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Chapter 4

Outcome Frames in Bilateral Negotiation: Resistance to Concession Making and Frame Adoption

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ABSTRACT

This chapter reviews research and theory concerned with outcome frames in negotiation—the negotiator's conception of the dispute as involving gains (gain frame) or losses (loss frame). We argue that because losses are more aversive than equivalent gains are attractive, loss framed negotiators should display greater resistance to concession making and settle less easily than negotiators with a gain frame. A review of frame research supports this argument. Furthermore, we propose that during negotiations, disputants communicate about their frame, and tend to adopt the frame communicated by their opponent. Several experiments are reviewed that show this frame adoption effect to be likely especially when the negotiators themselves have a gain rather than a loss frame. The chapter concludes with a discussion of the importance of outcome frames to the escalation of social conflict.

INTRODUCTION

The stability of international relations, organizational effectiveness, and marital satisfaction all depend on how participants solve their social conflicts. Many conflicts are resolved through negotiation which occurs when two or more individuals try to settle a mutual conflict of interest, and have an incentive to cooperate with each other in an attempt to reach agreement, as well as an incentive to compete with each other in an attempt to obtain the largest share of the joint outcome (Carnevale & Pruitt, 1992; Rubin & Brown, 1975). Whether negotiators tend to cooperate or compete is affected by their subjective representation of the situation, of the issues at stake, and of the outcomes involved (Deutsch, 1973; Kelley & Thibaut, 1978; Neale & Bazerman, 1991). This chapter deals with one such subjective representation, namely the negotiators' *outcome frame*—the negotiators' conception of the dispute as involving gains and profits (gain frame), or as involving losses and costs (loss frame) (cf. Tversky & Kahneman, 1981). For example, if you wish to sell the car you bought for \$8,000 two years ago, you can evaluate someone's offer of \$3,500 as a gain relative to \$0. Conversely, you can evaluate the \$3,500 as a \$4,500 loss relative to the car's original value of \$8,000. Similarly, one can think about labor-management negotiations where a union claims an 8% raise whereas management argues for a 0% raise, both parties may view settlement at 4% as a gain (i.e. more than their opponent's initial position), but also as a loss (i.e. less than their own initial position) (Bazerman, 1983).

Research shows that, in general, negotiators with a gain frame demand less, concede more and settle more easily than those with a loss frame (for reviews, see Carnevale & Pruitt, 1992; Neale & Bazerman, 1991; Thompson, 1990). This chapter is a review of research and theory dealing with these and other effects of outcome frames in bilateral negotiation. Our goal is three-fold. First of all, there is the issue of what explains frame effects in bilateral negotiation. Why do gain framed negotiators demand less, concede more, and settle more easily than loss framed negotiators? Current research and theory tends to rely on either one of two explanatory constructs—loss framed negotiators' heightened risk-tolerance, and loss framed negotiators' heightened concern for own outcomes. We will critically discuss the evidence for each of the two potential explanations, in an attempt to determine whether both are really needed, or whether one or the other suffices. Second, we will discuss the accumulating evidence that negotiator frame and behavior are influenced by information about their opponent's gain or loss frame (De Dreu, Emans, & Van de Vliert, 1992a; Putnam & Holmer, 1992). Third we will delineate the relationship between outcome frames and conflict escalation, and examine the circumstances under which the loss frame leads to more conflict escalation than the gain frame.

NEGOTIATOR FRAMES: DEFINITIONS AND EXPLANATIONS

Negotiation may be conceived of as a complex decision making task (Neale & Bazerman, 1991; Raiffa, 1982), and although some decisions are made after careful scrutiny of the decision alternatives, most are made intuitively and on heuristic bases (cf. Chaiken, Liberman, & Eagly, 1989; Dawes, 1988). Consequently, negotiator judgment and decision making is likely to be affected by rules of thumb, and by simplifying mental representations. In particular judgments and decisions concerning one's own prospective outcomes may be affected by the negotiator *outcome frame*. As mentioned, the negotiator's outcome frame can be defined as the negotiator's cognitive representation of the potential outcomes associated with the negotiation. Specifically, the outcome frame indicates whether the negotiator views the dispute as positive involving gains and profits (gain frame), or as negative involving losses and costs (loss frame) (Kahneman & Tversky, 1979; Tversky & Kahneman, 1981). Gain framed negotiators then are more or less focused on the maximization of their gains, and they evaluate their own concessions as decreases in their gains. Loss framed negotiators are more or less focused on the minimization of their losses, and they evaluate their own concessions as increases in their losses (Bazerman, 1983; Carnevale & Pruitt, 1992).¹

