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Chapter 4

Framing Effects in Small-Group and Intergroup Negotiation: A Cognitive Perspective

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Introduction

Negotiation is a fundamental form of social interaction (Carnevale & Pruitt, 1992; Olekalns, 2002). It involves interactions between several parties with specific interests in one or several issues. According to cognitive models, negotiators' behaviors, strategies, and decisions are determined by their mental models about the issue at hand. Lately, the pervasive impact of cognition on behavior received considerable attention both in the decision making (Hastie, 2001) as well as in the negotiation literature (Olekalns & Smith, 2005). Factors that influence the development and activation of cognitive representation in the long-term memory of the decision makers and negotiators are of great importance in understanding the negotiation processes. The framing of the negotiation issues is such an important factor and it is also one of the most prolific areas of study in the judgment and decision-making research (Levin, Schneider, & Gaeth, 1998).

The aim of this chapter is to provide an overview of the theoretical approaches that address the framing effects at the individual level and to put forward a cognitive model of framing in small-group and intergroup negotiation. Small-group negotiations (with integrative potential) are situations in which group members with often conflicting interests communicate, exchange and share information trying to solve their disagreements in the pursuit of a common goal (Schei & Rognes, 2005). Very often the success of small-group integrative negotiation is evaluated as the extent to which the group reaches integrative agreements, namely the maximization of joint outcomes without endangering the individual interests (Beersma & DeDreu, 2002; Schei & Rognes, 2005). Intergroup negotiations are situations in which the negotiating partners are groups rather than individuals.

The studies exploring the framing effects in individual/group decision making as well as on negotiation are reviewed because decision making and

negotiation go hand in hand (Beersma & DeDreu, 2002; Schei & Rognes, 2005) and both need to be analyzed in order to fully understand the framing effects in group and intergroup negotiations. The chapter builds on team cognition (Rentsch & Whoer, 2004) and organizational cognition (Hodgkinson & Healey, 2007) literature to put forward a cognitive model for framing in small groups. The model argues that groups are information processing systems; they receive information, build, store, and use cognitive representations (Curşeu, 2006a).

Another core argument of the model is that several contextual (e.g., external threats, modes of information framing) and group dynamics (e.g., group composition, group level emotions) factors lead to specific information processing strategies and, as a consequence, different collective representations emerge at the group level (Curşeu, Schalk & Wessel, 2008). Specific group-level responses, attributed directly to framing are in fact the result of these collective representations and information processing strategies developed at the group level. Based on the proposed model, a set of theoretical propositions are put forward. These propositions have both practical and theoretical implications. The propositions identify factors that impact on group-level reactions to framing and therefore the most important practical implication is the possibility of identifying those factors open to manipulation that will reduce the negative consequences of framing effects especially in small-group negotiation. Moreover, these propositions have major theoretical implications in that they fill in a gap of theoretical developments in the field of group and intergroup negotiations. The theoretical propositions open new ways for testing the impact of framing on group and intergroup negotiation.

The chapter is structured in three main sections: (1) an overview of framing in decision making and negotiations and a review of research that addressed the issues of framing at the group level; (2) an integrative theoretical framework for small-group negotiation based on team cognition; and (3) an overview and a set of theoretical propositions concerning the factors that impact on group-level framing effects. The chapter concludes with the theoretical and practical implications of using this cognitive perspective to explore framing effects at the group level.

Current State of Research on Framing in Decision Making and Negotiation

The *gain-loss framing* effect (Kahneman & Tversky, 1979) is one of the most prolific areas of study in the judgment and decision-making research (Levin, Schneider & Gaeth, 1998) and it originally described a decision maker's ten-

dency to adopt a riskier or more conservative alternative depending on the way (probabilistically) similar alternatives are formulated (Tversky & Kahneman, 1981). Also known as risky shift effect, the gain-loss framing shows that decision makers have a tendency of being risk averse when the alternatives are framed as gains and risk seeking when the alternatives are framed as losses (LeBoeuf & Shafir, 2003; Tversky & Kahneman, 1981). The literature abounds with empirical studies supporting this risky shift (Maule & Villejoubert, 2007), yet the magnitude of effects differs across studies (Kühberger, 1998). Different types of framing (attribute, goal or risky choice framing) as well as several individual characteristics seem to explain the difference in the magnitude of the effects (Levin, Schneider, & Gaeth, 1998; Levin, Gaeth, Schneider, & Lauriola, 2002).

Among the three types of framing described by Levin and his colleagues, the risky choice framing seems to have the strongest impact on decision makers. With respect to individual differences, women are slightly more sensitive to the framing effects as compared to men (Fagley & Miller, 1990, 1997), people scoring high on need for cognition are less susceptible to framing (Curşeu, 2006b; Sieck & Yates, 1997; Simon, Fagley, & Halleran, 2004), people scoring very high or very low on risk taking are less likely to be influenced by the framing of a decision situation (Zickar & Highhouse, 1998) and people with a more analytical as opposed to a heuristic style of information processing are less susceptible to framing (LeBoeuf & Shafir, 2003).

