12-2015

Pain and Preferences: Observed Decisional Conflict and the Convergence of Preferences

Rom Y. Schrift
University of Pennsylvania

Moty Amar

Pain and Preferences: Observed Decisional Conflict and the Convergence of Preferences

Abstract

Decision making often entails conflict. In many situations, the symptoms of such decisional conflict are conspicuous. This article explores an important and unexamined question: How does observing someone else experiencing decisional conflict impact our own preferences? The authors show that observing others' emotional conflict and agony over an impending decision makes the observer's preferences converge to those of the conflicted actor (i.e., choose similarly). Thus this article contributes to the social influence literature by demonstrating that observers' preferences are not only influenced by an actor's ultimate choice, but also by the process leading to this choice. For example, in one experiment, participants' real monetary donations to one of two charities converged to those of a paid confederate who agonized over the decision. Six studies demonstrate this effect and show that it is triggered by empathy and a greater sense of shared identity with the conflicted actor. Accordingly, the studies show the effect is more pronounced for individuals with a greater tendency to empathize with others, and that convergence occurs only if participants deem the actor's conflict warranted given the decision at hand. The authors also demonstrate important implications of this effect in contexts of group decision making.

Pain and Preferences: Observed Decisional Conflict and the Convergence of Preferences

ROM Y. SCHRIFT

MOTY AMAR

July 2015

*Rom Y. Schrift (roms@wharton.upenn.edu) is the Claude Marion Assistant Professor at the Wharton Business School, University of Pennsylvania, PA 19104. Moty Amar (mamar@ono.ac.il) is Assistant Professor at the School of Business Administration, Ono Academic College, Kiryat Ono, ISRAEL. Correspondence: Rom Y. Schrift. The authors acknowledge the helpful input of the editor, associate editor, and reviewers. The authors are also grateful for helpful comments and suggestions received on previous versions of this article from participants in seminars at Cornell University and at the Four School Conference at New York University. The authors are also grateful for the support of the Wharton Behavioral Lab, the Ono Research Institute, and the Ono Behavior Lab. Supplemental materials are included in the online-only version of this article.

ABSTRACT

Decision making often entails conflict. In many situations, the symptoms of such decisional conflict are conspicuous. This paper explores an important and unexamined question: How does observing someone else experiencing decisional conflict impact our own preferences? The authors show that observing others' emotional conflict and agony over an impending decision makes the observer's preferences converge to those of the conflicted actor (i.e., choose similarly). Thus, this paper contributes to the social influence literature by demonstrating that observers' preferences are not only influenced by an actor's ultimate choice, but also by the process leading to this choice. For example, in one experiment, participants' real monetary donations to one of two charities converged to those of a paid confederate that agonized over the decision. Six studies demonstrate this effect and show that it is triggered by empathy and a greater sense of shared identity with the conflicted actor. Accordingly, the studies show the effect is more pronounced for individuals with a greater tendency to empathize with others, and that convergence occurs only if participants deem the actor's conflict warranted given the decision at hand. The authors also demonstrate important implications of this effect in contexts of group decision-making.

Keywords: social influence, conflict, empathy, shared identity, preferences

Choice conflict is often a central component of the decision-making process. This paper explores a straightforward yet important and unexamined question: How does observing someone else experiencing emotional conflict over an impending decision impact our own preferences? Would we be more likely to choose similarly to or differently from another individual after observing this person's pain and agony over the decision? Indeed, understanding how other peoples' choices influence our own decisions is important in many domains and contexts. A vast body of literature has studied social influence and how the behavior of others shapes our own actions and attitudes (see Cialdini and Goldstein, 2004, for a review). However, although social psychology has long explored the factors that motivate individuals to converge to, or diverge from, the behavior of others, the field has largely ignored how and why observing the choice *process* of others (e.g., their experienced emotional conflict in choice) may affect the observer's own preferences. Thus, this paper contributes to the social influence literature by demonstrating that observers' preferences are not only influenced by an actor's ultimate choice, but also by the process through which this choice is made. In particular, we hypothesize that observing others' choice conflict—a central and often conspicuous element of the decision-making process—increases the likelihood that the observer's preferences will converge to those of the actor's.

In this paper, we advance an emotion-based mechanism underlying the effect. Specifically, as social creatures, we are attuned to those around us and to their emotional states. Integrating literature on empathy and shared identity, we argue that observing others in "pain and agony" over an impending decision triggers empathic reactions that make the observer feel a greater sense of shared identity with the conflicted actor. Such a sense of shared identity leads

the observer to choose more similarly to the conflicted actor (i.e., convergence of preference).

Figure 1 summarizes the suggested theoretical framework and main hypotheses.

FIGURE 1. THEORETICAL FRAMEWORK
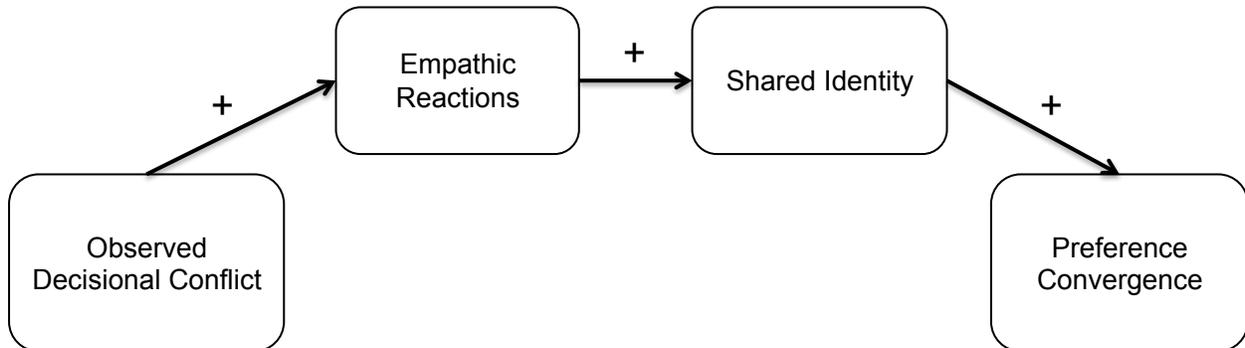
Admittedly, one could also advance an account that involves inferential processes. For example, one could argue that observing a conflicted actor may signal to the observer that the actor conducted a more thoughtful and diligent choice process and therefore must have made a better choice (e.g., Rucker, Petty, and Briñol, 2008; Schrift, Netzer, and Kivetz, 2011). According to this account, convergence of preferences will occur through inferential processes, which may involve following descriptive norms (e.g., Cialdini, Reno, and Kallgren 1990). However, an inferential process may also lead to opposite predictions. That is, the observer might interpret the actor's conflict as a sign of confusion, incompetency, or perhaps unfamiliarity with the decision domain. This reasoning should cause the observer to question the decision quality and gravitate away from the conflicted actor's choice (i.e., preference divergence).

Although we agree these types of inferential processes are pertinent in some instances, they may have a smaller role in other instances. For example, in decisions that inherently involve

subjective preferences and personal tastes, the notion of a "better" or an "accurate" decision becomes less relevant. The fact that an individual is either thoughtful or confused about these types of decisions should not necessarily inform the observer about the best course of action, because "best" is highly subjective and governed by personal taste and heterogeneity in preferences. We argue that in such instances, a different mechanism, which is separate and distinct, may become more relevant. Throughout the studies, we control for the aforementioned inferential processes and isolate and test the suggested emotion-based account.

In addition to the theoretical significance, this research question is important from a practical perspective. Specifically, in many instances, individuals can directly observe (in real time) other people, such as friends, colleagues, managers, or even strangers at a store, experiencing conflict when facing important decisions. In other instances, experienced conflict may be inferred or learned post-hoc either directly (e.g., a friend tells us about a difficult decision he or she experienced) or indirectly through blogs, reviews, or other means of communication. Other situations that involve group interactions, such as jury decision making (e.g., Devine et al. 2000; Kaplan 1987) or instances in which group members voice their own opinions sequentially (e.g., Arieli and Levav 2000), may provide decision makers with cues to the level of conflict group members experience. Thus, studying how preferences are shaped when people learn, observe, or even imagine decisional conflicts that others experience has important practical implications.

Recent research lends support to the notion that observing or learning about different elements in others' decision processes may affect people's judgments. For example, Critcher, Inbar, and Pizarro (2013) showed that the speed with which an actor made either a moral or immoral decision influenced how others judged this actor's moral character. Lamberton, Naylor,

and Haws (2013) found that learning about the reasoning that governed an actor's choice could significantly affect the observer's confidence when making (and publicly discussing) a similar choice. Kupor et al. (2014) reported that the perceived thoughtfulness with which an actor made a decision affected the observer's evaluation of the actor as well as openness to being influenced. Thus, emerging and recent research underscores the importance of studying and understanding different elements of the decision *process* when examining social influence.

In what follows, we develop our theoretical framework following each of the three links depicted in Figure 1, namely, (i) decisional conflict and empathy, (ii) empathy and shared identity, and (iii) shared identity and preference convergence. We then report six studies that explore how others' decisional conflicts influence the observers' preferences through empathic reactions and a greater sense of shared identity. We conclude by discussing the contribution of this research and suggest directions for future research.

THEORETICAL DEVELOPMENT

Observed Conflict and Empathic Reactions

Earlier research that laid down the *laws of conflict behavior* viewed conflict as a situation in which two or more incompatible responses are aroused simultaneously in an organism (Miller 1944; Berlyne 1960). Accordingly, studies showed that experiencing conflict in choice often produced negative emotional states, such as psychological stress, anxiety, discomfort, agitation, and anticipated regret (e.g., Armitage and Arden 2007; Barker 1942; Baron and Spranca 1997; Beattie et al. 1994; Janis and Mann 1976; Lewin 1951; Luce, Bettman, and Payne 2001; Miller 1944; Simonson 1992; Zeelenberg 1999). Researchers also explored and documented other

concomitants of decisional conflict, such as marked changes in heart rate, finger-pulse amplitude, galvanic skin response, reaction time, eye movements, and hesitancy in response (e.g., Barker 1942; Bergum and Dooley 1969; Cattell 1902; Gerard 1967; Harreveld et al. 2009; Jones and Johnson 1973; Mann, Janis, and Chaplin 1969). Indeed, many of the indications for decisional conflict are conspicuous. Thus, people may often observe, infer, and learn others' experienced conflict and its corresponding emotional states through direct verbal indications as well as nonverbal communication such as facial expressions and body language (e.g., Ekman 1993; Keltner at al. 2003).

Because decisional conflict often involves conspicuous negative emotional states, and past research shows that observing the suffering of others often triggers empathy, we argue that observing others going through the "pain and agony" of choice will trigger empathic reactions. Empathy, in its broadest sense, refers to an individual's reaction to the experience of another individual (Davis 1983) and has been studied from evolutionary, developmental, social, and neuroscience perspectives (Decety and Jackson 2004). Ickes (1997) defines empathy as a complex form of psychological inference in which observation, memory, knowledge, and reasoning collectively produce insights into the emotional states and thoughts of others. As such, empathy involves both an affective component, which is more visceral, (i.e., sharing others' emotional state), and a cognitive component (i.e., taking the perspective of others). Not surprisingly, the origin of the word empathy comes from the integration of the two Greek words em, which means "in," and pathos, which means "feeling." Thus, it captures the process by which we vicariously experience others' internal states as our own (Feshbach 1978; Hoffman 1985). As Decety and Jackson (2004) noted, "This natural ability to understand the emotions and feelings of others, whether one actually witnessed his or her situation, perceived it from a

photograph, read about it in a fiction book, or merely imagined it, refers to the phenomenological experience of empathy."

Although empathic reactions are complex, they are primal and spontaneous. Developmental researchers have documented that even young infants are sensitive to others' emotional states, and are predisposed to and capable of emotional resonance, which are important precursors of empathy (Decety and Jackson 2004; Hoffman 2001; Trevarthen 1979). Studies demonstrate that by the age of two, children manifest empathic reactions toward others in distress through behaviors such as helping, sharing, and comforting, (e.g., Bretherton et al. 1986; Feshbach and Roe 1968).

The literature concerning pro-social behavior has also extensively studied empathy (e.g., Batson et al. 1997; Cialdini et al. 1997) and documented how learning, inferring, or directly observing others' misfortunates triggers empathic reactions. We argue that such empathic reactions would generalize to decision-making contexts. Specifically, because decision makers' conflict and attitude ambivalence are often accompanied by negative emotional states, which others may observe or infer, we expect they would also produce empathy toward the conflicted actor. Thus, we hypothesize that individuals who observe, infer, or learn about an actor's emotional conflict and "pain" over an impending decision will tend to take the perspective of the actor and resonate with the actor's emotional state.

Empathy and Shared Identity

Because empathic reactions entail sharing others' emotional states and taking their perspective, understanding how such reactions could also influence the observer's self-other representations is important. Several streams of literature suggest that when empathizing with

others, individuals tend to generate mental and cognitive representations of others that considerably overlap with their own self-representations. This notion of shared identity (also termed as "oneness;" Cialdini et al. 1997) is built on the view that the self-concept is dynamic and malleable (e.g., Higgins 1996; Kihlstrom and Cantor 1984) and can shift temporarily to include others (e.g., Aron and Aron 1986; Hornstein 1978). Accordingly, researchers have suggested that when one vicariously experiences what another is experiencing, the self is incorporated within the boundary of the other and can include a form of psychological indistinguishability and blur self-other distinctions (Cialdini et al. 1997; Neuberg et al. 1997; Wegner 1980; Lerner 1980).

Research on perspective taking (e.g., Davis et al. 1996; Galinsky and Moskowitz 2000) and emotional contagion (e.g., Hatfield, Cacioppo, and Rapson 1993; Howard and Gengler 2001) lends support to this link between empathic reactions and shared identity. For example, Davis et al. (1996) found that taking the perspective of others (an integral part of empathy) influences individuals' mental representations, and causes them to see more of themselves in the other. Specifically, participants that were instructed to take the perspective of a stranger that experienced certain difficulties in life attributed a greater proportion of their self-descriptors (e.g., traits) to this individual. As Davis et al. (1996) noted, "The mental processes associated with perspective taking cause an observer's thoughts and feelings about a target to become, in some sense, more 'selflike'… the effect of active perspective taking will be to create a merging of self and other."

Note that whereas Aron et al. (1991) mainly focused on how people with whom we have close relationships (e.g., spouse and family) come over time to be "included within the self," Davis et al. (1996) explored and demonstrated that taking the perspective of even a stranger

triggers self-other merging. Indeed, like research concerning pro-social behavior demonstrated, empathic reactions are not limited to cases in which the observer and target are in a close relationship (e.g., Bagozzi and Moore 1994; Coke, Batson and McDavis 1978; Small and Loewenstein 2003). More importantly, this literature lends further support to the notion that empathy triggers self-other merging. In particular, Cialdini et al. (1997) suggested and found that empathy-induced helping behavior occurs as a result of self-other merging. This finding sparked a debate concerning the empathy-altruism model, and whether helping behavior is driven by a non-altruistic factor (e.g., Batson et al. 1997; Neuberg et al. 1997). Cialdini et al. (1997) noted, "After all, as the self and other increasingly merge, helping the other increasingly helps the self…our findings suggest that empathic concern may have only appeared to mediate aid in much prior research because it is a concomitant of perceived oneness, a construct that offers a non-altruistic path to such aid."