Central to the frame concept is the *reference outcome* from which all other potential own negotiation outcomes are described. Negotiators have a gain frame when they rely on a relatively low reference-outcome, so that all possible outcomes are coded positively and evaluated as gains. When, in contrast, a relatively high reference-outcome is taken, possible outcomes will be coded negatively and evaluated as losses. According to Tversky and Kahneman (1981), the reference-outcome is judged neutral. It is supposed to correspond to a level of aspiration, or to a state to which one has adapted. Liebrand and Messick (1993), for example, assumed a person's reference-outcome to be the average of the outcomes of several people close to this particular person. Thus, when a negotiator anticipates outcomes that fall at or above the average

¹ The outcome frame is but one variant of a larger class of framing phenomena outlined by Kahneman and Tversky (1979; Tversky & Kahneman, 1981). Other frames relate to probabilities and expectancies as opposed to outcomes, or to the decomposition of the decision process into a coding stage and an evaluation stage. These decision making frames have yet not been exported into negotiation research, and are not discussed any further. However, negotiation research has discovered that in addition to the outcome frame other frames may affect negotiation and conflict management. Pinkley (1990; Pinkley & Northcraft, 1994) observed that disputants tend to frame the conflict in terms of task versus relationship, emotion versus intellect, and cooperative versus win conflicts. In line with Pinkley's cooperative versus win frame, Putnam (1990) distinguishes between integrative and distributive frames. These frames tend to deal primarily with the negotiation process and with the relational aspects of the conflict, and thus complement the outcome frame discussed and reviewed here.

outcome of his or her six colleagues, he or she is predicted to adopt a gain frame; if outcomes fall below the average outcome of his or her six colleague negotiators, he or she is predicted to have a loss frame.²

Unlike Prospect Theory (Kahneman & Tversky, 1979), negotiation theory tends to conceive of the level of aspiration as the goal for which one strives (Kelley & Thibaut, 1978; Rubin, Pruitt, & Kim, 1994; Siegel & Fouraker, 1960). This goal may change during negotiation, for example as a function of the opponent's behavior (Siegel & Fouraker, 1960; Yukl, 1974). In this chapter, we assume that the *level of aspiration* as conceived in negotiation theory does not determine the frame, but exists *within the frame*. To put it another way, it is assumed that gain framed negotiators have an aspiration about the amount of gains they attempt to achieve. Loss framed negotiators have an aspiration regarding the amount of loss they attempt to avoid. Likewise, both gain and loss framed negotiators have a *limit*—the minimum gain (or maximum loss) below (or above) which they refuse to concede (Pruitt, 1981). That is, in the example of the \$8,000 car you attempt to sell, with either the gain frame (\$0 as the reference-outcome) or the loss frame (\$8,000 as the reference-outcome), your level of aspiration may be \$7,000 (i.e., to gain at least \$7,000, or to lose \$1,000 at most). Similarly, your limit may be \$6,000, or, to put it another way, your limit is a \$6,000 gain, or a \$2,000 loss.

Explanations of Frame Effects in Negotiation

Although perhaps a dozen different explanations may be put forward, negotiation research tends to rely on either one of two general explanatory constructs—heightened *risk-tolerance* (Bazerman, 1983; Bottom & Studt, 1993; Lax & Sebenius, 1986; Neale & Bazerman, 1991; Olekalns & Frey, 1994), and heightened *concern for outcomes* (Carnevale & Pruitt, 1992; De Dreu *et al.*, 1995; Kahneman, 1992; Ross & Nisbett, 1991). Both explanations assume that framing outcomes as gains or as losses has important implications for the evaluation of prospective outcomes in terms of subjective utility and

² We assume that negotiators operate on the basis of one reference-outcome, not two or more, and thus adopt either a gain frame or a loss frame (cf. Kahneman & Tversky, 1979). This assumption is inspired by Prospect Theory and parallels similar assumptions made in the domain of schemata (e.g., Fiske & Taylor, 1991). Recent research tends to challenge this assumption by showing that people may use multiple reference-outcomes in judging satisfaction with a particular outcome (Boles & Messick, in press). These studies show that a loss (compared to the status quo) evokes more satisfaction than a gain (compared to the status quo) when a relevant comparison other incurs a greater loss, or a larger gain, respectively. It should be noted, however, that this evidence pertains to *observers* judging how (dis)satisfied an *actor* would be given a particular outcome. That observers use multiple reference-outcomes in evaluating an actor's outcome does not necessarily mean that the actor is doing the same thing. Rather, we expect the actor to rely on one reference-outcome, either the status quo, or the outcome obtained by the relevant comparison other. Further research is needed, however, to settle this issue.