Several cognitive (Gigerenzer, Hoffrage, & Kleinbölting, 1991; Jou, Shanteau, & Harris, 1996; Maule & Villejoubert, 2007), biological (Kahneman & Frederik, 2006; DeMartino, Kumaran, Seymour, & Dolan, 2006; Weller, Levin, Shiv, & Bechara, 2007), and affective models (Druckman & McDermott, 2008; Loewenstein, Webber, Hsee, & Welch, 2001) were advanced to explain the framing effect. Two cognitive models are especially important in explaining the gain-loss framing effect. According to the probabilistic mental models (PMM) framework (Gigerenzer, Hoffrage, & Kleinbölting, 1991), the framing effect results from the construction of a mental model of the decisional situation. This model is built around knowledge describing the decisional situation and the cognitive representations that are activated from the long-term memory. According to this model, a decision results from a comparison between the data describing the current situation and preexisting cognitive representations. The causal schema model (CSM) argues that the framing effect occurs because the alternatives are embedded in different cognitive causal schema (Jou, Shanteau, & Harris, 1996; Olekalns & Smith, 2005). Both, PMM and CSM explain the framing effect based on the

activated cognitive representations. The core argument in this representational approach is that the shift in the preferences documented in the framing studies is determined by the activation of specific knowledge structures (e.g., cognitive schema) (Nelson, Oxley, & Clawson, 1997).

Recent brain studies using functional magnetic response imagining in healthy respondents (DeMartino et al., 2006) or samples of patients with brain lesions (Weller et al., 2007) advanced biological explanations of the framing effect. The core argument advanced by these studies is that information framed as "potential gains" activates different brain regions than information framed as "potential losses." In other words, separate neural systems are responsible for dealing with information framed as potential gains or potential losses (Weller, et al., 2007). Amygdala activation was associated with a decision pattern similar to the one described in the classical framing tasks, namely with risk-averse behaviors for decision situations framed as potential gains and risk-seeking behaviors for decision situations framed as potential losses. Anterior cingulate cortex activation was associated with a decision pattern opposed to the general behavioral tendency reported in the literature, namely a risk-seeking behavior in the potential gain framing and risk-averse behavior in the potential loss framing (DeMartino et al., 2006).

Kahneman and Frederick (2006) argue that the results of these brain studies show that the general tendency to be risk seeking when loss frames are presented and risk-averse when gain frames are present is rooted in an emotional evaluation of the decision situation (amygdala is closely associated with emotional reactions). When the initial tendency to choose an alternative based on the emotional evaluation is suppressed (cortex activation), the behavior contradicts the general response pattern documented in the framing effect. To conclude, the brain imaging results fully support the theoretical argument that the sensitivity to the framing effect is closely related to the interplay between cognitive and emotional factors. This interplay is further elaborated in the emotional models that attempted to explain the framing effect (Loewenstein et al., 2001).

The risk-as-feelings hypothesis (Loewenstein et al., 2001) states that human behavior in decision situations and decisional outcomes result in part from emotional evaluations of the decision situation. That means that the impact of emotions on decision-making processes is not always mediated by cognitive processes, and it is the interplay between feelings and cognitive processes that will ultimately trigger behavior. The tendency of being risk seeking when decisions are framed as potential losses is due to the negative emotional connotation of the loss frame. It is this emotional evaluation that drives the decision-making behavior and not the rational analysis of the expected

values of the alternatives. In a study that tried to disentangle the impact of emotions on framing effect, Druckman and McDermott (2008) show that induced emotions impact on the sensitivity to the framing effect. Decision makers that experience enthusiasm display more risk-seeking behaviors and are less affected by the framing effect, while decision makers that experience distress are more risk seeking yet more sensitive to the framing effect. These results fully support the argument that the risk-seeking behavior in the loss frame is explained by the negative emotional connotation of the loss frame.

The empirical results reported by the proponents of the emotional explanations show that when explaining the framing effects, cognitive as well as emotional variables have to be taken into account. Recent arguments (Dane & Pratt, 2007; Kahneman & Frederick, 2006; Stanovich & West, 2000) show that the "two-process" theories of human cognition are the most suitable theoretical framework to incorporate the interplay between emotion and cognition. These "two-process" theories argue that between the perception stage and the WM space, knowledge is transformed through two interdependent processes: automatic and controlled processing (also known as intuitive vs rational or experiential vs rational thinking styles) (Dane & Pratt, 2007; Stanovich & West, 2000).

The automatic or heuristic information processing system (System 1) is, in evolutionary terms, older than the analytic or controlled information processing system (System 2). Information processing in System 1 is guided by general heuristics and does not impose computational constraints on the cognitive system because it relies on already existing schema stored in the long-term-memory space. These cognitive schema are acquired through experience and are a form of implicit inferences highly contextual and personalized. Contextual stimuli, very often emotionally charged, activate the heuristic information processing system leading to reactions/responses already stored in memory. Processing time is short and often the activation of System 1 is unconscious. The controlled or analytic information processing is based on explicit thought processes, and the speed of information processing in System 2 is slower than in System 1, putting high demands on the computational capacities of the cognitive system (Dane & Pratt, 2007; Stanovich & West, 2000). Nevertheless, the functioning of the two information processing systems is not independent. Although, the functioning of System 1 is influenced by slow and incremental learning processes, while the functioning of System 2 involves general abstractions and is influenced by short or sometimes nonrepetitive learning episodes, the two systems work hand in hand in generating any outcome for a goal-directed decision (Curşeu, Vermeulen, & Bakker, 2008; Hastie, 2001; Smith & DeCoster, 2000; Stanovich & West, 2000).