Additional evidence for the link between empathy and shared identity is apparent in the field of neuroscience (see Decety and Jackson, 2004, for a review on the functional architecture of human empathy). Several investigations support the notion that perception of a given behavior in another individual automatically activates one's own representations of that behavior (Preston and de Waal 2002; Prinz 1997). According to Decety and Jackson (2004), such a view of shared representations (Decety and Sommerville 2003; Jeannerod 1999) is grounded in the fundamental physiological properties of the nervous system regarding action-cognition continuity.

Neuroimaging studies of pain have documented a neural overlap between observing and evaluating pain when taking others' perspectives and when taking a self-perspective (Botvinick et al. 2005; Jackson et al. 2004; Singer et al. 2004). That is, observing others in pain and being asked to assess their own pain activated similar regions of the brain. Decety and Jackson (2004)

concluded that these findings suggest that part of the neural network mediating pain experience

is shared when empathizing with others experiencing pain.

To summarize, several streams of literature support the link between these two distinct

constructs, namely, empathy and shared identity. Accordingly, we hypothesize that the

observer's empathic reactions toward a conflicted actor will trigger a greater sense of shared

identity; this shared identity will lead the observer to see the actor in a more "self-like" manner.

However, a central question still remains: Why would a greater sense of shared identity

ultimately lead to preference convergence?

Shared Identity and Preference Convergence

As noted earlier, the notion of shared identity is conceptualized as individuals having

overlapping mental representations. Such shared representations can lead people to confuse

cognitions about the self with cognitions about close others (Aaron et al. 1991; Coats et al. 2000;

Smith, Coats, and Walling 1999) and influence their perceptions of their own attributes and traits

as being shared with those of others (Davis, et al. 1996; De Cremer 2004; Galinsky and

Moskowitz 2000; Goldstein and Cialdini 2007a).

Goldstein and Cialdini (2007a) experimentally triggered a greater sense of shared identity

between participant and actor (through perspective-taking instructions or by providing bogus

feedback about overlapping brainwaves). After observing the actor behaving in a certain manner,

participants incorporated attributes relevant to the actor's behavior into their own self-concept

and exhibited more congruent behavior. The researchers advanced a self-perception account

(Bem 1967) and argued that observing a close other behave in a certain way informed observers

about their own traits and attitudes as if they themselves had engaged in this behavior.

Consistent with these findings, we argue that through an emotional resonance with a conflicted actor, individuals will feel a greater sense of shared identity. That is, they will see the actor in a more self-like manner. Then, after learning about the actor's final choice, the observers will inform themselves about their own preferences (as though they themselves made the choice). Consequently, this process would make the observer more likely to choose like the conflicted actor (i.e., converge in preferences).

In what follows, we report a series of six studies that test the main hypotheses and the underlying psychological mechanism (an additional study is reported in Appendix G). Because decisional conflict could manifest itself in many ways, throughout these studies, we manipulate the observed/inferred decisional conflict in numerous ways (e.g., real-life behaviors, verbal communication, facial expressions, reflection manipulation, and direct communications).

In Study 1, we test our hypothesis in a realistic setting that involves paid actors (confederates) who exhibit high versus low decisional conflict over an impending real and consequential decision (which of two charities to donate to). We find that, when asked to make a similar decision, observers are more likely to donate to the charity chosen by the conflicted (as opposed to non-conflicted) actor. In Study 2, we use pictures of facial expressions to manipulate the observed conflict and test the first link of our theoretical model (i.e., the role of empathy as a driver of the effect). If empathic reactions indeed mediate the effect, the effect should be more pronounced for individuals' with a stronger tendency to empathize with others. Accordingly, we measure participants' innate tendency to empathize with others, and demonstrate its moderating role. In Study 3, we employ a multi-step mediation analysis and test the entire path of the suggested mechanism (as depicted in Figure 1): observed conflict [X] leads to empathic reactions [M_1], which leads to a greater sense of shared identity [M_2], which leads to convergence [Y].

Whereas Studies 2 and 3 provide support for the suggested emotion-based account, Studies 4a and 4b directly rule out inferential processes as the main driver. In particular, these studies demonstrate the effect persists also in situations that render such inferences completely irrelevant (i.e., in scenarios that involve random outcomes, e.g., lotteries). Further, Study 4b shows that convergence of preferences occur only when the observer can indeed empathize with the actor. When the actor's conflict does not trigger empathy (i.e., when the observer deems the actor's conflict inappropriate for the decision at hand), convergence is attenuated.

Study 5 examines how the proposed effect could shape an individual's preferences in a group decision-making context. We find that the experienced conflict of a teammate influences participants' real and consequential monetary decisions (in a group version of the ultimatum game). Finally, in Appendix G, we report an additional study (Study 6) that explores convergence of preferences in the product-attribute space (i.e., attribute weights). This study increases the convergent evidence by employing a different paradigm, and also allows us to test and rule out an additional rival account.

STUDY 1 – PREFERENCE CONVERGENCE IN REAL DONATION DECISIONS

The main purpose of this study was to examine, in a relatively realistic setting, whether observing an actor's decisional conflict over which charity to donate to would affect the observer's preferences. We asked participants to make real monetary donations after observing a paid confederate display either high or low decision conflict while making a similar decision. We predicted the participants' choice of a charity would converge to that of the confederate when the latter portrayed high conflict during deliberations over the impending decision.

The second goal of this study was to provide initial evidence for the proposed mechanism while maintaining the realism of the study. To do so, we measured participants' preferred interpersonal distance from the confederate after they observed the confederate's deliberations and choice. Previous literature has found that interpersonal distance (often operationalized by seating distance) is negatively correlated with empathic reactions (e.g., Bryant, 1982; Guardo 1969; Strayer and Roberts 1997) and thus can serve as a subtle proxy for the observer's empathic response toward the confederate.

Method

We recruited 100 undergraduate students from a private college in Israel to participate in the experiment as part of their course requirements. After completing an unrelated study, participants received additional monetary compensation and were told they would be asked to donate this money to one of two charities (because of the elaborate design, we tested each subject separately). Each subject was directed to a room in which an experimenter and a confederate sat on opposite sides of a table. The subject was then asked to sit on a chair in the corner of the room and wait until it was his or her turn to choose a charity (Figure 2 depicts the layout of the room and location of the experimenter, confederate, and subject). The confederate was ostensibly a student participating in the study and was conspicuously asked to decide to which of two charities to donate 19 New Israeli Shekels (NIS), an amount roughly equivalent to US$5.50. Two boxes were positioned on the table, each of which was labeled with the name and logo of a specific charity and sealed so that participants could not see the amounts that had already been donated to each charity. Before allowing the confederate to decide which charity to donate to, the experimenter described the two charities such that both the confederate and the

subject could hear, and mentioned that participants could allocate the 19 NIS coins between the two charities as they pleased. Because the participants were asked to donate an uneven number of shekels, they could not split the money evenly between the two charities, thereby forcing them to decide which of the two charities would receive the greater amount. The two charities were distinguishable in that one was positioned around assisting with health issues and the second was positioned around vital day-to-day necessities. All of the collected donations were eventually given to the target charities according to participants' allocations.

We randomly assigned participants to one of two conditions. In the high-conflict condition, the confederate clearly demonstrated the choice of charity was extremely conflicting and difficult to make. The confederate followed a script and mentioned out loud that making this decision was very hard and that he was not sure how to decide. The confederate also accompanied these statements with body language that conveyed agony over the decision. Finally, after roughly one minute, the confederate made his allocation. In the low-conflict condition, the confederate clearly demonstrated the decision was quite easy and not very conflicting. The script in the low-conflict condition involved sentences such as "This is an easy decision for me," accompanied by corresponding body language and a relatively short decision time (roughly 10 seconds). In both conditions, the confederate eventually donated the full amount (19 NIS) to a single charity (the choice of which was counterbalanced).

Once the confederate finalized the choice and inserted the donation into the charity box, the experimenter asked the confederate to complete a general information sheet to conclude the study, and then instructed the subject to grab the chair and join the experimenter at the table. The subject pulled the chair to the table and sat in front of the experimenter on the same side of the table where the confederate was sitting (see Figure 2 stage 2).

FIGURE 2. STUDY 1: ROOM LAYOUT AND ESTIMATED LOCATION OF INDIVIDUALS

AT DIFFERENT STAGES IN THE STUDY
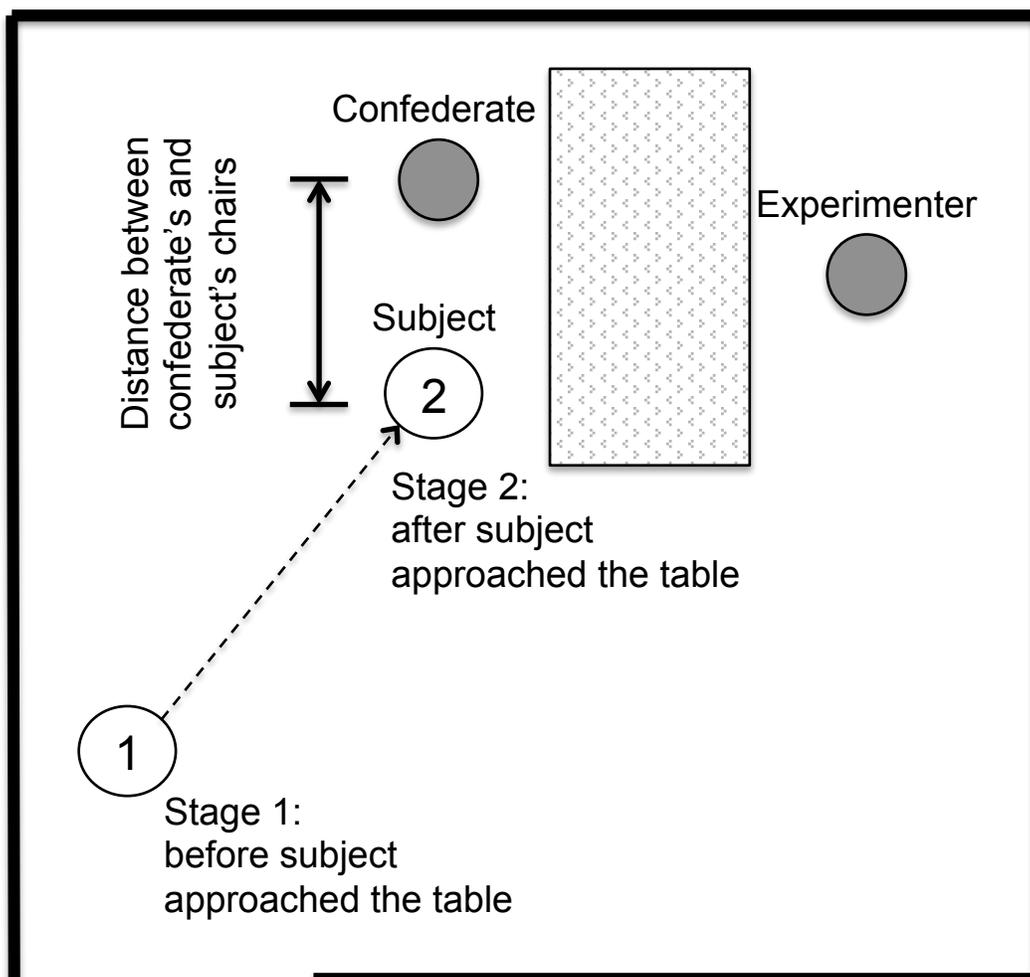
Next, the experimenter reiterated the instructions to the subject, during which time the

confederate finished filling out the information sheet, was thanked, and left the room. The

subject then received the remaining instructions and made his or her decision without the

confederate being present, thus eliminating rival accounts pertaining to possible convergence due

to emotional support and solidarity with the conflicted actor. The experimenter recorded how the subject decided to allocate the 19 NIS between the two charities, asked the subject to complete the general information sheet, and finally thanked and informed the subject that the study was over. After the subject left the room, the experimenter measured (using a tape measure) how close the subject had placed the chair next to the confederate's chair.

Previous studies have used seating distance as a measure of preferred interpersonal distance (e.g., Ashton-James et al. 2007; Gifford and O'Connor 1987; Holland et al. 2004). Directly related to our hypothesis, research has also shown that interpersonal distance (often operationalized by seating distance) is negatively correlated with empathic reactions (e.g., Bryant 1982; Guardo 1969; Strayer and Roberts 1997). For example, Strayer and Roberts (1997) found that children who empathized with a certain individual tended to seek physical closeness to this individual. Because an important goal of this study was to explore the effect in a realistic setting, in our view, this measure (although potentially noisy) seemed to serve as a subtle and potentially satisfactory proxy for an observer's empathic reactions toward the confederate.

Results

Donation Decision. The amount of money, between 0 and 19 NIS, that the subject decided to donate to the charity that the confederate chose served as the dependent variable: larger numbers indicate greater convergence with the confederate's preferences. A non-parametric test revealed that participants who observed the confederate experiencing greater decisional conflict (high-conflict condition) tended to donate more to the confederate's choice ($M_{\text{high-conflict}} = 12.53$ NIS) than participants assigned to the low-conflict condition ($M_{\text{low-conflict}} = 8.8$ NIS; Mann-Whitney U $= 768.5$, $p < .001$). Examining the distribution of responses, we found

that 82% of subjects assigned to the high-conflict condition donated more to the confederate's

choice of charity, compared to only 54% of subjects assigned to the low-conflict condition ($\chi^2(1)$

= 9.01, p < .005). An odds-ratio analysis indicated participants in the high-conflict condition

were 3.88 times more likely to donate more money to the confederate's choice of charity.

Because the confederate's choice of charity was counterbalanced, one could also test

whether convergence of preferences in the high-conflict condition or, alternatively, divergence in

the low-conflict condition, was the primary driver of the difference in donation amounts to the

confederate's choice of charity. Testing the donation amounts in the two conditions against 9.5

(which is half the amount that could be donated) supported the hypothesis that convergence

occurred. In particular, the amount donated to the confederate's choice of charity was

significantly different from 9.5 in the high-conflict condition ($t(49)$ = 3.45, p < .001) but not in

the low-conflict condition ($t(49)$ = -.865, p > .39).

Empathy. The distance between the confederate's and the subject's chairs served as a

measure of empathic reactions toward the confederate. As expected, participants in the high-

conflict condition placed their chair closer to the confederate (M = 149.5 cm) than participants in

the low-conflict condition (M = 197.5 cm; $F(1,98)$ = 36.92; p < .001).

Mediation Analysis. The data were submitted to a mediation analysis (using model 4 of

the macro PROCESS, Hayes 2013). The dependent variable was the amount of money donated

to the confederate's chosen charity, the potential mediator was the distance between the subject's

and confederate's chairs, and the independent variable was the confederate's decisional conflict

(low vs. high conflict). The experiment employed two different confederates (randomly assigned

between conditions), a variable that we included as a covariate in this analysis. The 95% Monte

Carlo confidence interval generated using 10,000 bootstrap samples estimated the mediating role

of distance on the relation between observed conflict and preference convergence ($B = 1.19$; $CI_{95\%} = $ -0.24 to 2.81). Although the estimated effect was positive, the tail of the 95% confidence interval included zero, thus indicating the mediation only approached significance. However, given the nature of the measurement used (distance between chairs after both the confederate and subject left the lab) and that this measurement was merely a proxy for the mediator, it is reasonable that it was noisy and difficult to trace. The 90% confidence interval did not include zero ($B = 1.19$; $CI_{90\%} = .013$ to 2.48).