thus for subsequent decision making. How objective outcomes represented as either gains or losses relate to subjective utility is depicted in Figure 4.1, which is based on Kahneman and Tversky's (1979) value function. The value function is part of Prospect Theory, which was developed basically to deal with risky decision making, but which also incorporates important propositions about human behavior when no risk is at stake.

The value function incorporates two variables that may explain the effect of frame on negotiator motivation and behavior. First, frame affects risk-tolerance. This derives from the fact that the value function is *concave* in the case of a gain frame, and *convex* in the case of a loss frame. In other words, the growth in positive (or negative) subjective utility is larger when the increase in gains (or losses) is from \$0 to \$4,000, than from \$4,000 to \$8,000. This decreasing sensitivity has an important implication for decision making under uncertainty in general. Imagine that someone faces the choice between a sure \$4,000 gain on the one hand, and a fifty-fifty chance on \$0 or \$8,000 on the other. As can be seen in Figure 4.1, the \$4,000 gain yields more positive utility than the sum of 50% on a \$0 gain and 50% on a \$8,000 gain. To put it another way, the risky option is less attractive than the sure gain. Provided that decision makers attempt to maximize their subjective utility, they will, in the case of a gain frame, choose the certain alternative. Conversely, a certain \$4,000 loss yields more negative subjective utility than the sum of 50% on a \$0 loss and 50% on a \$8,000 loss. Now the risky option is more attractive than the certain loss. The value function thus predicts that in case of a choice between a sure thing and an uncertain alternative *with equivalent expected value*, gain framed decision makers are risk-averse, whereas loss framed decision makers are risk-seeking (for evidence and discussions, see Budescu & Weiss, 1987; Fagley, 1993; Fagley & Miller, 1990; Hershey & Schoemaker, 1980; Kahneman & Tversky, 1979; Schneider, 1992; Schneider & Lopes, 1986; Van der Pligt & Van Schie, 1990).

In addition to risk-tolerance, frame impacts on the concern for own outcomes. Figure 4.1 shows that the value function is steeper for losses than for gains, reflecting the well-documented fact that losses are more aversive than equivalent gains are attractive. Thus, whether a loss or a gain frame is adopted may affect decision making because losses are more aversive than gains are attractive (Budescu & Weiss, 1987; Kahneman & Tversky, 1979; Tversky & Kahneman, 1991). In the realm of union-management negotiations, Ross and Nisbett (1991, p. 64) illustrated this loss-gain asymmetry by noting that 'union militancy was spurred less by promises of gain than by the threat and experience of loss. In particular . . . the most stormy epoch in the history of organized labor, came in the early part of the twentieth century at a time when the influx of jobless immigrants prompted employers to cut wages'. Tversky and Kahneman (1991, p. 1045) argued on the basis of more experimental material that 'a given difference between two options will generally have greater

Figure 4.1 An example of the value function based on Prospect Theory

impact when it is evaluated as a difference between two losses . . . than when it is viewed as a difference between two gains'.

This second component of Prospect Theory captures additional differences in the way people deal with losses as opposed to gains, such as the fact that losses are to be avoided whereas gains are attracted. This parallels the fact that negative stimuli such as losses evoke more causal analysis, deeper processing, and more intense emotions (for reviews, see Taylor, 1991; Peeters & Czapinski, 1990). Research indeed shows that compared to prospective gains, prospective losses evoke more 'inner conflict', as exemplified by lower decision speed (De Dreu, Emans, & van de Vliert, 1992a; Dehue, McClintock, & Liebrand, 1993; Smith & Epstein, 1967), higher arousal (Losco & Epstein, 1977), and lower consistency over decision trials (e.g., Schneider, 1992). In line with this, Schneider (1992, p. 1054) argued that 'people have a stronger desire to minimize losses than to maximize gains'.