In a study using the image theory as a theoretical framework, Dunegan (1993) shows that characteristics of controlled information processing emerge when the decision situation is framed in negative terms (negative performance history), while automatic information processing is triggered when positive framing is used. These results are in line with the image theory predictions, namely that discrepancies between a desired outcome and the present state (positive performance is desired and negative outcomes are obtained in the present) trigger controlled information processing, while the congruence between the desired and present state will trigger a heuristic processing of the decision situation. The theoretical explanation makes sense in the type of framing problem Dunegan (1993) used.

However, for the most common types of problems (e.g., Asian disease problem), the theoretical argument of the image theory is not clearly applicable, in that choosing the "risky" alternative as opposed to the "safe" one cannot be clearly linked to a systematic or automatic type of processing. Maule and Villejoubert (2007) argue that researchers should pay more attention to the way in which the framing intervention (the way the decision is externally framed) influences the internal cognitive representation of the problem and also to the way in which the internal representation determines the choice behavior. The authors suggest a flow diagram of framing effects, starting with the external formulation of the decision situation, leading to the mental editing operations and the development of an internal representation. Based on this mental representation the alternatives will be evaluated and this will lead to the choice behavior. Because of the in-depth information processing, System 2 activation will most probably lead to a very complex and accurate mental representation, while System 1 will lead to simplified representation (Curşeu et al., 2008; Dane & Pratt, 2007).

Cognitive Frames and Framing in Small Groups

Only a relatively small number of studies (Paese, Bieser & Tubbs, 1993; Schurr, 1987; Tindale, Sheffey, & Scott, 1993) extended the research on framing from the individual level to the group and there is a scarcity of integrative theoretical accounts explaining the framing effects in group and intergroup negotiations (Curşeu & Schruijer, 2008). The most important empirical findings will be summarized further on.

Schurr (1987) reports two experimental studies in which he explored the impact of framing in terms of profit versus expense on risky purchase intergroup negotiations. Participants (MBA students in the first experiment and professional buyers in the second) were engaged in an intergroup negotiation

simulation in which half of the groups received the game information framed as profit, while the other half received it framed as expense; each negotiation pair consisted of one team from each condition (a profit framed team faced an expense-framed one). In line with the general behavioral tendency registered at the individual level, Schurr (1987) reports a similar tendency for negotiation teams. Teams receiving a positive, gain-oriented framing were more willing to compromise and preferred less risky negotiation outcomes, than their opponents who received negative loss-oriented framing. Bazerman, Magliozzi, and Neale (1985) reported that negotiators with a gain frame were more willing to compromise than negotiators with a loss frame (a concession represented as a loss weighs more than a concession represented as a gain). Schurr's (1987) study extends the results reported by Bazerman et al. (1985) from dyadic negotiations to intergroup negotiations. Next to the extension of framing research from individual to the group level, another core contribution of the paper is the use of respondents involved in purchase negotiations to validate the results obtained on a sample of MBA students.

Tindale et al. (1993) combined individual- and group-level analysis in a study that explored (a) the extent to which different configurations of group composition with respect to the framing received by the individual group members impact on the choice made by the group as a whole, as well as, (b) the extent to which group discussions lead to a shift in individual preferences expressed by the group members. The authors used three different group compositions based on the number of members within each group receiving a gain-versus-loss framing and showed that groups' preference for the risky choice increases with the number of group members receiving the negative loss framing. After the group discussions around half of the participants maintained their initial framing as well as their preference, while half changed either the framing, the preferences, or both. However, respondents that changed their preferences (selected alternative) did not change their initial frame of reference. Although the authors' claim that "cognitive change is not necessary for preference change to occur" (Tindale et al., 1993) may be a bit too strong, it can be argued that group discussions may lead (but not necessary have to lead) to individual behavioral and cognitive changes.

Paese, Bieser, and Tubbs (1993) conducted a similar study that explored the sensitivity to framing of groups composed of same-frame members. Their study shows that sensitivity to framing effects is much higher at the group level as compared to the individual level. In other words, groups accentuate the response tendency induced by the framing presented to the individual group members. Moreover, the study shows that groups that were reframed (the group task was framed in the opposite way) reduced the initial tendency of the

individual group members. The authors used the group polarization (Lamm & Myers, 1978) theory to explain the results. Along with the groupthink model, the polarization is in fact one of the most studied aspects of group decision (Jones & Roelofsma, 2000).