Discussion

This study demonstrates, in a relatively realistic setting, that observing others conflicted about their choice can affect the observer's preferences. Participants who observed actors conflicted about their decision tended to exhibit preferences consistent with those of the actor; that is, they were more likely to donate to the same charity. As a subtle proxy for empathy, we examined how close participants chose to sit next to the conflicted or non-conflicted actor. We found this proxy mediated the impact of the actor's decisional conflict on preference convergence, providing suggestive evidence (though far from conclusive) that supports the underlying mechanism. The next study tests the role of empathy more directly. In particular, we show that individuals with a greater innate tendency to empathize with others exhibit greater convergence to the preferences of a conflicted actor.

STUDY 2 – OBSERVED CONFLICT AND THE ROLE OF EMPATHY

In Study 2, participants read a short scenario about a dilemma that an actor was facing, and also learned about the degree of decisional conflict this actor experienced. To manipulate conflict, we showed participants pretested pictures of different facial expressions of a decision maker, ostensibly taken while deliberating her choice. We decided to use facial expressions to manipulate perceived emotional conflict, because these are considered a central channel for communicating emotions and are often conspicuous (Ekman 1993; Small and Verrochi 2009).

We predicted that a cue about the actor's high decisional conflict would trigger empathic reactions, and consequently lead the observer's preferences to converge to those of the actor. Importantly, if preference convergence occurs as a result of an empathic response, the effect should be more pronounced for individuals with a greater innate tendency to empathize with others. Accordingly, we measured individuals' tendency to empathize with others and predicted it would moderate the effect.

To address rival accounts, we thoroughly pretested the pictures employed in the main study and validated that the facial expressions elicited perceptions of greater conflict but not perceptions of greater attentiveness or thoughtfulness with respect to the impending decision (the pictures and full description of the pretest are available in Appendix A).

Method

We recruited 450 paid, online subjects to participate in the study (17 of whom had incomplete responses and were therefore eliminated from the analyses). Participants read a short scenario about a dilemma that a woman faces: which of two important events to attend (attending

her best friend's wedding or her sister's bachelorette party). The scenario also mentioned that a scheduling conflict prevented her from attending both. We randomly assigned participants to one of three conditions: strong conflict cue, weak conflict cue, and no cue. In the strong and weak conflict cue conditions, participants observed the corresponding pictures from the pretest ostensibly taken during the actor's deliberation over her decision (attend her best friend's wedding or her sister's bachelorette party). As detailed in the pretest (Appendix A), the pictures were of the same person and did not differ in how thoughtful or attentive this person was perceived to be when deliberating her choice (measured using 4 items; all F's < 2.8 and p's > .1). However, the pretest verified that participants perceived the decision maker as more conflicted when observing the picture in the strong (as opposed to weak) conflict cue condition (measured using 4 items; all F's > 8.5 and p's < .005). In the no-cue condition no picture of facial expression was presented. Then, participants in all conditions were informed that the actor decided to attend her best friend's wedding and they were asked to indicate the likelihood that they would have chosen similarly (on a 1-7 scale ranging from *very unlikely* to *very likely*). Finally, participants completed 12 items from the Interpersonal Reactivity Index scale (IRI) to measure their innate tendency to empathize with others (Davis 1983). The items were highly correlated ($\alpha_{Cronbach}$ = .9) and were therefore collapsed to form a single measure (a list of the items is available in Appendix B).

Participants also completed the need-for-cognition scale (Cacioppo, Petty, and Kao 1984) to determine whether a different, important, and possibly relevant individual difference could explain the effect. An ANOVA confirmed that the experimental manipulation didn't affect any of the scales employed (IRI: $F(2,430)$ = 1.18, p > .3; NFC: $F(2,430)$ = .91, p > .4). Finally, to verify that participants' innate tendency to empathize was not correlated with greater

attentiveness to the study materials and manipulations, at the end of the study, participants indicated the name of the decision maker in the scenario and the two events of her focal decision. Overall, the recall accuracy for both was very high (95.6% and 92.8%, respectively), and importantly, neither significantly correlated with participants' IRI scores (p's > .36).

Results

A one-way ANOVA revealed a significant main effect of condition on preference convergence ($F(2,430) = 3.97$, $p < .02$). Planned contrasts revealed participants' preferences converged more when they observed the actor's strong conflict cue ($M_{\text{strong-conflict}} = 5.95$) compared to when observing the weak conflict cue ($M_{\text{weak-conflict}} = 5.41$, $t(289) = 2.78$, $p < .01$), and also compared to when no cue regarding the decision maker's choice conflict was provided ($M_{\text{no-cue}} = 5.59$, $t(287) = 2.01$, $p < .05$).

To examine how individuals' innate tendency to empathize with others (using the IRI scale) affected preference convergence, we regressed the dependent variable (likelihood of choosing similarly) on (i) the different conditions (effect coding), (ii) IRI response (mean centered), and (iii) their interaction. As predicted, the effect of conflict level on preference convergence was positive and significant ($B = .26$, $p < .007$), supporting our main hypothesis. In addition, the main effect of participants' innate tendency to empathize was significance and had a positive effect ($B = .25$, $p < .02$). Importantly, the interaction between the two was significant, indicating the impact of observed decisional conflict on preference convergence was more pronounced for participants with a greater tendency to empathize with others ($B = .25$ $p < .05$).

Figure 3 depicts preference-convergence rates across conditions and as a function of the observer's innate tendency to empathize with others. As can be seen, a cue regarding the actor's

emotional conflict triggered convergence that was more pronounced for participants with a higher innate tendency to empathize with others. However, the innate tendency to empathize did not moderate convergence in the no-conflict or control conditions.

FIGURE 3. STUDY 2: PREFERENCE CONVERGENCE AS A FUNCTION OF ACTOR'S CONFLICT AND OBSERVER'S INNATE EMPATHIC CONCERNS (IRI)
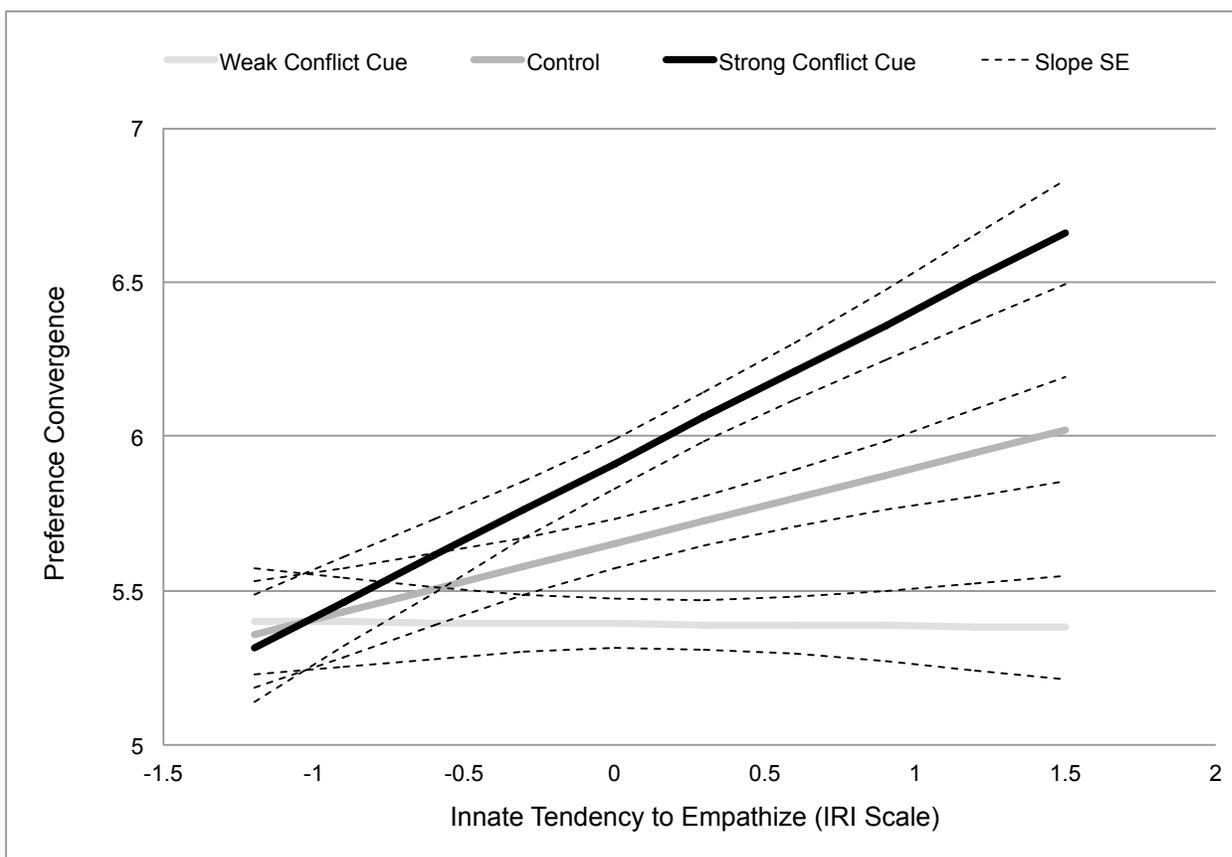
Discussion

This study demonstrates again that participants' preferences converged to those of an actor who exhibited greater decisional conflict. Importantly, this study underscores the role of empathy as the underlying mechanism. Participants with a stronger innate tendency to empathize

with others converged in preferences more so than those with a weaker tendency when observing the emotional conflict experienced by the actor. Moreover, observing a conflicted actor triggered preference convergence also relative to a condition that included no cue about the actor's conflict. Thus, underscoring the notion that process cues matter when examining how others influence our choice.

The results also help rule out inferential process as the main driver. First, we pretested the materials (see Appendix A) and found they did not affect participants' perceptions about the decision maker's attentiveness or thoughtfulness, thus making such an inference account less plausible. Second, inferences about attentiveness, to the extent they occurred, should be made regardless of participants' innate tendency to empathize with others. Thus, this study emphasizes the role of empathic reactions and supports the suggested emotional-based mechanism. The next study tests the entire path of the suggested underlying mechanism and explores the mediating roles of empathy and shared identity.

STUDY 3 - THE MEDIATING ROLES OF EMPATHY AND SHARED IDENTITY

The goal of Study 3 was to directly test the suggested underlying mechanism, which involves two mediators that operate sequentially, namely, empathy and a sense of shared identity. Accordingly, our analysis plan in this study involved a multi-step mediation as depicted in Figure 1. We hypothesized that observed decisional conflict (the independent variable; X) triggers empathic reactions (the first mediator; M_1), which triggers a greater sense of shared identity (the second mediator; M_2), which ultimately leads to preference convergence (the dependent variable; Y).

Method

We recruited 125 paid, online subjects to participate in the study (7 of whom had incomplete responses and were therefore eliminated from the analyses). In the first part of the study, participants were asked to write down the name of an acquaintance. The instructions explained this person did not necessarily have to be a best friend but rather someone with whom they were in regular contact, and currently unattached romantically. To increase the realism and involvement we instructed participants to indicate how long they had known this person, and to write a short paragraph describing how they met. Next, we measured participants' initial level of shared identity with the person they selected for the study, using several items administered in previous research. Specifically, following Goldstein and Cialdini (2007a), we asked participants to indicate the extent to which they (i) felt a shared identity with their friend, (ii) felt similar to their friend, and (iii) shared similar attributes with their friend (all on a 1-11 scale ranging from *not at all* to *extremely*). Following Batson et al. (1997) and Cialdini et al. (1997), we also asked participants (iv) the extent to which they would use the term "we" to describe their relationship with their friend, and (v) to choose one of the seven overlapping circles taken from the IOS scale (Aron, Aron, and Smollan 1992) that best describes that relationship. These five items (which were measured in random order) were highly correlated ($\alpha_{Cronbach} = .87$) and were collapsed to form the measure of initial shared identity.

After completing an unrelated survey, participants advanced to the main section of the study and were asked to imagine their friend was facing a decision. In the scenario (available in Appendix C), their friend was involved in a romantic relationship, and although this relationship had started only two months previously, it was going well and had the potential to be long term.

In addition, their friend had been recently offered the job he or she always dreamed of. However, taking this position would mean having to move to the other side of the country for a period of at least 12 months and possibly longer. Further, because the friend's romantic partner could not make such a move (because of other attachments), their friend was facing a decision to either accept the offer and move, potentially ending what could become a very serious relationship, or stay and forgo what could be the career opportunity of a lifetime.

Participants were then assigned to one of two conditions: conflict versus control. In the conflict condition, participants were also told to imagine that when they met their friend, they saw he or she was in apparent agony and pain over this decision. The description of the conflict included sleepless nights and extreme conflict. Participants assigned to the control condition did not receive any information about the emotional conflict, pain, or agony their friend experienced. The scenarios were identical in terms of the phrasing and the informational content they provided to participants, and differed only in the description of the actor's emotional conflict.

After reading the scenario, participants indicated on a 1-7 scale ranging from *not at all* to *extremely* the extent to which they felt each of the following six emotions toward their friend when learning about this decision: Sympathy, Softhearted, Warm, Compassionate, Tender, and Moved (Batson et al. 1997). The items were highly correlated ($\alpha_{Cronbach} = .94$) and were therefore collapsed to form a single measure of empathy. Next, we again measured participants' degree of shared identity with their friend, using the same items administered in the first part of the study. Again, the five items were highly correlated ($\alpha_{Cronbach} = .88$) and we therefore collapsed them to form the measure of subsequent shared identity between participants and their chosen friend. Thus, this measure enabled us to examine whether the degree of shared identity changed after reading the scenarios. By subtracting the initial level of shared identity from the subsequent

shared identity, we obtained a change score. A positive score indicates participants felt a greater

shared identity with their friend after reading the scenario. Conversely, a negative score indicates

the degree of shared identity decreased after participants read the scenario.

Finally, participants were told which decision their friend had made (either to stay or

leave; counterbalanced), and were asked to indicate the likelihood they would have done the

same (on a 1-7 scale ranging from *very unlikely* to *very likely*).


Results

A two-way ANOVA with conflict cue and friend's decision as independent variables first

revealed participants generally agreed more with their friend's decision to make the move and

accept the position, as opposed to staying and declining the position ($F(1,114) = 17.64$, $p <$

.001). Further, irrespective of the decision, participants who learned about the conflict their

friend experienced tended to agree more with their friend's decision ($M_{conflict} = 4.97$) compared

to those who were not exposed to information describing the friend's emotional conflict ($M_{control}$

$= 4.3$; $F(1,114) = 4.0$, $p < .05$). The interaction between decision and condition was not

significant ($F(1,114) < 1$). Therefore, we used the friend's decision (move vs. stay) as a covariate

in the mediation analysis.

Mediation Analysis. The data were submitted to a multi-step mediation analysis with two

sequential mediators (using the macro PROCESS, model 6, Hayes 2013). As depicted in Figure

4, the dependent variable (Y) was the degree to which participants' preferences converged to

those of their friend's. The potential mediators were the degree to which participants empathized

with their friend (M_1) and the degree to which participants' sense of shared identity changed

(M$_2$). The independent variable (X) was a dummy variable representing the two experimental

conditions (conflict vs. control).