When its components are taken together, Prospect Theory suggests that the outcome frame may affect decision making in general, and negotiation in particular because the loss frame leads to more tolerance toward risky strategies, and because the loss frame enhances the negotiator's concern for own outcomes. Although both explanations may very well co-exist, there is tendency in the current literature to rely upon either one or the other. In the

following sections, we will review the theoretical and empirical issues underlying both explanations, in an attempt, for reasons of parsimony, to determine whether both explanations are needed, or whether one or the other suffices.

Risk-Tolerance Explaining Negotiator Frame Effects

Originally, scholars assumed frame effects in bilateral negotiation to be due to the fact that frame affects risk-tolerance (e.g., Bazerman, 1983; Bazerman, Magglozzi, & Neale, 1985; Neale & Bazerman, 1985; see also Lax & Sebenius, 1986; Olekalns & Frey, 1994). For example, Bazerman (1983) assumed that negotiation involves decisions between options varying in their degree of uncertainty. He conceived of negotiation as a choice between, for instance, the adversary's current proposal (e.g., \$4,000) and the possible outcomes that an arbitration would yield in the case of non-agreement (e.g., a 50/50 chance on \$0 or \$8,000). Whereas other's current offer is a sure thing, arbitration in case of non-agreement is uncertain: depending on the arbitrator's decision, it either yields higher or lower outcomes than other's offer. On the basis of Prospect Theory's value function, Bazerman (1983) argued that gain framed negotiations are more aversive of this risky arbitration and thus of non-agreement than loss framed negotiators. The former consequently demand less, concede more and settle more easily than the latter.

Results of several studies were originally interpreted as supporting this *risk-hypothesis*. In an experimental study of union-management negotiations, Neale and Bazerman (1985) instructed half of their subjects to attempt to maximize their gains, and the other half to attempt to minimize their losses. Subjects were told that in case of non-agreement, arbitration would decide whether the subject's or the opponent's position would be settled upon. Subjects all assuming the role of the management representative thereafter negotiated settlement on vacation pay, medical plan, wages, paid sick days, and night shift differential with a confederate assuming the role of the union representative. The confederates always pursued a reciprocal strategy, that is, they mimicked the subject's negotiation behavior. Subjects were given twenty minutes to reach agreement, and if they failed to settle within this time allotted, they were asked to submit a final offer to the arbitrator. This arbitrator then chose the final offer that represented the greatest overall concession. Results indicated that in case of a gain rather than loss frame, negotiators made larger concessions, resolved a greater number of issues, reported higher perceived fairness of the contract, settled more often, and reported lower perceived level of competition.

Neale and Bazerman concluded that their results supported the risk-hypothesis. They stated 'individuals are more likely to choose a certain outcome—the negotiation settlement—when evaluating the prospects of perceived gains. But when individuals evaluate the prospect of losses, they

behave in a more risk-seeking manner—they are more likely to choose the risky option of arbitration rather than to take what appears to be a certain loss' (Neale & Bazerman, 1985, p. 45). Unfortunately, however, this conclusion may have been somewhat premature. It is unclear what exact outcomes and probabilities were associated with the risky arbitration, making it difficult to interpret settlement as risk-averse behavior. That is, has risky arbitration indeed an expected value equivalent to other's offer, which represented the riskless option? Furthermore, the experimental design did not include a control condition in which no risky arbitration was to be anticipated and, according to the risk-hypothesis, no frame effects should have been found.

Other studies supposedly supporting the risk-hypothesis were conducted by Bazerman, Magliozzi, and Neale (1985), and Neale, Huber, and Northcraft (1987). Subjects in these studies participated in a competitive market negotiation—a room full of buyers and sellers trying to complete as many transactions as possible in the time allotted. One half of them negotiated over net profits regarding such issues as warranty, delivery time, and price (gain frame); the other half bargained over expenses that would cut into their gross outcomes (loss frame) (the objective outcomes were the same in both conditions). Negotiators were allowed to exchange any information they wished, but were not allowed to exchange their issue charts with their opposing party. Hence, parties were basically unaware of each other's frame. In addition, subjects in these studies were told that if they failed to reach agreement with a particular party, their outcome would be a definite zero. Results showed that gain framed negotiators settled more often than loss framed negotiators, and the authors concluded that this supports the risk-hypothesis. For example, the researchers stated that the study 'suggests that positively (gain) framed negotiators will be more risk averse . . . than negatively (loss) framed negotiators' (Bazerman, Magliozzi, & Neale, 1985, p. 298). Aside from uncertainty about finding a new opponent in case of non-agreement, however, negotiators in these studies anticipated absolute certainty about their outcomes in case of non-agreement. That is, they were told they would receive a zero outcome in case of non-agreement. Thus, because there was little or no risk involved, these data seem to violate one of the basic premises of the risk-hypothesis, namely that frame effects occur when uncertainty is associated with non-agreement.