According to this theoretical approach, decisions are more extreme (polarized) as a result of group debate than the average of the initial individual judgments. Lamm's theory (Lamm & Myers, 1978) is centered round the assumption that the polarization of the group's final decision depends upon the initial position of the group members. If the group members initially have a more conservative attitude, this tendency will grow during the group discussion, and the group's final decision will be what the studies have called "the caution shift." If, on the contrary, the initial decisions of the group members were more risk-taking, the tendency will develop during the group discussion and then we shall talk about a "risky shift" (Lamm & Myers, 1978). Group polarization occurs in situations in which the group members share some kind of pre-discussion preference.

A cognitive explanation for the effect is that in this instance, the probability that more arguments are exposed in favor of the preferred alternative is higher than the probability of discussing arguments that favor other alternatives. Consequently, the level of persuasion of the arguments favoring the alternative preferred by the group members is higher than in the case of other alternatives. The polarization of the group decision hence appears because group members are exposed to a larger number of arguments favoring the alternative the entire group prefers (Burnstein, 1982).

So far the theoretical developments explaining the framing effects at the group level are rather scarce. Group decision-making theories (e.g., group polarization, social decision scheme theory) were used to explain the results of the studies summarized above. However, with the integrative theoretical approaches missing and little empirical evidence, the field of group negotiation and especially intergroup negotiation would benefit from a greater consensus on theoretical developments. The team cognition literature provides a useful framework for looking at the framing effects at the group level and to serve this particular need in the field of group and intergroup negotiations. Group cognition theories, argue that groups act as information processing units and cognitive science concepts can and should be used in order to make sense of the way in which these socio-cognitive systems process information. The next section extends the cognitive perspective on framing from the individual level of analysis to group and intergroup negotiation. A representational approach developed from the team cognition literature is used to explain the role of framing in group and intergroup negotiations.

A Team Cognition Approach to Framing Effects in Groups

Several models developed in the team cognition literature explore the way in which the individual knowledge of the group members is combined to generate group decisions or solutions. The *information sampling model* (Stasser & Titus, 1985) tackles the issue of information distribution within groups and shows that group decisions often do not reflect the knowledge of all group members. Groups have a tendency of overusing the information shared among all group members and ignoring the unique information held by only one group member (Stasser & Titus, 1985). Team cognition will therefore incorporate the shared rather than the unshared information.

Larson, Foster-Fishman, and Keys (1994) argue in favor of a specific systematic temporal pattern in combining the shared and distributed information in groups. They show that groups have the tendency of discussing the shared rather than unshared information during short discussions or during the first part of longer ones. Distributed knowledge can be dominant during the final parts of long debates. Moreover, they show that the information discussed in the first stages of group discussion will have a greater impact on the way the issue at hand (decision/negotiation) will be framed by the group. Wyer (1988) shows that information discussed earlier during debates, has a greater impact on judgments, opinions, and preferences than the information discussed in the later stages. Moreover, Worchel and colleagues (1992) suggest that the overuse of shared information is accentuated in newly formed groups. In these groups, pressure for conformity is greater and the members are motivated to underline the similarities with group companions in order to create cohesion and group loyalty (Worchel, Countant-Sassic, & Grossman, 1992).

The *shared mental model approach* is yet another important stream in the team cognition literature that explains the way in which groups perform cognitive tasks and argues that group members have to share a common understanding of the group's task, environment and identity in order to perform effectively. In other words, the group's shared mental model addresses the way in which knowledge representations are shared among group members (Cannon-Bowers, Salas, & Converse, 1993). According to Mohammed and Dumville (2001), "team mental models are team members' shared, organized understanding and mental representation of knowledge about key elements of the team's relevant environment" (Mohammed & Dumville, 2001: 90; also Mohammed, Klimoski, & Rentsch, 2000). The general shared mental model thesis states that *in order to work together successfully, group members must perceive, encode, store, and retrieve information in similar ways.*

Although team cognition research was dominated by the shared cognition arguments ("shared representations are good for performance" or "shared representations have a stronger impact on the group than the unshared ones"), recent developments started to take into account the emerging nature of team cognition (Curşeu, 2006a; Rentsch & Woehr, 2004). Team members use their individual cognitive schema (frames of reference) to make sense of the task, and group cognition emerges from the interactions among team members. Knowledge representation at the group level is done in an interactive manner. The collective representation developed by the group cannot be reduced to the sum of individual cognitive representations (as it is often assumed in the shared cognition approaches). Individual cognitive schema are continuously adjusted during group interactions. Pinkley and Northcraft (1994) report that negotiators' conflict-related frames of reference (schemata) mutually influence each other and have a tendency to converge after interpersonal interactions.

Moreover, De Dreu, Carnevale, Emans and van de Vliert (1995) show that negotiators are affected by the frames of reference held by their counter party, yet other studies (Tindale et al., 1993) find that individual cognitive schemata will not completely change based on the interpersonal interactions. This interdependence of the individual frames of reference (cognitive schema) will ultimately result in a collective cognitive structure that characterizes the group as a whole. The team cognition-as-emergence approach (Curşeu, 2006a; Curşeu, Schruijer & Boroş, 2007) argues that the process of structuring the collective representations is a dynamic one, in which individual cognitive schemata coevolve to generate a collective frame of reference that will be used by the group to tackle the task. When the group makes a choice, it can be argued that the collective representation reached a sort of stability.