FIGURE 4. STUDY 3: MULTI-STEP MEDIATION MODEL
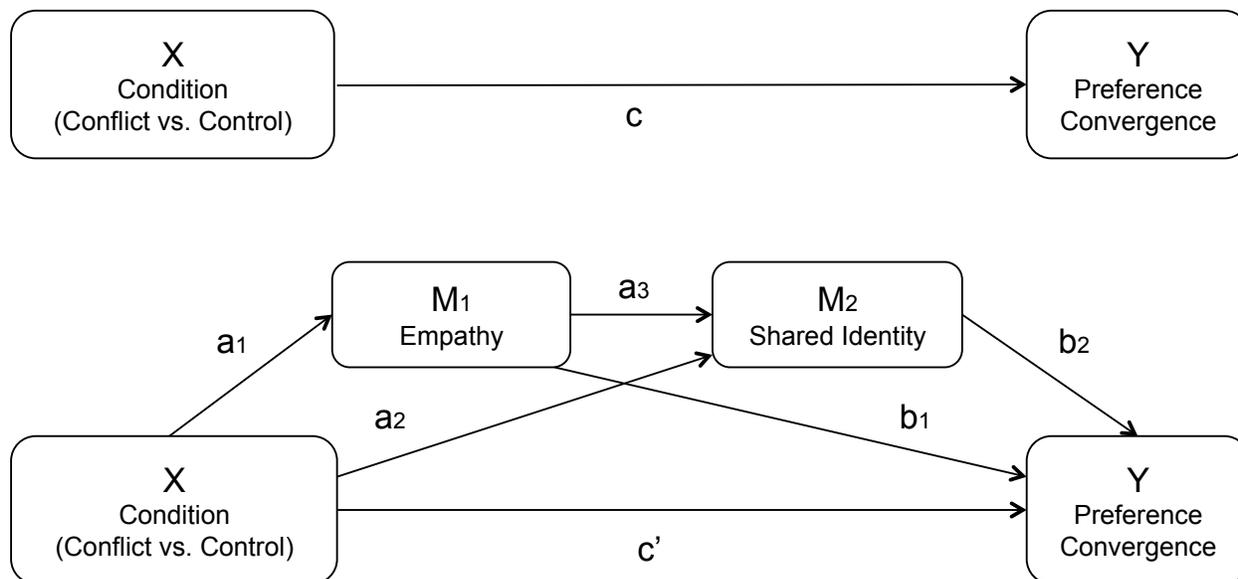
The path estimates confirmed the hypothesized multi-step mediation process. First, the

total-effect model confirmed a significant relationship between condition (conflict vs. control)

and the degree to which participants' preferences converged (path c in Figure 4: $B = .63$, $p <$

.05), supporting the main hypothesis. Further, the results confirmed the proposed chain of

mediators, namely, empathic reactions (M$_1$) and shared identity (M$_2$), mediated the effect of

conflict cue on preference convergence. Learning about their friend's emotional conflict

increased participants' empathic reactions (path a$_1$ in Figure 4: $B = .55$, $p < .03$). Such reactions

had a significant and positive impact on participants' sense of shared identity with their friends

(path a$_3$ in Figure 4: $B = .18$, $p < .01$). We found this increase in shared identity had a significant

and positive effect on the degree of preference convergence (path b_2 in Figure 4: $B = .41$, $p <$ .02). No other paths were significant. The 95% confidence interval for the indirect effect was obtained with 10,000 bootstrap resamples and supported the suggested multi-step mediation ($B = .04$, $CI_{95\%} = .003$ to .16). No other indirect effects were significant. To verify the uniqueness of the proposed path, we performed an additional multi-step mediation analysis in which we switched the position of the two mediators. Consistent with previous literature, the analysis ruled out this path and the 95% confidence interval included zero ($B_{reversed} = .02$, $CI_{95\%} = -.02$ to .1). Table 1 details the full results of the multi-step mediation analysis.

TABLE 1. STUDY 3: MULTI-STEP MEDIATION RESULTS

Model-Path Estimates

	Coefficient	SE	t	p
a_1	**.55**	**.23**	**2.33**	**< .03**
a_2	.31	.19	1.6	> .11
a_3	**.18**	**.07**	**2.4**	**< .02**
b_1	.19	.12	1.5	> .12
b_2	**.41**	**.15**	**2.7**	**< .01**
c	**.63**	**.31**	**1.99**	**< .05**
c'	.35	.31	1.13	> .26

Indirect Effect (with Bootstrap 95% Confidence Interval and Standard Errors)

	Effect	LL 95% CI	UL 95% CI	SE
X→M_1→Y	.11	-.02	.39	.10
X→M_2→Y	.13	-.02	.35	.09
X→M_1→M_2→Y	**.04**	**.01**	**.16**	**.03**
X→M_2→M_1→Y	.02	-.02	.1	.02

Discussion

The results of this study provide additional and direct support for the proposed underlying psychological mechanism. We found that participants tended to choose more similarly to an actor after learning about this actor's emotional conflict during his or her deliberation phase. Empathic reactions toward the conflicted actor and a greater sense of shared identity, operating sequentially, mediated such convergence of preferences. Thus, the findings show that regardless of other potential drivers of the effect, empathy and shared identity also play important and significant roles. Additionally, in an auxiliary analysis (reported on Appendix D) we did not find that the degree of initial level of shared identity between the observer and the actor moderated the effect. That is, controlling for the degree of initial shared identity, a cue regarding an actor's emotional conflict triggered preference convergence compared to when such a cue was not available.

The studies thus far have tested the roles of empathy (Studies 2 and 3) and of shared identity (Study 3). The pretest for Study 2 helped rule out inferential processes regarding the actor's attentiveness or thoughtfulness as the main driver. Further, the significant mediation in Study 3 supports the underlying psychological mechanism above and beyond any inferential processes (to the extent these occurred). Nevertheless, we designed Studies 4a and 4b to directly rule out inferential processes by demonstrating the effect persists also in situations that render such inferences completely irrelevant (i.e., scenarios that involve random outcomes).

STUDY 4a – FOCUS ON THE ACTOR'S EMOTIONAL CONFLICT

In Study 4a, participants learned about an individual facing an important decision. As part of a lottery game, this individual had to decide between two boxes: one containing a huge monetary prize and the other containing nothing. We assumed participants would consider such a decision as involving conflict and emotional stress. Then, instead of giving participants an external cue about the actor's conflict (as in Studies 1, 2, and 3), in the current study, we asked them to reflect on and write down the feelings, emotions, and accompanying body language that they believed the actor was experiencing when making the decision. We vetted this condition against two control conditions in which participants were either instructed to write a non-emotional paragraph about the decision maker or not instructed to write at all. We hypothesized that the emotional-reflection manipulation would increase participants' focus on the conflict the decision maker experienced and would therefore increase the likelihood of convergence.

In this study, to further isolate the proposed mechanism, we decided to use a choice that was inherently random. Choosing the box with the prize is purely guesswork; thus, inferences with respect to the thoughtfulness of the decision maker or the formation of a diligent decision process are irrelevant. By so doing, we essentially eliminate any potential informational value that conflict can have in this scenario, and only test its emotional impact on preference convergence. In addition, whereas one could argue that external cues for the actor's conflict may trigger inferential processes, such an account is less plausible when observers themselves generate the perception of conflict (by reflecting on the actor's emotional state).

Method

Ninety paid graduate and undergraduate students from a large East Coast university participated in the study (3 of whom had incomplete responses and were therefore eliminated from the analyses). Participants read a scenario in which a person ("Mike") was randomly chosen from the audience of a TV game show for the chance to play a simple lottery game. Participants learned this individual was given a choice between two boxes: one containing $200,000 and the other containing nothing. Participants were told that if Mike chooses the box containing the cash prize, he gets to keep the money.

We then assigned participants to one of three conditions. In the emotionally rich condition participants were instructed to reflect on the decision that Mike was about to make, and to write a paragraph describing his feelings, emotions, and body language during his deliberations. We expected that given the decision context, participants in this condition would focus on the conflict and emotional stress that Mike might exhibit during his deliberations. In the second condition, participants were not asked to reflect on or write anything about the decision maker (hereafter, the control condition). Finally, as an additional control, we asked participants assigned to a third condition to write a paragraph describing their thoughts about how Mike might use the money if he won (hereafter, the emotion-free condition). Participants in both the emotionally rich and emotion-free conditions were instructed to be as detailed as possible, and were only allowed to continue the survey after at least two minutes had elapsed (we found no difference in writing time across conditions, $p > .59$).

Next, participants in all conditions were shown a picture of the two boxes (labeled Box A and Box B) and were told that Mike eventually chose Box B. Then, participants used a 1-6 scale ranging from *definitely choose Box A* to *definitely choose Box B* to indicate their likelihood of

choosing one box over the other. The scale did not have a midpoint, thus forcing participants to indicate preference for one box over the other. We omitted a midpoint because in such a context involving a completely random choice, we believe participants would indicate indifference between the two boxes (as this is the rational and expected thing to do). However, once participants were required to choose one over the other, we expected to see convergence due to an increased focus on the actor's emotional conflict.

Results

A one-way ANOVA revealed a significant main effect of condition on preference convergence ($F(2,84) = 3.69$, $p < .03$). As expected, the preferences of participants who were instructed to reflect on and write about the emotions, feelings, and body language of the decision maker converged more ($M_{emotionally-rich} = 4.4$) than those of participants who were either instructed to write an emotion-free paragraph ($M_{emotion-free} = 3.46$; $t(56) = 2.43$, $p < .02$) or not instructed to write at all ($M_{control} = 3.59$; $t(57) = 2.38$, $p = .02$). Figure 5 depicts the convergence rates across the three conditions.

FIGURE 5. STUDY 4a: PREFERENCE CONVERGENCE ACROSS EXPERIMENTAL

CONDITIONS
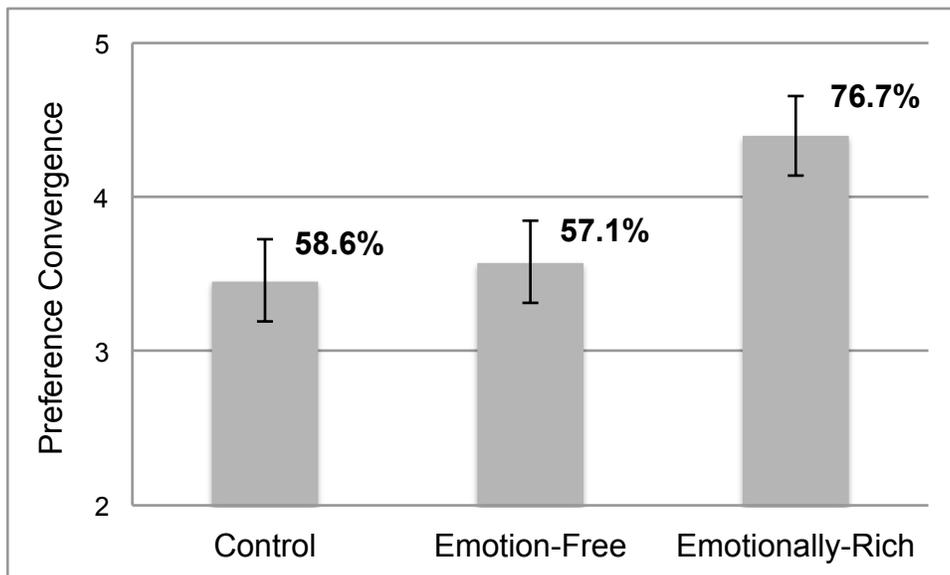
* The number next to each bar indicates the proportion of responses that converged to the actor's choice (i.e., indicated greater likelihood of choosing like the actor)

Content Analysis. Two independent coders who were blind to the hypothesis analyzed the participants' paragraphs. The coders indicated the extent to which each paragraph described Mike as being conflicted (on a 1-5 scale ranging from *not at all* to *extremely*), and how difficult and painful the decision was for him (using the same scale). The correlations between the coders on both measures were significant and high ($r_{conflict}$ = .82, $p < .001$ and $r_{difficulty}$ = .8, $p < .001$); therefore, we collapsed their responses. In addition, the correlation between the two items was also high ($r = .94$, $p < .001$); therefore, we collapsed the two items to form a single measure of participants' focus on the decision maker's conflict level.

As expected, participants who were asked to write about the emotions and feelings of the decision maker focused on his conflict more ($M_{emotionally-rich}$ = 4.13) compared to participants who

were asked to write about how the decision maker might use his winnings ($M_{\text{emotion-free}} = 1.71$,

$F(1,56) = 110.23$, $p < .001$). Below are representative examples of the responses in each of the

writing conditions.

Emotionally Rich Condition:

> Mike is definitely nervous and anxious. He is nervous about choosing the right box, and
>
> anxious about the consequences or rewards of choosing a box. He probably is sweating a
>
> little bit and shifting back and forth, maybe has his arms crossed with a nervous look on
>
> his face. He could be biting his nails as well. He is definitely moving around a lot. If he is
>
> sitting down he is shifting in his seat.

Emotion-free Condition:

> Mike will use the money to get out of debt, as well as buy personal items. Hopefully, he
>
> will also invest a percentage of the money so that he will always have savings. He will
>
> probably buy a car. If he is in student loan debt, he will probably pay all or a bulk of it
>
> off. Mike may also use the money to put down a down payment on a house. He will
>
> probably go to a nice restaurant and celebrate his big win with family. If he has a
>
> girlfriend, he will probably buy a gift or gifts for her as well. Lastly, he may donate a
>
> portion of the money to a friend in need and/or catch up on other bills (rent, utilities,
>
> etc.).

Mediation Analysis. A mediation analysis (using the macro PROCESS, model 4, Hayes

2013) confirmed that when examining the two writing conditions together, the extent to which

participants focused on the decision maker's emotional conflict mediated the effect of condition

on preference convergence ($B = 1.21$; $CI_{95\%} = .31$ to 2.88). However, a more stringent test for

our hypothesis would be to examine whether within the emotionally rich condition, the extent to which participants focused on the decision maker's conflict (which was high throughout) was correlated with the tendency to converge in preference. In fact, a regression analysis (using responses only from the emotionally rich condition) confirmed that the degree to which participants' focused on the decision maker's conflict was a positive and significant predictor of preference convergence ($B = .5$, $p < .02$).

Discussion

This study suggests that even in instances in which no objective criteria exist for making the "right" choice, observing a conflicted actor nevertheless leads to preference convergence. Further, we found this effect was more pronounced in individuals who focused more on the emotional conflict the actor experienced. In addition, consistent with research on empathy, this study highlights that convergence may occur even in the absence of direct observations of a conflicted actor. Memory, knowledge, reflection, and reasoning can still produce insights into the emotional states of others and trigger preference convergence.

The next study employs a similar decision context and explores an important boundary condition for the effect. We show that convergence occurs only when observers empathize with the actor. In instances where observers do not empathize with the conflicted actor (e.g., because they consider the conflict exhibited by the actor as unreasonable and unwarranted for the decision at hand), convergence attenuates.

