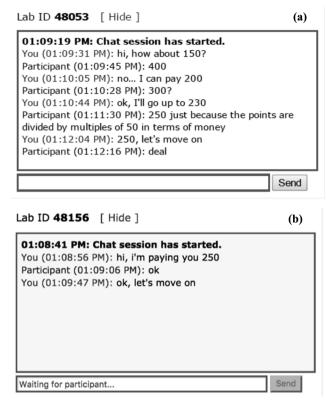


Fig. B1. Sample exchanges. Panel (a): Negotiation condition; Panel (b) Control (no negotiation) condition.

Table B1 Confederates' chat scripts in the Negotiation and Control conditions in each study.

	Negotiation condition	Control condition
Studies 1, 2, 3	1. Hi, how about 150?	1. Hi, i'm paying you 250
	2. No I can pay 200	2. Ok, let's move on
	3. Ok, i'll go up to 230	
	4. 250, let's move on	
	5. 250 is the final offer	3. It's 250, let's move on
	6. I won't do more than 250	4. I decided on 250
	7. It's 250, let's move on	
Study 4, 6	1. let's get this over with 150	1. hi, i'll pay you 250 points
	2. [definitely not]. I can pay 200	2. [Study 4: ok. so what do you have planned for the rest of the day?]
	3. that won't work. I'll go up to 230	
	4. ok fine 250 let's move on	
	5. 250 is the final offer	3. I decided on 250
	6. i hold firm on 250	4. it's 250 that's what I'm paying
	7. I don't care. 250 or you get nothing	5. [Study 4: 250 we can chat about other stuff].
	8. I won't do more than 250	
	9. 250. time is running out	
Study 5 (Integrative three-issue negotiation)	1. hi, how about – wage 30 letter e length 36	1. hi, I decided on – wage 50 letter e length 35
, , , , , , , , , , , , , , , , , , , ,	2. I prefer wage 40 letter e length 36	2. ok, let's go
	3. let's do wage 40 letter e length 35	, 0
	4. ok, wage 50, e, length 35 let's go	
	5. wage 50 letter e length 35 is the final offer	3. it's wage 50 e length 35, let's move on
	6. the deal is 50-e-35	4. i decided on wage 50 letter e length 35
	7. it's 50-e-35, let's move on time is running out	- •

Note. Confederates wrote the sentences below the dashed line only if the participant did not agree to the final "goal" wage or contract.

Appendix C. Supplementary analyses

See Table C1–C5.

Table C1

Study 1: Linear regressions on number of correctly counted letter strings, only for participants who received the goal wage of 250 points (N = 187).

	(1)	(2)
Negotiation Conflict	- 9.38 ** (3.55)	- 6.42 [^] (3.38) -11.16*** (2.20)
Constant	33.35*** (2.43)	56.85*** (5.16)
Adj. R-squared	0.031	0.145

Note. *** $p \le .001$, * $p \le .05$, ** $p \le .01$.

Table C2

Study 2: Linear regressions on number of words written, only for participants who received the goal wage of 250 points (N = 118).

	(1)	(2)
Negotiation Conflict	- 36.01 * (16.87)	0.94 (16.66) - 37.07*** (6.92)
Constant	135.19*** (9.70)	255.67*** (24.13)
Adj. R-squared	0.029	0.216

Note. *** $p \le .001$, ** $p \le .01$., * $p \le .05$.

Table C3

Study 3: Linear regressions on number of correctly placed sliders, only for participants who received the goal wage of 250 points (N = 216).

	(1)	(2)
Negotiation Conflict	- 9.48 [^] (5.18)	4.42 (4.55) - 22.66*** (2.33)
Constant	45.19*** (3.54)	99.68** (6.33)
Adj. R-squared	0.011	0.312

Note. *** $p \le .001$, ** $p \le .01$, * $p \le .05$.

Table C4

Study 4: Linear regressions on number of correctly counted letter strings, only for participants who received the goal wage of 250 points (N = 154).

	(1)	(2)
Negotiation Conflict	- 6.40 * (2.82)	- 1.66 (2.66) -5.36*** (0.88)
Constant	27.27*** (1.70)	46.30*** (3.49)
Adj. R-squared	0.026	0.212

Note. *** $p \le .001$, ** $p \le .01$., * $p \le .05$.

Table C5

Study 6: Linear regressions on number of moved items, only for participants who received the goal wage of 250 points (N = 184).

	(1)	(2)
Negotiation Conflict	- 11.00 (6.20)	3.78 (5.64) -16.68*** (2.08)
Constant	41.10*** (4.16)	109.41*** (11.84)
Adj. R-squared	0.012	0.267

Note. *** $p \le .001$, ** $p \le .01$, * $p \le .05$.

Appendix D. Supplementary material

Supplementary data to this article can be found online at https://doi.org/10.1016/j.obhdp.2019.09.005.

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