The structure of the collective representation thus formed can be formalized as a conceptual network, a production rule, a narration, a cognitive schema and cognitive scenarios or as an artifact representation. When the group collective representation reaches stability, the group will most probably make a decision according to this representation. If the individual representations are congruent, the consensus between the group members is reached quickly and the collective representation is stabilized immediately. A core characteristic of this collective representation with a positive impact on group performance is its conceptual richness, defined as group cognitive complexity (Curşeu, Schalk, & Schruijer, 2010).

The cognition-as-emergence perspective is especially relevant in addressing integrative small group negotiation. In small-group integrative negotiation,

group members are likely to bring different interests, opinions or perspectives to the table (Bazerman, Curhan, & Moore, 2000; Carnevale & Pruitt, 1992). The challenge of the group negotiation is therefore to find ways to integrate these (ultimately cognitive) differences. The extent to which team cognition encompasses all interests and perspectives of the group members, will influence the degree of integrative agreements achieved by the group. When the individual interests diverge, a highly complex collective representation is expected to lead to integrative agreements to a higher extent than a simple collective representation. All the factors that impact on the complexity of this emergent collective representation (group's cognitive complexity, Curşeu et al., 2007) will in the end impact on the integrative agreements reached by the group. Although to date, only group diversity was empirically explored as the main antecedent for the cognitive complexity of groups (Curşeu et al., 2007; Curşeu et al., 2010), several other factors that were directly related to integrative agreements in small-group negotiation (e.g., collaboration norms, decision rules and procedures, communication style, see for details Bazerman et al., 2000) could in fact impact on the integrative agreements through the complexity of group emergent cognitive structures. Based on these arguments, the first general theoretical proposition is:

Proposition 1. In small-group negotiation, group cognitive complexity is beneficial for integrative agreements.

The literature on framing effects at the group level distinguishes between the framing received by the individual group members and the framing received by the group as a whole. A group as an entity receives a particular framing when the information available for the group as a whole is framed in a certain way (e.g., gain vs. loss) or a group can have a certain frame because the individual members of the group bring in the information framed in a particular way. Although not independent, the two ways of "framing groups" should be treated separately, especially because different theoretical frameworks can be applied to make sense of them.

   First, the availability (at the group level), of information framed in a particular way (e.g., danger vs. neutral in Curşeu & Schruijer, 2007 or gain vs. loss in Paese, Bieser, & Tubbs, 1993) leads to the elaboration of a particular group level schema, which in turn impacts on the negotiation behavior of the group. Because it focuses on the group as a cognitive system, group cognition-as-emergence is the most suitable theoretical framework to explore this particular effect. As argued in the framing literature discussed earlier, people seem to display rather consistent ways of representing infor-

mation framed as gains and losses. As a consequence, the group-level behaviors under different framing conditions should match the results reported at the individual level of analysis. The second general theoretical proposition is:

Proposition 2. Groups under a gain frame have a tendency of being risk averse, while groups under a loss frame have a tendency of being risk seeking.

Third, the individual frames of the group members (e.g., gain vs. loss, in Paese, Bieser & Tubbs, 1993; Tindale et al., 1993) will impact on the group outcomes. Because the emergent group-level cognition results from the interplay between the individual frames of reference, the individual frames will become part of the general group frame of reference. This focus on the shared knowledge (frames of reference) within groups makes the shared mental models as well as information sampling models useful frameworks to analyze this particular framing effect. Moreover, because the individual frames of the group members are at stake in this perspective, insights from the group diversity literature could be useful to further explore this particular type of framing. Due to the tendency of overusing the shared frames of reference, team cognition will ultimately reflect the frame shared across group members. If all the group members have access to the same aspects of the decision space (have the same representation about the decision situation), the probability of developing analogue cognitive representations at the group level is considerable. This argument is in line with the results reported by Paese et al. (1993) and Tindale et al. (1993).

Proposition 3. In small-group negotiation a shared tendency to react to a particular frame, is accentuated after group discussions.

Results concerning the direct effect of framing on concession making under different frames shows that individuals receiving a loss frame are less likely to make concessions as compared to individuals receiving a gain frame. Negotiators are in general concerned with their own outcomes and as a consequence when they face the prospect of loosing something after negotiation, they find it more difficult to make further concessions (Carnevale & Pruitt, 1992). The general theoretical proposition concerning intergroup negotiation is:

Proposition 4. In intergroup integrative negotiations, groups under a loss frame are less likely to make concessions as compared to groups under a gain frame.

Some external conditions as well as the internal dynamics of the group generate affective reactions (e.g., group emotional climate) that will impact on the style of information processing in the individual group members and therefore on the emergence of group cognition as well as on the group's sensitivity to framing. Also group composition in stable individual differences (e.g., differences in cognitive styles, need for cognition or attitude towards risk) impacts on team cognition and therefore could influence groups' sensitivity to framing effects. These interaction effects will be discussed in the forthcoming sections and the core arguments of a cognitive approach to framing effects at the group level are summarized in the model presented in Figure 4.1.