STUDY 4b – APPROPRIATE CONFLICT AND ITS MODERATING ROLE

So far, the studies have consistently shown that observing an emotionally conflicted actor prompts preference convergence; however, it may not always. In particular, because we hypothesize that convergence occurs as a result of empathic reactions and a greater sense of shared identity, the effect should attenuate when the observed conflict does not trigger such reactions. For example, observing an actor experiencing an emotional conflict over a decision that observers consider trivial might impede taking this actor's perspective and feeling a sense of shared identity. Hence, we predict that a cue about the emotional conflict an actor experiences should trigger preference convergence only if the observer considers such conflict and agony as warranted and reasonable for the decision at hand.

Method

After completing an unrelated study, 200 paid, online subjects participated in the study (9 of whom had incomplete responses and were therefore eliminated from the analyses). Participants read the same scenario as described in Study 4a about an individual facing a lottery choice between two boxes. Unlike Study 4a, in which participants did not receive a direct signal concerning the actor's conflict, in this study, we randomly assigned participants to two conflict conditions (high vs. low) and asked them to imagine they had observed this individual deliberating his choice. We told the high-conflict participants that the actor was in apparent agony and pain over this decision and was extremely conflicted and nervous about which box to choose. We told the low-conflict participants that the actor did not appear to be in any agony or pain over this decision.

To test the aforementioned boundary condition, we also manipulated (between subjects) the potential cash rewards from the lottery. In particular, in the first condition, we told participants that one of the boxes contained $200,000 and the other contained nothing (i.e., an identical scenario to that employed in Study 4a). However, in the second condition, we told participants that one box contained $200,000 and the other box contained $150,000. Thus, in this condition, regardless of which box the actor eventually chose, he would win at least $150,000 in cash. We predicted that in this decision, with a sure gain of $150,000, observers would deem a high emotional conflict exhibited by the actor as unwarranted.

Using a pretest (reported in Appendix E), we verified that when an actor faced a choice between boxes containing $200,000 or nothing (hereafter, the high-stakes condition), participants considered high conflict as justified and reasonable. However, choosing between boxes that both provided high monetary prizes of either $200,000 or $150,000 (hereafter, the low-stakes condition), participants did not see choice conflict as appropriate. Therefore, empathy and convergence should occur when observing a conflicted actor in the high- but not in the low-stakes condition.

After reading the scenario and learning the conflict level in this 2 (actor's conflict: high vs. low) x 2 (stakes: high vs. low) between-subjects design, participants were told the actor had chosen box B. We then presented the participants with the two boxes again and told them that "although this is obviously a completely random decision, which box do you believe you would choose if you were asked to make a similar decision?" Participants then indicated their likelihood of choosing one box over the other on a 1-6 scale ranging from *definitely choose Box A* to *definitely choose Box B*.

Results

Preference Convergence. Using a 2 (conflict: high vs. low) X 2 (stakes: high vs. low) ANOVA, we analyzed the degree to which participants' preferences converged to those of the actor's. The analysis revealed the expected interaction between observed conflict and decision stakes ($F(1,187) = 5.54$, $p = .02$). In particular, when participants observed an actor facing a high-stakes decision (i.e., boxes containing $200,000 or nothing), their preferences converged in the high conflict condition but not in the low-conflict condition ($M_{high\ conflict} = 4.16$, $M_{low\ conflict} = 3.4$, $t(1,93) = 2.46$, $p < .016$). However, a cue regarding the actor's high conflict did not trigger preference convergence in the low-stakes condition (i.e., boxes containing $200,000 or $150,000), that is, when participants did not perceive the conflict as appropriate to the decision at hand ($M_{high\ conflict} = 3.3$, $M_{low\ conflict} = 3.58$, $t(1,94) = .88$, $p > .38$). We observed no main effects of conflict level or stakes ($p > .27$, and $p > .12$, respectively). Figure 6 displays the degree (and distribution) of preference convergence as a function of conflict and stakes in the decision.

FIGURE 6. STUDY 4b: PREFERENCE CONVERGENCE AS A FUNCTION OF ACTOR'S CONFLICT AND STAKES IN THE DECISION

	Actor's Conflict	
	High	Low
High Stakes ($200K vs. $0)	4.16 (68.8%) Match between observed & expected behavior	3.40 (48.9%) Mismatch between observed & expected behavior
Low Stakes ($200K vs. $150K)	3.30 (43.5%) Mismatch between observed & expected behavior	3.58 (50.0%) Match between observed & expected behavior

* Numbers in parentheses indicate the proportion of responses that converged to the actor's choice (i.e., indicated greater likelihood of choosing like the actor)

Discussion

As in Study 4a, the results of this study suggest that even when the outcome is inherently random, observing an actor's decisional conflict triggers preference convergence. The study also shows that the effect is moderated by whether or not the observer perceives the actor's conflict as appropriate and reasonable for the decision at hand. This study underscores three important issues that are consistent with the suggested emotional account. First, if the cue about the actor's emotional conflict (even in cases with random outcomes) had certain informational value with respect to the accuracy of the decision, observers would have converged in both the high- and low-stakes conditions. That is, observers would have used such a cue to maximize their probability of receiving the high prize in both conditions. Thus, this study further implies that inferential processes, and the notion of conflict as a cue for accuracy, cannot account for the observed pattern of results.

Second, if the effect was driven by participants' perceptions that the actor behaved as they would have behaved in a similar situation, one would expect to see convergence in both matching conditions (i.e., high conflict in a high-stakes decision and low conflict in low-stakes decision; upper-left and lower-right cells in Figure 6). As the pretest indicated (available in Appendix E), in both of these conditions, participants perceived the conflict level exhibited by the actor to be appropriate and to match how they themselves would have likely reacted. However, we find that participants' preferences converged only in the high-conflict high-stakes condition. An actor's behavior that was consistent with the observer's expectations but did not include an emotional conflict did not produce convergence.

Third, based on the proposed framework, one could speculate about two main reasons for why observing an actor conflicted over a trivial decision did not produce convergence (i.e., in the

high-conflict low-stakes condition; lower-left cell in Figure 6). The first is that participants might

not have empathized with the conflicted actor. Such lack of empathy may have occurred because

observers may have questioned the authenticity of the actor's conflict, or viewed his behavior as

an unwarranted complication (e.g., Schrift, Netzer, and Kivetz 2011). A second explanation

would suggest that although observers did empathize with the conflicted actor, they had

difficulty feeling a sense of shared identity with an actor that behaved in a very different manner

than how they themselves would have behaved. Although both accounts are consistent with our

framework, a posttest (available in Appendix F) supported the former explanation. That is, the

post-test indicated that in this specific context, participants did not empathize with the actor that

was conflicted over choosing between two extremely positive outcomes.

In the next and final study, we explore how observed conflict affect decisions in a group

decision-making context. In such a setting, observed conflict may play an important and

pertinent role in shaping group members' preferences, because members are often exposed to

other members' decision processes and conflict in choice.

STUDY 5 - OBSERVED CONFLICT AND CONVERGENCE IN GROUP CONTEXT

The goal of this study was to examine, in an incentive-compatible manner, how the effect

of observed emotional conflict on preference convergence may affect voting behavior in a group

decision-making context. Note that in this study, we did not test group decision-making

dynamics per se but rather explored how an individual's preferences might be influenced in such

a setting. We told participants that they were playing a group version of the ultimatum game, and

exposed them to comments and thoughts one of their group members ostensibly had during the

deliberations. We manipulated whether the description of these comments included a cue for experienced emotional conflict, and examined whether, and to what extent, participants' preferences converged to those of their conflicted or non-conflicted teammate.

Method

We offered 105 paid participants from a national online panel to complete a bonus survey for additional compensation after completing an unrelated survey (14 participants declined to participate in the additional task, leaving us with a sample size of 91 subjects). We informed participants that the computer would randomly assign them to one of two groups (distinguished by color, either yellow or blue), each containing three members. We then told participants they would play a simple game, and gave them the instructions for the ultimatum game. Specifically, we informed participants that the yellow team would receive a total of $3.00 and would decide by voting how much of the $3.00 to allocate to the blue team. After receiving the offer, the blue team would then vote on whether to accept the offer. If the blue team decided to accept the offer, the money would be allocated accordingly. However, if the blue team decided to reject the offer, neither of the groups would receive money and both would leave without any additional compensation. After receiving these instructions, participants also received a short numerical example of a fictitious game to ensure they understood the rules. We also informed participants that this game would be played once, was completely anonymous, and that they will be compensated in accordance with their decision in this game.

The next page informed all participants that they had been randomly assigned to the blue team (i.e., the team that needed to decide whether to accept or reject the offer). Participants then learned that out of the total $3.00, the yellow team ostensibly decided to keep $2.70 and offered

the blue team the remaining \$0.30. Participants were also informed that one of their teammates had already voted and indicated his or her comments about this decision. Participants then read the text supposedly entered by their teammate and learned about his or her vote.

The text either included a cue regarding the emotional conflict (high-conflict condition) or did not include such a cue (control condition). Specifically, participants in both conditions read the following text: "I think that the offer they gave us is really inappropriate! We got almost nothing...much less than half…c'mon!!! Still it is something, right?" Participants is the high-conflict condition also read the following: "I don't know what to do :/ Oh…why is this such a difficult and conflicting decision for me? grrr…" Finally, participants in both conditions read their teammate's decision, which was either to accept or reject the offer (manipulated between subjects): "I think that I will vote for [accepting/rejecting] the offer…" Participants in both conditions then indicated their vote of whether to accept or reject the offer. To increase the realism of the study, participants were also allowed to write anything they would like their third teammate to read before casting his or her vote.

After casting their votes, participants were told they would learn about the outcome of the game in the next few days once all games had been played. Finally, as a manipulation check, we asked participants to indicate how conflicted they perceived their teammate to be (on a 1-7 scale ranging from *not at all* to *extremely*). To verify that the emotional conflict cue did not trigger inferences about the teammate's decision quality, participants also indicated the extent to which they (i) perceived their team member to be thoughtful when making the decision (on a 1-7 scale ranging from *not at all* to *extremely*), (ii) perceived their teammate to be careless when making the decision (on a 1-7 scale ranging from *not at all* to *extremely*), and (iii) were conflicted about this decision (on a 1-7 scale ranging from *not at all* to *extremely*).

Results

Manipulation Check. A MANOVA confirmed the manipulation worked as intended. Participants assigned to the conflict condition reported perceiving their teammate as more conflicted compared to those assigned to the control ($M_{conflict}$ = 4.78, $M_{control}$ = 3.58; $F(1,89)$ = 9.87, $p < .002$). However, we found no significant differences across conditions with respect to how thoughtful or careless they perceived their teammate to be ($p > .25$ and $p > .93$, respectively). In addition, we found no significant difference in participants' self-reports of their own experienced conflict when making their decision ($p > .45$).

Convergence of Preferences. To examine whether and to what extent participants' votes converged to that of their teammate, we performed a binary logistic regression with participants' vote as the dependent variable (coding 1 as vote consistent with their teammate's, and 0 otherwise). The independent variables in the model were (i) experimental condition (conflict vs. control), (ii) teammate's vote (accept vs. reject), and (iii) their interaction. As expected, participants who received a cue regarding their teamate's emotional conflict tended to vote similarly to a greater extent ($M_{conflict}$ = 75.5%) than those who did not receive such a cue ($M_{control}$ = 56.5%; B = 1.39, $p < .05$). We found no main effect for the second manipulated factor (i.e., teammate's decision; $p > .73$) or its interaction with conflict cue ($p > .28$), indicating convergence occurred regardless of the actor's ultimate decision.

Discussion

The results of this study further demonstrate the impact of a conflict cue in a real and consequential choice situation, but this time in a group decision-making context. Observing another teammate's conflict during deliberation significantly affected participants' preferences

and influenced whether they accepted or rejected a real financial offer in the ultimatum game. In addition to providing supportive evidence for the importance and applicability of the proposed effect, this study underscores the notion that the process by which an actor reaches his or her final decision matters and shapes the observer's preferences.

GENERAL DISCUSSION

Decision making often entails conflict. Whether we observe these decisions in real time or learn about them post-hoc, we are often exposed to (or learn about) the extent to which the decision maker experienced choice conflict. This article investigates whether and why learning about other people's decisional conflicts affects our preferences. We find that observing another person's decisional conflict increases the likelihood that the observer's preferences will converge to those of the actor. Watching others in "pain and agony" over an impending decision triggers empathic reactions that make the observer feel psychologically closer to the conflicted actor. This greater sense of shared identity leads the observer's preferences to converge to those of the actor. That is, when facing a similar decision, the observer is more likely to choose the option the conflicted actor chose. More broadly, we find that observers' preferences are not only influenced by an actor's ultimate choice, but also by the process leading to this choice. In other words, *process matters*.

Review of Key Findings. Six studies consistently demonstrated the proposed effect. Study 1 explored the effect in a realistic setting in which individuals observed paid confederates who were either conflicted or not about an impending consequential decision. Study 2 showed that this effect is more pronounced for individuals with a greater innate tendency to empathize with

others. In Study 3, a multi-step mediation analysis confirmed the role of the two mediators that work sequentially, namely, empathy and shared identity. Studies 4a and 4b showed this effect occurs even in decision contexts with random outcomes, thus underscoring the emotional (as opposed to rational) driver of this effect. Further, Study 4a demonstrated that reflection about the decision maker's emotional state triggers preference convergence, but that such convergence is attenuated if the observer perceives the emotional conflict as unwarranted (Study 4b). Study 5 explored this effect in a group decision-making context and found that in a group version of the ultimatum game, players' votes tended to converge to those of their emotionally conflicted teammates. Across the different studies, we manipulated observed conflict in various manners and measured convergence in several ways, such as real allocation of money, reported likelihood of choosing similarly, and consequential voting behavior. In Appendix G we report an additional study (Study 6) in which we measured convergence using self-reported attribute weights. Thus, this study demonstrates the effect using a very different paradigm, and also allows us to test an additional rival account (i.e., perceived polarization of preferences).

Alternative Explanation. A rival account for the observed effect would reason that greater decisional conflict may be associated with perceptions of greater attentiveness and thoughtfulness, and therefore with better (i.e., more accurate and informed) decisions. We agree that such inferential processes may exist in some situations. However, we argue that the proposed emotion-based mechanism is separate and distinct. Aside from employing tests that ensured the conflict cues did not trigger perceptions of thoughtfulness (Studies 2 and 5), we showed the effect occurs even in decisions that involved random outcomes (Studies 4a and 4b). In such decisions, inferences about the accuracy of the actor's choice are immaterial. Moreover, because the decision contexts that were examined across the studies are governed by subjective

preferences, there are no clear and objective criteria regarding what constitutes a "better" or more accurate decision. Therefore, in these contexts such rival account is less plausible.

Additionally, inferences about the quality of the decision should be made regardless of the observer's innate tendency to empathize with others, and should not produce empathic reactions and sense of shared identity. However, inconsistent with this rival account, we found the effect was mediated by sense of empathy and shared identity (Study 3) and moderated by the individual's innate tendency to empathize with others (Study 2).

An additional and related rival account may advance the notion that observers converge to the preferences of actors that behave in a manner consistent with how they themselves would have behaved. However, the results of Study 4b demonstrated that compatibility between the actor's behavior and what the observer feels is an appropriate behavior is not a sufficient condition for convergence. An "appropriate" degree of decisional conflict did not produce convergence when the actor exhibited low conflict. Instead, convergence occurred only when the actor exhibited high emotional conflict, and when this conflict was deemed appropriate. The fact that both aspects (i.e., high conflict and compatibility) should occur concurrently to produce convergence is consistent with our conceptual framework and with the results of the posttest reported in Appendix F.