We would argue, therefore, that the empirical evidence for the risk-hypothesis is not yet very convincing. Furthermore, this research relied on an early version of Prospect Theory in its infancy. More recent theoretical developments identified particular problems with, and limitations to Prospect Theory (e.g., Fagley, 1993; Schneider, 1992; Schneider & Lopes, 1986; Tversky & Kahneman, 1991). Relevant to the current discussion is that in order to explain negotiation as risk-seeking/avoiding, all decision alternatives should have equivalent expected value and vary only in their degree of uncertainty

(Lopes, 1987). Often this condition is not met. Also, the risk-hypothesis implies that negotiators should have complete information about both outcomes and associated probabilities, a situation that may be rare in most negotiations. Despite these problems, however, current research still tends to rely upon the risk-hypothesis (e.g., Bottom & Studt, 1993; Olekalns & Frey, 1994). In the next section, we discuss a potential alternative to explain frame effects in bilateral negotiation.

Concern for Own Outcomes Explaining Negotiator Frame Effects

The concurrent and perhaps more parsimonious explanation for frame effects in bilateral negotiation is, as mentioned earlier, based on the robust observation that the negative subjective utility of a loss exceeds the positive subjective utility of an equivalent gain. The implication is that it is more difficult and more painful to incur losses, and to lose resources, than to forgo gains and resources. In line with this, Kahneman (1992) argued that there exists 'concession aversion': The losses incurred by making concessions loom larger than the gains one makes by receiving other's concessions, and therefore, concessions are difficult to make. Research on the Endowment Effect (e.g., Kahneman, Knetsch, & Thaler, 1990; Tversky & Kahneman, 1991) similarly shows that when given the opportunity to trade one's resources (e.g., a coffee mug, or five dollars) for those of someone else (e.g., five dollars, or a coffee mug), people tend to perceive their own resources as twice as valuable as those of the other party. Thus, people ask for twice as much as they are willing to pay, regardless of what goods are traded. Apparently, losing something one possesses is much harder and more painful than receiving it is pleasant and satisfying.

These arguments can be combined to form a *resistance-hypothesis*: compared to a loss framed negotiator, a gain framed negotiator has lower resistance to concession making, and will therefore demand less, concede more and settle more easily (cf. Carnevale & Pruitt, 1992). Notice that, contrary to the risk-hypothesis, the resistance-hypothesis assumes the negotiator frame to affect the negotiator's concern for own outcomes, and predicts frame effects to occur regardless of the presence or absence of uncertainty in the case of non-agreement. The data originally seen as supporting the risk hypothesis (Bazerman, Magliozzi, & Neale, 1985; Neale, Huber, & Northcraft, 1987; Neale & Bazerman, 1985) may be readily interpreted as confirming this more parsimonious resistance-hypothesis. In addition, the resistance-hypothesis may nicely account for the recent finding (explained by the authors in terms of risk-tolerance) that negotiators with a gain frame are sensitive to being more or less powerful than their opponent, whereas loss framed negotiators are not (Olekalns & Frey, 1994). Since the gain framed negotiators have less internal resistance to concession making, having less power than the opponent leads to

much more concession making than having more power. But the loss framed negotiators' high resistance to concession making may counteract to some extent the tendency to yield in case of a disadvantaged bargaining position.

Both the risk-hypothesis and the resistance-hypothesis may be equally valid, and both may co-exist. However, the preceding sections revealed some important shortcomings of the risk hypothesis. The explanation in terms of concern for own outcomes does not appear to suffer from such drawbacks, is more generally applicable (i.e. to situations with and without uncertainty), and appears to be more parsimonious. On top of this, the evidence presented in favor of the risk-hypothesis can be easily understood in terms of the resistance-hypothesis, whereas the reverse is not always true. The pivotal question thus is whether we need the risk-hypothesis to explain effects of outcome frames in bilateral negotiation. In an attempt to answer this question, Carnevale, Gentile, and De Dreu (1993) tested the risk-hypothesis and the resistance-hypothesis simultaneously. Since this experiment used a methodology typically used in our research, we will discuss its methods and procedures in some detail.