Figure 4.1. A group-level cognitive model of framing.
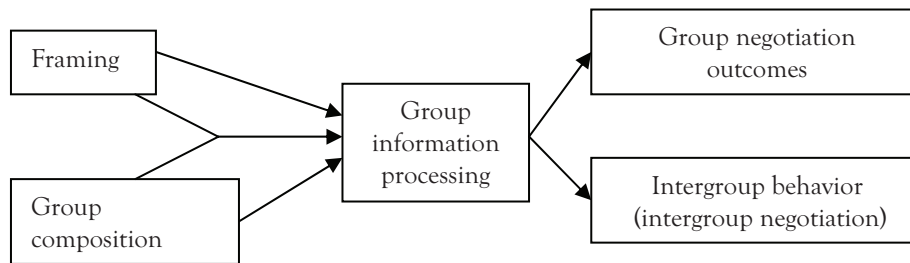
Framing and the Emotional Climate of the Group

Emotions and emotional experiences have a pervasive influence on the course of negotiation (Barry, 2008; Druckman & Olekalns, 2008). Groups experience emotions as a result of the interpersonal interaction processes and various group events (Smith, Seger, & Mackie, 2007). The functioning of System 1 is strongly influenced by the emotions experienced at the time of decision. As argued before, the framing effect at the individual level is the result of a heuristic information processing associated with the activation of System 1. Moreover, the results of the brain imaging studies support the fact that responses consistent with the general tendency reported in the framing literature are associated with amygdala activation, and framing effects can be conceptualized as an affect-driven heuristic (Kahneman & Frederick, 2006; DeMartino et al., 2006; Weller et al., 2007).

It is therefore not unreasonable to argue that the way groups react to gain versus loss frames is influenced by the emotional climate of the group. In small-group negotiation, a wide variety of empirical studies explored the relationship between mood and cooperation, yet the results are mixed and inconclusive (Bazerman et al., 2000; Carnevale & Pruitt, 1992). Hertel, Neuhof, Theuer, and Kerr (2000) argue that the impact of mood on cooperation is mediated by information processing styles (heuristic vs. analytic). Positive mood will not simply make people more cooperative, but would rather trigger a heuristic type of information processing and simpler decision processes. Moreover, the way in which the cooperation is conceptualized in most experimental studies (e.g., chicken dilemma games in Hertel et al., 2000, collective action dilemma in Fleishman, 1988) actually refers to concession making.

At the individual level, Carnevale (2008) reported evidence that positive emotions moderate framing effects in negotiations. He shows that negotiators experiencing positive emotions are less likely to make concessions when the negotiation issue is framed as gain (due to the fit between the emotional state of the negotiator and the state induced by the framing, concessions loom larger in the domain of gain). Therefore, under positive mood, individual negotiators seem to exhibit patterns of behavior opposite to the ones reported in the framing effect in negotiations (Bazerman et al., 1985; Schurr, 1987). In other words, when they experience positive emotions, individual negotiators are more risk averse under a loss frame and more risk seeking under a gain frame. These results are in line with the ones reported by Druckman and McDermott (2008) showing that enthusiasm leads to risk-seeking behaviors across frames.

Less attention was so far devoted to disentangle the implication of group-level emotions on negotiation behavior. Recent empirical evidence shows that groups experiencing a positive emotional climate have a stronger tendency to act rather than reflect and discuss as compared to groups that experienced negative emotions (Smith et al., 2007). It seems that positive emotions have a positive effect on group identification and at the individual level they stimulate a heuristic type of information processing (the activation of System 1). This means that group members experiencing a positive mood will be motivated to preserve the positive emotional climate in the group and thus they will have a tendency to converge fast to a final position, without debating or challenging the dominant view within the group. The theoretical propositions developed further on follow this general argument, that impact of emotions on negotiation behavior in different framing conditions is mediated by information processing.

In small-group negotiation, positive mood increases the probability that negotiators will make concessions (Fleishman, 1988; Hertel et al., 2000). In other words, the impact of positive mood seems to stimulate the extent to which negotiators are willing to make concessions rather than to generate real cooperation in exploring the integrative potential in negotiation. In negotiation with integrative potential, concession making is not necessarily a positive way to achieve integrative agreements. Parties should explore in detail each others' interests in order to identify the integrative gains. In a positive mood, negotiators are more likely to (a) adopt a heuristic type of information processing and (b) make more concessions; therefore, they are less likely to explore the integrative potential of a negotiation situation. In integrative bargaining, negotiators usually start with a fixed pie representation of the negotiated issue and only later on during negotiation they change this frame and eventually adopt an integrative behavior (Bazerman et al., 1985). Given the arguments presented before, in groups experiencing a positive emotional climate, this fundamental bias is likely to be accentuated, therefore groups are expected to make few concessions, especially if they have a gain frame on the negotiated issue. Therefore, in intergroup settings, if the negotiating group has a gain framing and experiences a positive emotional climate, it is likely that concessions loom larger than in a loss frame and are therefore less likely to be made.

Proposition 5. Group-level positive emotions reduce the task-related dissent (task conflict) and therefore increase the likelihood of a heuristic as opposed to systematic/analytic information processing.