It is noteworthy that we do not claim the suggested emotion-based account is the only mechanism that may be at play. We acknowledge that although in some situations, an empathic response to others' emotional conflict may be an important driver of preferences, in other situations, it may be overpowered by other important underlying motivations to assimilate or distance oneself from a specific actor (e.g., Asch 1956; Berger and Heath 2008; Escalas and Bettman 2003; Ferraro, Bettman, and Chartrand 2009; Goldstein and Cialdini 2007b; McFerran

et al. 2010; Shalev and Morwitz 2012; White and Dahl 2006). However, as a whole, the results indicate that, controlling for other potential drivers of the effect, the suggested emotional mechanism is important and distinct.

Contribution and Future Directions. From a theoretical perspective, this paper explores an understudied aspect of social influence: holding constant the actor's characteristics and ultimate choice, the process leading to the actor's choice is also an important driver that shapes observers' preferences. Although this paper focused on a central and often conspicuous aspect of the decision process, namely, conflict, other aspects could merit further investigation. Another potentially fruitful direction for future research would be to explore how would others' decision processes influence the observer's decision process itself (and not only outcome).

The current paper also extends the literature regarding empathy and self-other merging to decision contexts. Conspicuous conflict, pain, and agony that a decision maker experiences trigger empathy that fosters "closeness." Relatedly, as reported in Study 4b, we found that perceptions of the appropriate degree of conflict moderated observers' tendency to empathize with the actor. This finding is consistent with recent research demonstrating that decision makers value compatibility between the effort they anticipate or think a certain decision merits and the actual effort that is exerted (i.e., the effort compatibility hypothesis; Schrift et al. 2011). The current results suggest that such a desire for compatibility may be present even when observing others making a decision.

Future research may examine, more broadly, how different sources and attributions for other's experienced conflict may impact the observer's judgment and behavior. For example, whether or not the conflict experienced by others is perceived warranted, sincere, driven by context versus one's innate dispositions to be conflicted, may lead to different results. Such

attributions may also be influenced by factors such as the ability to defer judgment (e.g., Dhar 1997; Parker and Schrift 2011), time constraints (e.g., Dhar and Nowlis 1999; Suri and Monroe 2003), and social pressure (e.g., Asch 1956).

From an applied perspective, this research also suggests that through exhibiting and/or communicating others' decisional conflicts, one may increase convergence and consensus tendencies. This strategy may prove to be valuable in several domains, such as when leaders, managers, and individuals seek to build a consensus around a difficult decision they or others have made. Other situations may include persuasion messages that promote a choice of a specific product or service, as well as other situations in which one wishes to directly foster closeness between a character and an audience (e.g., greater identification with a spokesperson or even with a character in a movie or a book). Pain and decisional conflict matter and bring us closer.

APPENDIX A. PRETEST OF PICTURES USED IN STUDY 2

We performed a pretest to verify that the pictures employed in Study 2 elicited perceptions of greater conflict but not perceptions of greater attentiveness or thoughtfulness with respect to the impending decision

Method

Fifty-five online subjects read a short scenario about a dilemma a woman faced: which of two important events to attend (her best friend's wedding or her sister's bachelorette party). The scenario explained that a scheduling conflict prevented her from being able to attend both events. We randomly assigned participants to one of two conditions (A and B). In each condition, participants observed a single picture of the same woman exhibiting different facial expressions, ostensibly taken while she was deliberating her decision (see Appendix Figure 1). Participants were asked to indicate, based on the facial expression, the extent to which this individual appeared to present any one of the 10 items described in the table below (all on a 1-10 scale ranging from *not at all* to *very much*).

APPENDIX FIGURE 1. PICTURES PRETESTED FOR STUDY 2

Picture "A"   Picture "B"

Results

A MANOVA indicated that across the two conditions, the four items relating to decisional conflict were significantly different. Specifically, participants perceived the facial expression depicted in the picture of condition A (hereafter, the strong conflict cue) to portray a greater decisional conflict than that depicted in the pictures used in condition B (hereafter, the weak conflict cue; all F's > 8.5 and p's < .005). However, and as intended, we observed no significant differences on the attentiveness (all F's < 2.8 and p's > .1) or mood items (all F's < 1 and p's > .6). Note that directionally, three of the four attentiveness items were in the opposite direction to what we would expect for supporting inferences about the decision quality as the main driver. Table 1 details the means and statistics for each of the items.

TABLE 1. PRETEST: SUMMARY OF RESULTS

	Item	Condition A (Strong Conflict Cue) Mean [S.E.]	Condition B (Weak Conflict Cue) Mean [S.E.]	F(1,53)	p-value
Conflict-related Items	Conflicted	**8.75** (.35)	**7.26** (.36)	8.68	**0.005**
	Concerned	**7.96** (.39)	**6.29** (.39)	8.95	**0.004**
	In Difficulty	**8.5** (.35)	**6.82** (.36)	11.30	**0.001**
	Struggling	**9.03** (.36)	**6.93** (3.6)	17.00	**< 0.001**
Attention-related Items	Attentive	5.64 (.43)	6.11 (.44)	0.58	0.451
	Indifferent	2.50 (4.3)	3.52 (.44)	2.68	0.107
	Thoughtful	5.71 (.45)	6.78 (.45)	2.74	0.104
	Careless	2.64 (.34)	2.37 (.35)	0.31	0.578
Mood-related Items	Happy	2.57 (.28)	2.74 (.29)	0.17	0.68
	Sad	5.36 (.38)	5.3 (.38)	0.01	0.91

APPENDIX B. STUDY 2: ITEMS USED FROM THE IRI SCALE (Davis 1983)

Participants indicated how well each of the statements described them (on a 1-5 scale ranging from *does not describe me well* to *describes me very well*).

Empathic-concern subscale:

- I often have tender, concerned feelings for people less fortunate than me.

- Sometimes I don't feel very sorry for other people when they are having problems. (-)

- When I see someone being taken advantage of, I feel kind of protective towards them.

- Other people's misfortunes do not usually disturb me a great deal. (-)

- When I see someone being treated unfairly, I sometimes don't feel very much pity for them. (-)

- I am often quite touched by things that I see happen.

- I would describe myself as a pretty soft-hearted person.

Perspective-taking subscale:

- I sometimes find it difficult to see things from the "other guy's" point of view. (-)

- I try to look at everybody's side of a disagreement before I make a decision.

- I sometimes try to understand my friends better by imagining how things look from their perspective.

- When I'm upset at someone, I usually try to "put myself in his shoes" for a while.

- Before criticizing somebody, I try to imagine how I would feel if I were in their place.

APPENDIX C. SCENARIO USED IN STUDY 3

* Please note the scenario below uses the name "Dan" simply as an example. The real study

contained the actual name of the friend, as indicated by each participant prior to seeing the

scenario.

Your friend, Dan, is faced with a certain dilemma. Specifically, Dan started a relationship

with someone and things are going great. Although they have not been dating for more than 2

months, Dan feels that there is a true long-term potential there and that the feeling is mutual.

In addition, Dan has recently been offered the job he/she always dreamed off; one of these

sought-after positions that could really get one's career going. However, this position means

that Dan will have to move to the other side of the country for at least 12 months (and possibly

longer).

Conflict condition:

Dan, knowing that the person he/she is dating cannot make this move (due to family and career

attachments), is torn over this decision.

When you meet Dan, you see that he/she is in apparent agony and pain over this decision. On

one hand, the emotions in the relationship are already there and quite intense; on the other hand

they have only been dating for two months and who knows what could happen. In addition, the

position Dan was offered is very rare and this may be an opportunity of a lifetime.

Dan is extremely conflicted for several days and sleepless nights and is

tremendously agonizing over this decision.

Control condition:

Dan knows that the person he/she is dating cannot make this move (due to school and career

attachments).

You meet with Dan during the time of his deliberations. On one hand, the emotions in

the relationship are already there and quite intense; on the other hand they have only been

dating for two months and who knows what could happen. In addition, the position Dan was

offered is very rare and this may be an opportunity of a lifetime.

APPENDIX D. STUDY 3: AUXILIARY ANALYSES

In the mediation analysis reported in Study 3, we used the change in shared identity (before versus after observers learned about the actor's conflict) as our second mediator. Using this change in shared identity (at the individual level) reduces noise and increases the statistical power. However, one can also focus on just the initial level of shared identity (measured before the conflict manipulation) to examine two main interesting aspects. First, we can reasonably expect that regardless of the actor's level of exhibited conflict, the observer will tend to empathize more with a close friend versus a distant friend. If so, we should find a main effect of initial level of shared identity on empathy and preference convergence.

Second, one could also explore whether the initial level of shared identity moderates the effect of observed conflict. That is, one could test whether providing a cue about an actor's emotional conflict would affect the observer's empathic reactions and preferences to a different extent as a function of initial level of shared identity. If so, one would expect to observe an interaction between initial level of shared identity and conflict cue.

To explore these conjectures, we first regressed participants' empathic reaction on (i) the degree of initial level of shared identity (measured in the first stage of the experiment and prior to administering the conflict manipulation), (ii) the two experimental conditions (conflict vs. control), and (iii) their interaction. The results indicated the degree of initial connectedness had a significant and positive main effect on the degree of empathy the observer experienced ($B = .39$, $SE = .09$, $p < .001$). That is, regardless of conflict cue, learning about a difficult decision that a close friend is making triggers greater empathy compared to learning about a distant other making such a decision.

As expected, the regression also revealed a main effect of conflict level ($B = .36$, $SE = .16$, $p < .03$) consistent with the main hypothesis of this paper. However, the interaction between conflict level and initial connectedness was not significant ($B = .06$, $SE = .09$, $p > .49$). Thus, the results indicate that a cue regarding the emotional conflict the actor experiences significantly increases the empathy the observer experiences but that this effect occurs regardless of the initial observer-actor connectedness.

We conducted a similar regression using preference convergence as the dependent variable. Again, the regression revealed a significant effect of conflict cue ($B = .35$, $SE = .17$, $p = .04$) and a marginally significant effect of initial connectedness on preference convergence ($B = .17$, $SE = .09$, $p > .08$). However, the interaction between the two was not significant ($B = .05$, $SE = .09$, $p > .62$).

In summary, we did not find that the degree of initial level of shared identity between the observer and the actor moderated the effect of conflict cue on preference convergence. That is, controlling for the degree of initial shared identity, a cue regarding an actor's emotional conflict triggered preference convergence compared to when such a cue was not available. Note that the

lack of interaction between conflict cue and initial level of shared identity is consistent with our conceptual framework as well as with existing literature regarding empathy. As noted in the paper, empathic reactions are primal and involve a visceral component. Thus, empathic reactions toward others that experience negative emotional states are expected, regardless of how close people consider the others to be. Indeed, abundant literature on charitable donations demonstrates that empathic reactions can be triggered even toward others who are distant from the observer (e.g., in distant countries and from different cultures and backgrounds). Further, previous research has found that whereas the degree of similarity between individuals affects the rate of social interaction, such similarity does not fully account for the degree and accuracy of empathic response (Stinton and Ickes 1992). Similarly, studies have found that children exhibit empathy even toward individuals they have never met before (e.g., Strayer and Roberts1997). Thus, the literature seems to support the assertion that a cue regarding others' emotional conflict would trigger empathic response regardless of the level of initial shared identity or connectedness.

APPENDIX E. STUDY 4b: PRETEST

In this pretest for Study 4b, we measured how participants would perceive the behavior of an actor when facing either the high-stakes or low-stakes decision. In particular, we examined whether participants perceived the actor's decisional conflict (high vs. low) appropriate in each of these decisions. We also examined whether this behavior matched how participants indicated that they themselves would have behaved in a similar situation. We hypothesized that

participants would perceive an emotional conflict exhibited by the actor to be warranted (and match their own behavior) in the high-stakes, but not in the low-stakes, condition.

Method

After completing an unrelated survey, 145 paid, online participants participated in the pretest. Participants were randomly assigned to one of the four conditions described in Study 4b in this 2 (conflict: high vs. low) x 2 (stakes: high vs. low) design, and they read the same scenarios used in the main study. However, after learning about the actor's conflict, participants indicated (i) the extent to which they considered the actor's experienced level of conflict to be appropriate to the situation at hand (on a 1-7 scale ranging from *very inappropriate* to *very appropriate*) and (ii) the extent to which they felt the actor's reaction in this situation was similar to how they would have reacted (on a 1-5 scale ranging from *not at all like me* to *just like me*). These two items were highly correlated ($r = .75$; $p < .001$), and we collapsed them to form the *appropriateness* measure. Finally, participants indicated whether they considered the level of conflict the actor exhibited in this situation to be too little, too much, or just about right (which was anchored at the midpoint of the scale).

Results

A two-way ANOVA revealed a significant main effect of stakes in the decision (high vs. low) on the *appropriateness* measure ($F(1,141) = 4.42$, $p = .037$). More importantly, the interaction between stakes and conflict was significant ($F(1,141) = 29.3$, $p < .001$). Planned contrasts revealed that when facing the high-stakes decision (prize of \$200,000 or nothing), the actor's high conflict was perceived as more appropriate compared to that described in the low-

conflict condition ($M_{\text{high conflict}} = 4.28$; $M_{\text{low conflict}} = 3.64$; $F(1,71) = 4.65$, $p = .035$). Conversely, when facing the low-stakes decision (prize of $200,000 or $150,000), the actor's high conflict was perceived as less appropriate compared to the low conflict ($M_{\text{high conflict}} = 3.12$; $M_{\text{low conflict}} = 4.59$; $F(1,70) = 34.6$, $p < .001$). Figure 2 depicts the means of the appropriateness score across all cells.

APPENDIX FIGURE 2. PRETEST FOR STUDY 4b: APPROPRIATENESS MEASURE AS A FUNCTION OF ACTOR'S CONFLICT AND STAKES IN THE DECISION
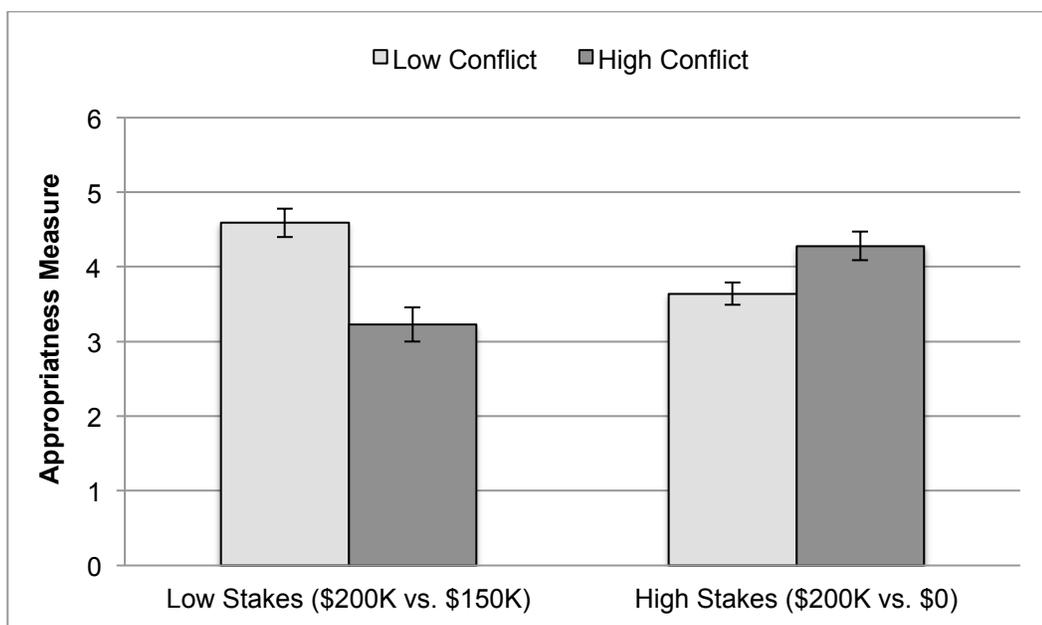
Further validating that the manipulation worked as intended, in the high-stakes conditions, 76% of participants in the high-conflict condition indicated the level of conflict the actor exhibited was "just about right" compared to only 44% of participants in the low-conflict condition ($\chi^2(1) = 7.43$, $p < .01$). Conversely, in the low-stakes conditions, only 30% of the

participants in the high-conflict condition indicated the level of conflict the actor exhibited was "just about right" compared to 74% of participants in the low-conflict condition ($\chi^2(1) = 14.3$, $p < .001$).