Subjects in the Carnevale, Gentile, and De Dreu (1993) experiment were undergraduate students assuming the role of sellers in a buyer-seller negotiation. Each subject was seated in front of a personal computer, connected to a central server. All instructions, the negotiation task, and a post-negotiation questionnaire appeared on the computer screen; responses to questions, written statements to the opposing negotiator, and counter-offers during negotiation all had to be communicated through the keyboard connected to the computer. Subjects were told that they would negotiate with another participant (the buyer), who in fact was simulated by a pre-programmed computer. Subjects then received some task-instructions, including an issue chart listing three issues (discount, delivery time, and financing terms, for a series of home appliances) with eight different settlement levels per issue (i.e., for discount, settlement could be reached on 10% discount, on 15% discount, on 20% discount, and so on). In the gain frame conditions, the issue chart contained positive numbers reflecting one's net profit at a particular settlement level (e.g., settling on a 15% discount resulted in a net profit of 1,800 whereas settling on a 20% discount would result in a net profit of 1,500). The minimum net profit summed over the three issues was 0, the maximum was 8,000. In the loss frame conditions, the issue chart contained negative numbers reflecting costs cutting into one's Gross Outcomes of 8,000. Thus, settling on a 15% discount resulted in a loss of 600, whereas settling on a 20% discount would result in a loss of 900. The maximum loss summed over the three issues was 8,000, the minimum was 0.

To ensure sufficient motivation to negotiate seriously, subjects were told that at the end of the study, their personal earnings from the negotiation would be converted into lottery tickets giving them a chance at winning one of

five 20-dollar prizes. After some practice rounds to familiarize themselves with the computer and the task, subjects received a first (quite unattractive) offer from their opponent. Subjects were prompted to make a counter-offer, and, if they wanted, to create and send a written message to their opponent. This procedure continued for a maximum of six rounds. The pre-programmed strategy pursued by the buyer was non-contingent upon the subjects' concession pattern, and also constant over experimental conditions. After six exchanges of offers, the negotiation was interrupted and some questions had to be answered. Hereafter, subjects were debriefed, and thanked for their time.

Carnevale, Gentile, and De Dreu (1993) tested the risk-hypothesis in the following way. Besides outcome frame, they manipulated the absence versus presence of risk by telling the subjects that, in the case of non-agreement, there would be a coin flip yielding a 50/50 chance on \$6,000 or \$0 (risky condition), or by telling them that in the case of non-agreement, they would get \$3,000 for sure (riskless condition). If the risk-hypothesis is valid, that is, if outcome frame affects negotiation because it affects risk-tolerance, outcome frame should have an impact on negotiation behavior only in the risky condition, and not in the riskless condition (where variations in risk-tolerance do not matter). According to the resistance-hypothesis, presence or absence of risk should not matter, and hence outcome frame should impact negotiation irrespective of the presence or absence of risk. This is exactly what was found: negotiators demanded more and conceded less when they had a loss rather than a gain frame, and this effect was not qualified by a two-way interaction between risk and frame. Thus, these data can be well understood in terms of the resistance-hypothesis, and the risk-hypothesis seems to be additional at best.

In addition to this, the Carnevale, Gentile, and De Dreu (1993) study provided rather compelling evidence for the resistance-hypothesis. Besides frame and risk, the experiment manipulated time pressure as a third independent variable. This was done by telling one half of the subjects prior to negotiation that 'you have 21 rounds of negotiation, which is plenty of time to reach agreement' (low time pressure condition), or that 'you have 7 rounds of negotiation, which is very little time to reach agreement' (high time pressure condition). Negotiation research has shown that negotiators with high resistance to concession making, for example due to high levels of aspiration, tend to be less affected by time pressure than negotiators without such strong resistance to making concessions (e.g., Carnevale, O'Connor, & McCusker, 1993; Smith, Pruitt, & Carnevale, 1982; Yukl *et al.*, 1976). Thus, if the resistance-hypothesis for effects of outcome frames is valid, one should expect loss framed negotiators to demand more and to concede less than gain framed negotiators, especially in case of high rather than low time pressure. This is exactly what Carnevale, Gentile, and De Dreu observed. Table 4.1 gives the cell means for negotiator demand and concession making (both averaged over

Table 4.1 Negotiator demand and concessions (averaged across rounds) as a function of time pressure and outcome frame

	Time pressure			
	High		Low	
	Gain frame	Loss frame	Gain frame	Loss frame
Concession	11.37 _a	9.55 _b	8.22 _b	8.15 _b
Demand	5,443 _a	6,043 _b	6,457 _b	6,315 _b

Note: For concessions, means could range between 0 and 27, with lower numbers indicating smaller concessions. For demand, means could range between 0 and 8,000, with higher numbers indicating higher demands. Cell means in each row with unequal subscripts are significantly different at $p < 0.05$.