Corollaries:

In small-group negotiations with integrative potential, a positive emotional climate reduces group cognitive complexity and as a consequence the probability of integrative agreements.

In intergroup integrative negotiations, groups experiencing positive emotions are less likely to make concessions in a gain frame (thus take greater risks) as compared to a loss frame.

For the negative emotions the empirical results concerning the framing effect are less consistent. Some studies show that negative emotions are associated with a dominance of System 2–type information processing. In other words, when experiencing negative emotions, decision makers and negotiators tend to find explanations to explore the cases of the negative emotional state

(Schwarz, 2000). Nevertheless, research on the role of threats in decision making (Jackson & Dutton, 1988; Staw, Sandelands & Dutton, 1981) and negotiations (Curşeu & Schruijer, 2008) show different patterns of results, namely a tendency to use a heuristic rather than an analytic information processing under threat. The *threat-rigidity hypothesis* (Jackson & Dutton, 1988; Staw, Sandelands & Dutton, 1981) posits that situations framed as threats will limit the information processing capabilities and will trigger well-learned and dominant responses as opposed to decision situations framed as opportunities that will lead to effortful information processing and better decision outcomes. This hypothesis is in line with the negativity bias, stating that the human cognitive system is more sensitive to information signaling danger and it reacts quicker and firmer to information signaling danger than to other types of incoming information (Baumeister, Bratslavsky, Finkenauer and Vohs, 2001). The quickest way to react is to use already existing heuristics stored in the long-term memory and this is why under threat people use a heuristic rather than analytic information processing style.

A possible explanation for these seemingly opposite results is that qualitatively different (negative) emotions have a differential impact on information processing. Druckman and McDermott (2008) show that anger encourages risk seeking, while distress encourages cautious reactions. Lerner and Keltner (2001) show that anger and fear influence judgment in risky decisions in opposite ways. Anger is associated with an optimistic view on future events and a high tendency to take risks; fear triggers more pessimistic views on future events and is associated with a lower tendency to take risks. Moreover, Smith et al. (2007) show that anger experienced at the group level leads to high-risk confrontational behaviors. Anger seems to be associated with a dominating behavior, competitive attitude, and risk-seeking behaviors (Van Kleef, Van Dijk, Steinel, Harinck, & Beest, 2008). Diffuse negative mood states are associated with a general tendency to process information in a more systematic and analytic way (Schwarz, 2000) and people experiencing negative emotions are often more realistic and accurate in their perceptions and judgments than people experiencing general positive emotional states (Alloy & Abramson, 1982).

Threats as manipulated in several experimental studies (Curşeu & Schruijer, 2007; Jackson & Dutton, 1988) most probably create distress and strong emotional reactions (anger or fear) and as a consequence will limit the information processing capabilities of the group and thus lead to a simplified information processing style. Negative feedback on group performance leads to more diffuse negative emotions and thus will have the opposite effects. In a diffuse negative emotional climate, groups will most likely try to find the causes of underperforming and thus engage in effortful information processing.

Proposition 6a. The presence of external threats leads to strong emotional reactions and as a result will increase the likelihood of a heuristic as opposed to systematic/analytic information processing.

Corollaries:

In small-group negotiations with integrative potential, the presence of external threats reduces group cognitive complexity and therefore the likelihood of integrative agreement.

In intergroup negotiations, groups under a threat frame are likely to adopt a defensive strategy and engage in fight/flight behaviors rather than explore in an analytic way the available information. Fight behaviors are very likely to occur when groups experience anger (based on an optimistic evaluation of being successful), while flight behaviors are very likely to occur when groups experience fear (based on a pessimistic evaluation of being successful) towards the negotiating partner.

Proposition 6b. The presence of negative feedback leads to a diffuse negative mood and as a consequence increases the likelihood of systematic/analytic as opposed to heuristic information processing.

Corollaries:

In small-group negotiations with integrative potential, diffuse negative emotions experienced by the group members increases the likelihood of integrative agreements.

In intergroup integrative negotiations, groups experiencing diffuse negative emotions are less likely to make concessions in a loss frame (thus take greater risks) as compared to a gain frame.

Group (Composition) Diversity and Framing

Group diversity has pervasive implications for group dynamics and performance. In most models of group effectiveness, group diversity is considered as an input variable, influencing the patterns of interaction within the group (group processes), which in turn has a direct impact on group emergent states and group outcomes (Illgen et al., 2005). As argued before, two aspects of group composition are relevant for the group framing literature. First, group members can

bring in the group discussion their own frame of reference on the issue at stake. This is a cognitive, deep-level diversity attribute that will most likely impact on group dynamics and ultimately on group outcomes. Second, group members can differ in several personal attributes associated with the sensitivity to the framing effect. People high in need for cognition as well as people with an analytic rather than heuristic style of information processing seem to display the opposite patterns of behavior to the framing effect. Diversity in these traits will most likely impact on a group's reaction to a particular frame.