APPENDIX F. STUDY 4b: POSTTEST

The goal of this posttest was to further explore why participants' preferences did not converge to those of an actor who was emotionally conflicted over the low-stakes decision (i.e., boxes containing $200,000 or $150,000). Based on our conceptual framework there are two main possibilities for why preferences did not converge in this condition. The first possibility is that participants did not empathize with the conflicted actor. The second possibility is that although participants did empathize with the conflicted actor, they had difficulty feeling a sense of shared identity with an actor that behaved in a very different manner than how they themselves would have behaved. This posttest explores whether preference convergence in this case attenuated due to the lack of empathy or not.

Method

We recruited 200 paid, online subjects to participate in the study (2 of whom had incomplete responses and were therefore eliminated from the analyses). The procedure was identical to that employed in Study 4b and participants were randomly assigned to one of the four condition in this 2 (actor's conflict: high vs. low) x 2 (stakes: high vs. low) between-subjects design. After participants learned about the actor's conflict level, we measured their empathic reactions and sense of shared identity with the actor. Specifically, participants indicated on a 1-7

scale ranging from *not at all* to *extremely* the extent to which they felt each of the following six emotions toward the actor when learning about the decision he faced: Sympathy, Softhearted, Warm, Compassionate, Tender, and Moved (Batson et al. 1997). The items were highly correlated ($\alpha_{Cronbach}$ = .96) and were therefore collapsed to form a single measure of empathy. Then, we measured participants' sense of shared identity with the actor using the IOS scale (Aron, Aron, and Smollan 1992).

Results

A two-way ANOVA first revealed participants generally empathized more with an actor that faced a high-stakes decision regardless of the conflict level he exhibited ($F(1,194) = 24.4$, $p < .001$). Importantly, the analysis revealed the expected interaction between conflict level and decision stakes ($F(1,194) = 11.3$, $p < .001$). Planed contrasts indicated that when observing an actor debating about a high-stakes decision, participants empathized with this actor more when observing his high (as opposed to low) decisional conflict ($M_{high\ conflict} = 4.79$, $M_{low\ conflict} = 4.05$, $t(1,99) = 2.62$, $p < .01$). However, such effect was not observed (and even reversed) when observing the actor debating about a low-stakes decision. Specifically, when observing the actor choosing between two boxes that both contained high monetary rewards, this actor's high conflict did not trigger empathy, and even reduced it significantly ($M_{high\ conflict} = 2.92$, $M_{low\ conflict} = 3.69$, $t(1,95) = -2.19$, $p < .03$).

As expected, a similar pattern of results emerged when examining participants' sense of shared identity with the actor. Consistent with the way empathic reactions trigger sense of shared identity, a two-way ANOVA revealed that participants had a greater sense of shared identity with an actor that faced a high-stakes decision regardless of the conflict level he exhibited

($F(1,194) = 17.77$, $p < .001$). Importantly, the analysis revealed a significant interaction between conflict level and decision stakes ($F(1,194) = 12.01$, $p < .001$). Planed contrasts indicated that when observing an actor debating about a high-stakes decision, participants felt a greater sense of shared identity with this actor when observing his high (as opposed to low) decisional conflict ($M_{high\ conflict} = 4.47$, $M_{low\ conflict} = 3.6$, $t(1,99) = 2.56$, $p < .02$). However, such effect was not observed (and even reversed) when observing the actor debating about a low-stakes decision. Specifically, when observing the actor choosing between two boxes that both contained high monetary rewards, this actor's high conflict did not trigger a greater sense of shared identity, and even reduced it significantly ($M_{high\ conflict} = 2.59$, $M_{low\ conflict} = 3.42$, $t(1,95) = -2.34$, $p < .02$).

Thus, other than providing additional convergent evidence for the effect of conflict cue on empathy and shared identity, the results also give us better understanding of why in some cases observed decisional conflict will not trigger convergence. Specifically, we found that observers do not empathize with a conflicted actor if they perceive his conflict as unwarranted.

APPENDIX G. STUDY 6: OBSERVED CONFLICT AND CONVERGENCE AT THE ATTRIBUTE-LEVEL SPACE

The studies reported in the main text explored convergence of preferences by examining whether the ultimate choice of the observer converged to that of the actor. The current study employed a different paradigm and examined whether we would also observe convergence of preferences at the attribute level (i.e., attribute-importance weights). This investigation is important for two main reasons. First, in some decision contexts, alternatives are described as a set of attributes; thus, exploring whether convergence also occurs in these instances increases our

findings' generalizability. Second, measuring attribute weights enables us to investigate an additional rival account, namely, perceived polarization of the actor's preferences.

Method

Ninety-three undergraduate students from a private college in Israel participated in the experiment as part of their course requirements (data for 3 participants were missing; we therefore dropped these participants from the analysis). Participants were informed that the purpose of the study was to test a new system aimed at helping students in the college share information and recommendations about different topics. Participants then read a description of a decision a fellow student ostensibly made. Participants learned the student was trying to choose between two job opportunities, and they received information about each job (described on 7 attributes, e.g., salary, reputation, commute, etc.; the full description of the stimuli is available at the end of this appendix). We then randomly assigned participants to one of two conditions (low vs. high conflict) in which they were informed about the level of conflict the student experienced prior to making the decision. In the low-conflict condition, we informed participants that the choice of job was relatively easy for the student and that the student took two minutes to finalize his choice. In the high-conflict condition, we informed participants that the choice of job was very difficult for the student, that the student changed his mind several times, and that he took about two weeks to finalize his choice. Thus, the study employed a single-factor, two-level (low- vs. high-conflict cue), between-subjects design.

After reading the description of the choice process, participants learned which of the available alternatives the student eventually chose (held constant across conditions). Next, as a measure of a sense of shared identity, participants indicated the degree to which they identified

with the student and could put themselves in the student's shoes on a 1-11 scale ranging from *not at all* to *very much*. Thereafter, as a measure for preference convergence, participants indicated (i) the likelihood of choosing the same option if faced with a similar decision (on a 1-11 scale ranging from *extremely low* to *extremely high*) and (ii) the degree to which they believed their preferences were similar to those of the student who made the choice (on a 1-11 scale ranging from *extremely dissimilar* to *extremely similar*). These two items were highly correlated ($r = .8$, $p < .001$) and we collapsed them to construct a similarity-in-preference variable.

Finally, participants indicated, for each of the seven attributes, (i) the extent to which they believed the attribute was important for the student and (ii) the extent to which each attribute was important for them when choosing their preferred job (all on a 1-11 scale ranging from *extremely unimportant* to *extremely important*). These measures served as an additional indication of preference similarity at the attribute level.

Results

The Effect of Observed Cconflict. A one-way ANOVA revealed that participants assigned to the high-conflict condition identified with the actor more than those assigned to the low-conflict condition ($M_{\text{high-conflict}} = 7.79$ vs. $M_{\text{low-conflict}} = 6.36$; $F(1,88) = 5.34$, $p < .03$). Further, participants' preferences converged more in the high-conflict condition than in the low-conflict condition ($M_{\text{high-conflict}} = 8.00$ vs. $M_{\text{low-conflict}} = 6.92$; $F(1,88) = 3.68$, $p < .06$).

Mediation Analysis. The data were submitted to a mediation analysis (using the macro PROCESS, model 4, Hayes 2013). The 95% confidence interval for the indirect effect confirmed the mediating role of identification in the relation between conflict level and preference similarity ($B = .61$; $CI_{95\%} = .12$ to 1.3). The results indicated the direct effect of conflict on

preference similarity became non-significant ($B = .46$, $p > .36$) when we controlled for identification, thus suggesting full mediation.

Attribute Weights. A more stringent test for preference convergence was also performed by examining the difference in how important participants perceived each attribute to be to the actors and to themselves. We calculated a measure of perceived difference (D_i) for each subject as follows:

$$D_i = \sum_{a=1}^{7} (W_{ia} - S_{ia})^2$$

where W_{ia} denotes subject i's estimation of how important attribute *a* was for the actor, and S_{ia} denotes subject i's own importance ratings of attribute *a*. Because we are interested in the overall distance between own and other importance ratings, we took the squared term of this difference for each attribute and summed across all seven attributes.

As expected, the average difference in importance ratings (Di) for participants assigned to the high-conflict condition was lower than for those assigned to the low-conflict condition ($D_{\text{high conflict}} = 10.3$, $D_{\text{low conflict}} = 14.68$; a Mann-Whitney non-parametric U test rejected the null, *p* $< .03$), indicating that participants who observed a conflicted (as opposed to non-conflicted) actor felt their own attribute weights were closer to those of the actor.

Alternative Account. An alternative account for the observed pattern of results might suggest that participants' preferences did not converge in the high-conflict condition but rather diverged in the low-conflict condition. In particular, observing a non-conflicted actor may have prompted the inference that this actor had polarized preferences. For example, the actor may care strongly about a single attribute and therefore, when confronted with the two options, have had an easy choice. That is, the actor easily chose the option that was superior on this single attribute

that is of high importance. Such an inference would presumably rationalize to the observer the actor's quick and easy decision. In addition, if respondents generally perceive their own preferences as non-polarized and coming from the middle of the population distribution (i.e., false-consensus effect, Ross, Greene, and House 1977), this perception might explain the lower perceived similarity in preferences for subjects assigned to the low-conflict condition. To address this potential account, we performed an auxiliary analysis.

If participants assigned to the low-conflict condition indeed perceived the actor's preferences as more polarized, we should observe differences in the degree of perceived polarization across the two conditions. We calculated a measure of perceived polarization P_i for each subject as follows:

$$P_i = \sum_{a=1}^{7} |W_{ia} - M|$$

where W_{ia} denotes subject i's estimation of the decision maker's importance of attribute a, and M denotes the scale's midpoint (a scalar equals 6).

We averaged the polarization measures (P_i) across respondents in each conflict condition. A non-parametric test (Mann-Whitney U) failed to reject the null hypothesis and indicated the distribution of the polarization index was not significantly different across the low- and high-conflict conditions ($U_{\text{Mann-Whitney}} = 1{,}013.5$, $p > .98$), casting serious doubt on the claim that inferences regarding the actor's polarized preferences drove the observed pattern of results.

Discussion

The results of Study 6 provide further support for the main hypothesis that observers' preferences tend to converge to those of the actor when the latter experiences higher conflict

during his or her deliberation phase. Furthermore, the results show that the impact of perceived conflict on the convergence of preferences is mediated by the extent to which the observer identifies with the actor. Participants who were informed about the actor's high decisional conflict tended to identify with the actor more and were more likely to choose a similar option when facing the same decision.

STUDY 6: DESCRIPTION OF STIMULI

Description of Option A
- A company with a very good reputation in its field
- The position offers a full-time employment
- Most of the activity is done at the office and the position demands relatively routine work
- The working environment is very competitive
- Distance from the student's home: 20 km [12.4 miles]
- 14 paid vacation days
- Monthly salary of 9,000 NIS [~$2500]

Description of Option B
- A company with a very good reputation in its field
- The position offers a full-time employment
- Most of the activity is done outside of the office and in the field
- The working environment is very collaborative
- Distance from the student's home: 20 km [12.4 miles]
- 7 paid vacation days
- Monthly salary of 7,000 NIS [~$2000] + additional bonus monthly salary

REFERENCES

Arieli, Dan, and Jonathan Levav (2000), "Sequential Choice in Group Setting: Taking the Road Less Traveled and Less Enjoyed," *Journal of Consumer Research*, 27(3), 279-90.

Aron, Arthur, and Elaine N. Aron (1986), *Love and the Expansion of Self: Understanding Attraction and Satisfaction*, Hemisphere Publishing Corp/Harper and Row Publishers.

Aron, Arthur, Elaine N. Aron, and Danny Smollan (1992), "Inclusion of Other in the Self Scale and the Structure of Interpersonal Closeness," *Journal of Personality and Social Psychology*, 63(4), 596-612.

Aron, Arthur, Elaine N. Aron, Michael Tudor, and Greg Nelson (1991), "Close Relationships as Including Other in the Self," *Journal of Personality and Social Psychology*, 60(2), 241-53.

Armitage, Christopher J., and Madelynne A. Arden (2007), "Felt and Potential Ambivalence Across the Stages of Change," *Journal of Health Psychology*, 12(1), 149-58.

Asch, Solomon E. (1956), "Studies of Independence and Conformity: I. A Minority of One Against a Unanimous Majority," *Psychological Monographs: General and Applied*, 70(9), 1-70.

Ashton-James, Claire, Rick B. van Baaren, Tanya L. Chartrand, Jean Decety, and Johan Karremans (2007), "Mimicry and Me: The Impact of Mimicry on Self-Construal," *Social Cognition,* 25(4), 518-35.

Bagozzi, Richard P., and David J. Moore (1994), "Public Service Advertisements: Emotions and Empathy Guide Prosocial Behavior," *The Journal of Marketing*, 56-70.

Barker, R. G. (1942), *An Experimental Study of the Resolution of Conflict by Children*.

Baron, Jonathan, and Mark Spranca (1997), "Protected Values," *Organizational Behavior and Human Decision Processes*, 70(1), 1-16.

Batson, C. Daniel, Karen Sager, Eric Garst, Misook Kang, Kostia Rubchinsky, and Karen Dawson (1997), "Is Empathy-induced Helping Due to Self–other Merging?" *Journal of Personality and Social Psychology*, 73(3), 495-509.

Beattie, Jane, Jonathan Baron, John C. Hershey, and Mark D. Spranca (1994), "Psychological Determinants of Decision Attitude," *Journal of Behavioral Decision Making*, 7(2), 129-44.

Bem, Daryl J. (1967), "Self-perception: An Alternative Interpretation of Cognitive Dissonance Phenomena," *Psychological Review*, 74(3), 183-200.

Berger, Jonah, and Chip Heath (2008), "Who Drives Divergence? Identity Signaling, Outgroup Dissimilarity, and the Abandonment of Cultural Tastes," *Journal of Personality and Social Psychology*, 95(3), 593-607.

Bergum, Bruce O., and Roger P. Dooley (1969), "Forced-choice Preferences and Response Latency," *Journal of Applied Psychology*, 53(5), 396-98.