Source: Carnevale, Gentile, and De Dreu (1993).

six rounds of negotiation). As can be seen, the loss frame leads to higher demands and smaller concessions, but especially in case of high time pressure.

Summary and Conclusion

The previous section reviewed the theoretical substance, and the empirical evidence for the two most popular explanations for effects of outcome frames on negotiation—risk-tolerance and concern for outcomes. This review strongly suggests that the older explanation—risk-tolerance—is theoretically problematic, and empirically not well supported. This conclusion is important since some recent research tends to continue to interpret frame effects in negotiation in terms of variations in risk-tolerance (Bottom & Studt, 1993; Olekalns & Frey, 1994). At the same time, our review suggests that the second explanatory construct—concern for outcomes—is theoretically sound and empirically validated. Moreover, concern for outcomes is a more parsimonious construct than risk-tolerance. Finally, concern for outcomes explains the data originally seen as supporting the risk-hypothesis, whereas the reverse is not always the case. In the following sections of this chapter, we therefore assume effects of outcome frames on negotiation to be due to the fact that the loss frame produces higher concern for outcomes than the gain frame.

DYNAMICS OF OUTCOME FRAMES

So far, the discussion focused on the effects of negotiators' own frame on their own motivation and behavior other than verbal communication. As such, there was the implicit assumption that frames are static and do not change

easily. However, Bartlett (1932) described frames as dynamic, changing patterns. Donnelon and Gray (1990) postulated that negotiation is a process of framing and reframing the parameters and definition of a dispute. Pinkley and Northcraft (1994, p. 195) further note that, just as past experiences help determine the cognitive frames that opponents bring into the dispute, new experiences during conflict management and negotiation, such as interaction and exchange of information with the opposing party, should also influence the opponent's frame. In the following sections, we argue that one's own outcome frame affects one's own communication, which in turn impacts the other party's frame and behavior, and vice versa. Furthermore, we assume that negotiators may have foreknowledge about their opponent's frame, for example through third-party communications, or through information conveyed in the mass media. Experiments centred around these two sources of frame influence—opponent's frame communication and foreknowledge about other's frame—will be reviewed.

Frame Communication

Negotiators may be motivated to talk about gains and profits, for example in an attempt to induce a more desirable frame in their opponent (cf. Kahneman, 1992; Putnam & Holmer, 1992; Russo & Schoemaker, 1989). Furthermore, there is good evidence that other's cognitions affect one's choice of linguistic labels and verbal categories (Glucksberg, 1988; Markus & Zajonc, 1985). Ross and Nisbett (1991) nicely illustrate how different perspectives on, for example, the issue of abortion are reflected in public statements about these issues ('reproductive freedom' versus 'murder of the fetus'). They furthermore suspect that spokespersons may actively frame issues in a particular way in order to persuade the opposing party, or some neutral bystander.

In negotiations, matters may be similar, and the outcome frame may affect the way negotiators verbally evaluate outcomes in either gain or loss terms. Thus negotiators may consciously or unconsciously communicate their own gain or loss frame to the other party. The language and cognition literature cited above would suggest the hypothesis that gain framed negotiators more often communicate about gains and profits (e.g., 'this concession really decreases my gains and profits, you know') than about losses and costs (e.g., 'this concession really increases my losses and costs, you know'), whereas loss framed negotiators do the reverse. An experiment by De Dreu and Carnevale (1992, fully reported in De Dreu, 1993) tested this prediction. The study used the previously described computer-paradigm with undergraduate students assuming the role of seller, and supposedly playing against another participant assuming the role of buyer (in fact a standardized computer program). The subject's own frame was induced using the issue-charts manipulation discussed above. Thus, one half of the subjects negotiated over net profits (gain

frame), whereas the other half negotiated the costs they would incur in their gross outcomes (loss frame). The opponent sent offers to the subject, but never a verbal message. The subjects, in contrast, could respond with both counter-offers and self-created messages. Analyses of subjects' offers replicated the classical frame effect, with loss framed subjects demanding more and conceding less than gain framed subjects (see also row 1 of Table 4.2).