Several taxonomies of group diversity have been put forward; the most recent one (Harrison & Klein, 2007) is especially relevant for further exploring framing effects in groups. Harrison and Klein (2007) distinguish between three forms of diversity: *separation* (differences in cognitive structures, beliefs, attitudes and values); *variety* (differences in functional background and type of expertise); and *disparity* (inequalities in status and power). Separation refers to differences in the lateral bimodal disposition of the group members on a continuum defined by a certain diversity trait with some at the highest endpoints (e.g., they have a gain frame), and others at the lowest endpoints of the considered variable's continuum (e.g., they have a loss frame). Variety refers to the composition of differences in kind, source or category of relevant knowledge or experience among group members. It reflects a uniform distribution, with even spread of members across all possible categories of a variable (e.g., a group high on variety is a group composed of psychologists, sociologists and anthropologists). Disparity refers to the composition of (vertical) differences in proportion of socially valued assets or resources held among unit members, pointing to an inequality or relative concentration. Disparity reflects a positively skewed distribution, with one member at the highest point on the continuum (one member is in a high power position) of the considered variable, others at the lowest (most of the members have no power) (Harrison & Klein, 2007).

The results concerning the impact of separation on small-group negotiation are rather scarce. Group separation in the framing received by the group members was manipulated in one study only. Tindale et al. (1993) show that group diversity in the framing received by the individual group members is highly relevant in explaining the effects of framing at the group level. Their study shows that the risk-seeking behavior at the group level increases with the number of group members who have a loss frame prior to debates. In other words, the study manipulates separation and shows that more within-group separation leads to less consistency in the way groups react to framing.

The impact of disparity on small-group negotiation is well illustrated by the studies on power differences in negotiation. Power inequalities received a considerable attention in the negotiation literature. Previous empirical studies show

that power disparity contributes to the asymmetry in influence between the parties involved in negotiation and as a consequence generate less integrative agreements (Mannix & Neale, 1993; Wolfe & McGinn, 2005). Integrative agreements depend on the extent to which parties exchange relevant information and under the condition of equal power distribution within groups, parties have a stronger motivation to try to understand each others' interest as compared to negotiation situations in which parties have unequal power. High-power group members are usually not motivated to try to understand the interests and points of view of the low-power group members, who are also more reluctant to communicate their interest to the other group members (Wolfe & McGinn, 2005). To summarize, power disparity leads to process losses in groups and as a consequence leads to less integrative agreements.

Several personal attributes were shown to impact on sensitivity to framing effects at the individual level (e.g., gender, cognitive style, need for cognition, attitude towards risk) and it is very likely that group variety on these attributes plays an important role in the group-level framing effects. These results open a very interesting area to be explored, namely the way in which group variety with respect to particular attributes impacts on framing effects at the group level. Based on the results reported at the individual level, it is not unreasonable to argue that group variety in attributes relevant for the framing effects leads to less consistency in the way groups react to framing.

Proposition 7. Horizontal within-group differentiation (group variety in framing relevant attributes—cognitive style, need for cognition) increases task-related dissent and the likelihood of an analytic as opposed to heuristic information processing, while vertical differentiation (power disparity) and separation increase the chance of process losses and likelihood of heuristic as opposed to analytic information processing.

Corollaries:

In group negotiation with integrative potential:

a) groups high on variety in framing related attributes reach higher levels of integrative agreements as compared to groups low on variety;

b) group separation in cognitive frames (gain vs. loss frames) increases the likelihood of process losses and therefore decreases the likelihood of integrative agreements;

c) groups high on power disparity are less likely to reach integrative agreements as compared to groups low on power disparity.

The three types of group diversity are not completely independent (Harrison & Klein, 2007). Their interaction is very likely to impact in the way groups react to the framing received by the individual members. The framing as gain received by a high-power member will influence the group more than the framing as gain received by the low-power members. Moreover, although group variety in framing-related attributes is expected to have a positive impact on the integrative agreements, the presence of power disparity can significantly decrease this effect.

Proposition 8. Group variety in frame-relevant attributes interacts with power disparity in such a way that high-power disparity decreases the benefits of variety.

Conclusions

The purpose of this chapter was to provide a review of the cognitive processes that influence sensitivity to framing in decision making and negotiation and to put forward a cognitive model for framing in small-group and intergroup negotiation. The chapter attempted a multilevel extension of information processing mechanisms from individual to teams in order to understand framing effects at the group level. Groups are conceptualized as information processing systems with representational properties, and the core argument is that framing ultimately impact on the integrative agreements and intergroup behavior through the group-level information processing mechanisms.

Another core argument of the model is that the impact of the interaction between framing and the emotional climate of the group as well as between framing and group composition impact on the group-level outcomes as well as intergroup behavior is also mediated by information processing. Several theoretical propositions are put forward starting from these theoretical arguments. These propositions open possible avenues for investigation of the specific aspects of framing at the group and intergroup level. First, the argument that different negative emotions interact with framing in distinct ways deserves further attention in empirical settings. Second, the three forms of diversity and their interaction with framing could also fuel interesting research agendas on framing effects at the group level. Finally, the chapter has also practical implications, in that group emotional climate and group composition are aspects relatively open to managerial manipulation and thus it points to ways of managing the sensitivity to framing effects in groups.

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