Berlyne, Daniel E. (1960), *Conflict, Arousal, and Curiosity,* McGraw-Hill New York, NY.

Botvinick, Matthew, Amishi P. Jha, Lauren M. Bylsma, Sara A. Fabian, Patricia E. Solomon, and Kenneth M. Prkachin (2005), "Viewing Facial Expressions of Pain Engages Cortical Areas Involved in the Direct Experience of Pain," *Neuroimage*, 25(1), 312-19.

Bretherton, Inge, Janet Fritz, Carolyn Zahn-Waxler, and Doreen Ridgeway (1986), "The Acquisition and Development of Emotion Language: A Functionalist Perspective," *Child Development*, 57, 529-48.

Bryant, Brenda K. (1982), "An Index of Empathy for Children and Adolescents," *Child Development*, 53(2), 413-25.

Cacioppo, John T, Richard E. Petty, and Chuan F. Kao (1984), "The Efficient Assessment of Need for Cognition," *Journal of Personality Assessment*, 48 (3), 306-07.

Cattell, J. McK (1902), "The Time of Perception as a Measure of Differences in Intensity," *Festsch*.

Cialdini, Robert B., Stephanie L. Brown, Brian P. Lewis, Carol Luce, and Steven L. Neuberg (1997), "Reinterpreting the Empathy–altruism Relationship: When One Into One Equals Oneness," *Journal of Personality and Social Psychology*, 73(3), 481-94.

Cialdini, Robert B., and Noah J. Goldstein (2004), "Social Influence: Compliance and Conformity," *Annual Review Psychology*, 55, 591-621.

Cialdini, Robert B., Raymond R. Reno, and Carl A. Kallgren (1990), "A Focus Theory of Normative Conduct: Recycling the Concept of Norms to Reduce Littering in Public Places," *Journal of Personality and Social Psychology,* 58(6), 1015-26.

Coats, Susan, Eliot R. Smith, Heather M. Claypool, and Michele J. Banner (2000), "Overlapping Mental Representations of Self and In-group: Reaction Time Evidence and its Relationship with Explicit Measures of Group Identification," *Journal of Experimental Social Psychology*, 36(3), 304-15.

Coke, Jay S., C. Daniel Batson, and Katherine McDavis (1978), "Empathic Mediation of Helping: A Two-stage Model," *Journal of Personality and Social Psychology*, 36(7), 752-66.

Critcher, Clayton R., Yoel Inbar, and David A. Pizarro (2013), "How Quick Decisions Illuminate Moral Character," *Social Psychological and Personality Science*, 4(3), 308-15.

Davis, Mark H. (1983), "Measuring Individual Differences in Empathy: Evidence for a
   Multidimensional Approach," *Journal of Personality and Social Psychology*, 44(1), 113-
   26.

Davis, Mark H., Laura Conklin, Amy Smith, and Carol Luce (1996), "Effect of Perspective
   Taking on the Cognitive Representation of Persons: a Merging of Self and Other,"
   Journal of Personality and Social Psychology, 70(4), 713-26.

De Cremer, David (2004), "The Closer We Are, the More We Are Alike: The Effect of Self-
   other Merging on Depersonalized Self-perception," *Current Psychology*, 22(4), 316-24.

Decety, Jean, and Jessica A. Sommerville (2003), "Shared Representations Between Sself and
   Others: A Social Cognitive Neuroscience View," *Trends in Cognitive Science*, 7, 527-33.

Decety, Jean, and Philip L. Jackson (2004), "The Functional Architecture of Human
   Empathy," *Behavioral and Cognitive Neuroscience Reviews*, 3(2), 71-100.

Devine, Dennis, J., Laura D. Clayton, Benjamin B. Dunford, Rasmy Seying, and Jennifer Pryce
   (2000), "Jury Decision Making: 45 Years of Empirical Research on Deliberating
   Groups," *Psychology, Public Policy, and Law*, 7(3), 622-727.

Dhar, Ravi (199), "Consumer Preference for a No-choice Option," *Journal of Consumer
   Research* 24(2), 215-31.

Dhar, Ravi and Stephen M. Nowlis (1999), "The Effect of Time Pressure on Consumer Choice
   Deferral," *Journal of Consumer Research*, 25(4), 369–84.

Ekman, Paul (1993), "Facial Expression and Emotion," *American Psychologist*, 48(4), 384-92.

Escalas, Jennifer Edson, and James R. Bettman (2003), "You Are What They Eat: The Influence
   of Reference Groups on Consumers' Connections to Brands," *Journal of Consumer
   Psychology*, 13(3), 339-48.

Ferraro, Rosellina, James R. Bettman, and Tanya L. Chartrand (2009), "The Power of Strangers: The Effect of Incidental Consumer Brand Encounters on Brand Choice," *Journal of Consumer Research*, 35(5), 729-41.

Feshbach, Norma D., and Kiki Roe (1968), "Empathy in Six-and Seven-year-olds," *Child Development*, 133-45.

Feshbach, N. D. (1978), *Studies On Empathic Behavior in Children,* in B. Maher (Ed.), Progress in Experimental Personality Research, Vol. 8, 1-47, New York: Academic Press.

Galinsky, Adam D., and Gordon B. Moskowitz (2000), "Perspective-taking: Decreasing Stereotype Expression, Stereotype Accessibility, and In-group Favoritism," *Journal of Personality and Social Psychology*, 78(4), 708-24.

Gerard, Harold B. (1967), "Choice Difficulty, Dissonance, and the Decision Sequence," *Journal of Personality*, 35(1), 91-108.

Gifford, Robert, and Brian O'Connor (1987), "The Interpersonal Circumplex as a Behavior Map," *Journal of Personality and Social Psychology*, 52(5), 1019 – 26.

Goldstein, Noah J., and Robert B. Cialdini (2007a), "The Spyglass Self: A Model of Vicarious Self-perception," *Journal of Personality and Social Psychology*, 92(3), 402-17.

Goldstein, Noah J., and Robert B. Cialdini (2007b), "Using Social Norms as a Lever of Social Influence," The Science of Social Influence: Advances and Future Progress, 167-90.

Guardo, Carol J. (1969), "Personal Space in Children," *Child Development,* 40(1), 143-51.

Hatfield, Elaine, John T. Cacioppo, and Richard L. Rapson (1993), "Emotional Contagion," *Current Directions in Psychological Science*, 2(3), 96-9.

Hayes, Andrew F. (2013), *Introduction to Mediation, Moderation, and Conditional Process Analysis*, New York, NY: Guilford.

van Harreveld, Frenk, Bastiaan T. Rutjens, Mark Rotteveel, Loran F. Nordgren, and Joop van der Pligt (2009), "Ambivalence and Decisional Conflict as a Cause of Psychological Discomfort: Feeling Tense Before Jumping off the Fence," *Journal of Experimental Social Psychology*, 45(1), 167-73.

Higgins, E. Tory (1996), "The 'Self Digest': Self-knowledge Serving Self-regulatory functions," *Journal of Personality and Social Psychology*, 71(6), 1062-83.

Hoffman, Martin L. (1985), "Developmental Synthesis of Affect and Cognition and its Implications for Altruistic Motivation," *Developmental Psychology*, 11, 607-22.

Hoffman, Martin L. (2001), *Empathy and Moral Development*, New York: Cambridge University Press.

Holland, Rob W., Ute-Regina Roeder, Aafje C. Brandt, and Bettina Hannover (2004), "Don't Stand so Close to Me: The Effects of Self-construal on Interpersonal Closeness," *Psychological Science*, 15(4), 237-42.

Hornstein, Harvey A. (1978), "Promotive Tension and Prosocial Behavior: A Lewinian Analysis," in Altruism, Sympathy, and Helping: Psychological and Sociological Principles, Lauren Wispe (Ed.), New York: Academic Press, 177-207.

Howard, Daniel J., and Charles Gengler (2001), "Emotional Contagion Effects on Product Attitudes," *Journal of Consumer Research*, 28(2), 189-201.

Ickes, William John (1997), *Empathic Accuracy*, (Ed.), Guilford Press.

Jackson, Philip L., Eric Brunet, Andrew N. Meltzoff, and Jean Decety (2006), "Empathy Examined Through the Neural Mechanisms Involved in Imagining How I Feel versus How You Feel Pain," Neuropsychologia 44(5), 752-61.

Janis, Irving L., and Leon Mann (1976), "Coping with Decisional Conflict: An Analysis of How Stress Affects Decision-making Suggests Interventions to Improve the Process," *American Scientist*, 64(6), 657-67.

Jeannerod, Marc (1999), "To Act or Not to Act: Perspective on the Representation of Actions," *Quarterly Journal of Experimental Psychology*, 52A, 1-29.

Jones, Edward E., and Anderson C. Johnson (1973), "Delay of Consequences and the Riskiness of Decisions," *Journal of Personality*, 41(4), 613-37.

Kaplan, Martin F. (1987), "The Influencing Process in Group Decision Making," in *Review of Personality and Social Psychology: Group Processes*, ed. Clyde Hendrick, Newbury Park, CA: Sage.

Keltner, Dacher, Paul Ekman, Gian C. Gonzaga, and Jennifer Beer (2003), "Facial Expression of Emotion," in Handbook of Affective Sciences, R.J. Davidson, K.R. Scherer, and H.H. Goldsmith, ed. New York: Oxford University Press, 415–32.

Kihlstrom, John F., and Nancy Cantor (1984), "Mental Representations of the Self," *Advances in Experimental Social Psychology*, 17, 1-47.

Kupor, Daniella M., Zakary L. Tormala, Michael I. Norton, and Derek D. Rucker (2014), "Thought Calibration How Thinking Just the Right Amount Increases One's Influence and Appeal," *Social Psychological and Personality Science,* 5(3), 263-70.

Lamberton, Cait P., Rebecca W. Naylor, and Kelly Haws (2013), "Same Destination, Different Paths: When and How Does Observing Others' Choices and Reasoning Alter Confidence in Our Own Choices?" *Journal of Consumer Psychology*, 23(1), 74-89.

Lerner, Melvin J. (1980), *The Belief in a Just World: A Fundamental Delusion*, New York: Plenum Press.

Lewin, Kurt (1951), *Field Theory in Social Science: Selected Theoretical Papers*, Dorwin

    Cartwright (Ed.), London: Tavistock.

Luce, Mary F., James R. Bettman, and John W. Payne (2001), "An Integrated Model of Trade-

    off Difficulty and Consumer Choice," *Journal of Consumer Research*, 1(11), 11-35.

Mann, Leon, Irving L. Janis, and Ruth Chaplin (1969), "Effects of Anticipation of Forthcoming

    Information on Predecisional Processes," *Journal of Personality and Social*

    Psychology, 11(1), 10-16.

McFerran, Brent, Darren W. Dahl, Gavan J. Fitzsimons, and Andrea C. Morales (2010), "I'll

    Have What She's Having: Effects of Social Influence and Body Type on the Food

    Choices of Others," *Journal of Consumer Research*, 36(6), 915-29.

Miller, Neal E. (1944), "Experimental Studies of Conflict," in Personality and the Behavior

    Disorders, Hunt, J. McV, Oxford, England: Ronald Press, 431-65.

Neuberg, Steven L., Robert B. Cialdini, Stephanie L. Brown, Carol Luce, Brad J. Sagarin, and

    Brian P. Lewis (1997), "Does Empathy Lead to Anything More Than Superficial

    Helping? Comments on Batson et al." *Journal of Personality and Social Psychology*,

    73(3), 510-16.

Parker, Jeffrey R., and Rom Y. Schrift (2011), "Rejectable Choice Sets: How Seemingly

    Irrelevant No-choice Options Affect Consumer Decision Processes," *Journal of*

    Marketing Research, 48(5), 840-54.

Preston, Stephanie D., and Frans De Waal (2002), "Empathy: Its Ultimate and Proximate Bases,"

    Behavioral and Brain Sciences, 25, 1-72.

Prinz, Wolfgang (1997), "Perception and Action Planning," *European Journal of Cognitive*

    Psychology, 9, 129-54.

Ross, Lee, David Greene, and Pamela House (1977), "The False Consensus Effect: An

    Egocentric Bias in Social Perception and Attribution Process," *Journal of Experimental*

    Social Psychology, 13(3), 279-301.

Rucker, Derek D., Richard E. Petty, and Pablo Briñol (2008) "What's in a Frame Anyway? A

    Meta-Cognitive Analysis of the Impact of One versus Two Sided Message Framing on

    Attitude Certainty," *Journal of Consumer Psychology*, 18, 137–149.

Schrift, Rom Y., Oded Netzer, and Ran Kivetz (2011), "Complicating Choice," *Journal of*

    Marketing Research, 48(2), 308-26.

Shalev, Edith, and Vicki G. Morwitz (2012), "Influence via Comparison-Driven Self-Evaluation

    and Restoration: The Case of the Low-Status Influencer," *Journal of Consumer*

    Research, 38(5), 964-80.

Simonson, Itamar (1992), "The Influence of Anticipating Regret and Responsibility on Purchase

    Decisions," *Journal of Consumer Research*, 19(1), 105-18.

Singer, Tania, Ben Seymour, John O'Doherty, Holger Kaube, Raymond J. Dolan, and Chris D.

    Frith (2004), "Empathy for Pain Involves the Affective But Not Sensory Components of

    Pain," *Science*, 303(5661), 1157-62.

Smith, Eliot R., Susan Coats, and Dustin Walling (1999), "Overlapping Mental Representations

    of Self, In-group, and Partner: Further Response Time Evidence and a Connectionist

    Model," *Personality and Social Psychology Bulletin*, 25(7), 873-82.

Small, Deborah A., and George Loewenstein (2003), "Helping a Victim or Helping the Victim:

    Altruism and Identifiability," *Journal of Risk and Uncertainty*, 26(1), 5-16.

Small, Deborah A., and Nicole M. Verrochi (2009), "The Face of Need: Facial Emotion

    Expression on Charity Advertisements," *Journal of Marketing Research*, 46(6), 777-87.

Stinton, Linda, and William Ickes (1992), "Empathic Accuracy in the Interaction of Male Friends Versus Male Strangers," *Journal of Personality and Social Psychology*, 62(5), 787-97.

Strayer, Janet, and William Roberts (1997), "Children's Personal Distance and their Empathy: Indices of Interpersonal Closeness," *International Journal of Behavioral Development,* 20(3), 385-403.

Suri, Rajneesh, and Kent B. Monroe (2003), "The Effects of Time Constraints on Consumers' Judgments of Prices and Products," *Journal of Consumer Research*, 30(1), 92-104.

Trevarthen, Colwyn (1979), "Communication and Cooperation in Early Infancy: A Description of Primary Intersubjectivity," in Before Speech: The Beginning of Interpersonal Communication, Margaret Bullowa (Ed.), CUP Archive, 321-47.

Wegner, Daniel M. (1980), "The Self in Prosocial Action," In D. M. Wegner and R. R. Vallacher (Ed.) The Self in Social Psychology, New York: Oxford University Press, 131-57.

White, Katherine, and Darren W. Dahl (2006), "To Be or Not to Be? The Influence of Dissociative Reference Groups on Consumer Preferences," *Journal of Consumer Psychology*, 16(4), 404-14.

Zeelenberg, Marcel (1999), "Anticipated Regret, Expected Feedback and Behavioral Decision Making," *Journal of Behavioral Decision Making*, 12(2), 93-106.