The messages sent by the subjects were scored for (a) communicated gain frame, when the message contained terms such as 'profits', 'benefits' or 'gains', or (b) communicated loss frame, when the message contained terms like 'expenses', 'costs' or 'losses'. Messages that could not be classified as either communicated gain or loss frame were classified as 'communicated no frame'. No message potentially reflected both a gain and a loss frame (e.g., 'loss in profit'). Furthermore, no subject communicated both a gain and a loss frame in the messages across rounds. Table 4.2 shows the number of subjects who communicated at least once a gain or loss frame as a function of the gain and loss frame conditions. In the gain frame condition, significantly more subjects communicated a gain frame than a loss frame (i.e., 35 and 11). In the loss frame condition, this pattern was reversed. Here, more subjects communicated a loss frame than a gain frame (i.e., 24 and 4).

Frame Adoption

The findings reported above suggest that during negotiation, disputants exchange frame-relevant pieces of information. This is important since people are generally inclined to reciprocate communication styles (Giles & Smith, 1979). Moreover, people tend to converge toward similar definitions of the situation, a phenomenon assumed to be crucial for effective negotiation and reaching settlement (Lewicki & Litterer, 1985; Putnam, Wilson, & Turner,

Table 4.2 Demand (averaged across rounds) and number of subjects communicating a gain frame or a loss frame as a function of outcome frame

	Outcome frame	
	Gain (<i>N</i> = 119)	Loss (<i>N</i> = 106)
1. Demand	5,498	5,986
2. Communicates gain frame	35	4
3. Communicates loss frame	11	24
4. Communicates no frame content	80	71

Note: For demand, means could range between 0 and 8,000, with higher numbers indicating higher demands. Cell means for demand level are significantly different at $p < 0.05$. Numbers in row 2 through 4 reflect the number of subjects, ranging between 0 and 119 in the gain frame condition, and between 0 and 106 in the loss frame condition.

Source: De Dreu and Carnevale (1992).

1990). More specifically, Donnelon and Gray (1990) argued that negotiators exposed to the dispute interpretation of the other party are likely to alter their own interpretations to incorporate the other disputant's frame. As disputants share information and raise the salience of the issues important to each other, disputants' cognitive frames may become more similar. Pinkley and Northcraft (1994) tested this proposition. Subjects were asked both before and after a negotiation what they thought the dispute was actually about (i.e. their 'conflict frame'). Both the pretest and the post-test measures were categorized on a task-relationship dimension, an emotional-intellectual dimension, and a cooperate-win dimension. Analyses revealed that within-dyad differences in conflict frame were substantially greater before than after dispute resolution. Pinkley and Northcraft (1994, p. 201) concluded that disputants' frames mutually influenced each other, converging during the process of negotiation.

Things may be no different in the case of outcome frames. The opposing negotiator's communicated gain or loss frame may substantially influence the focal negotiator's representation of the dispute as involving gains, or as involving losses. If so, the focal negotiator's communication should reflect his or her opposing negotiators communicated frame at least as well as the own frame (as manipulated through issue charts), and in addition, other's communicated gain frame should induce less resistance to concession making than other's communicated loss frame.

For three reasons, however, this frame adoption may occur especially when negotiators themselves have a gain rather than loss frame. First, some scholars have argued that in social conflict, people tend to focus on their losses more than on their gains (Brockner & Rubin, 1985). Similarly, Kelley and Thibaut (1978, p. 200) argued that people more easily focus on the highest rather than the lowest outcome possible. They suspect some tendency for people to compare all prospective outcomes available to the highest outcome known, rather than to compare all prospective outcomes available to the lowest outcome known. This would imply that outcomes tend to be coded negatively, rather than positively. Thus, referring to the highest outcome (when one communicates a loss frame) may be more natural, more fitting with what the recipient is tempted to do, than referring to the lowest outcome (when one communicates a gain frame).

Second, there is some evidence that loss framed decision makers scrutinize incoming information to a greater extent than gain framed decision makers (e.g., Dunegan, 1993; Schneider, 1992). Thus, loss framed negotiators may be less easily 'tricked' by variations in their opponent's communicated frame. Third, there is increasing evidence that loss framed decision makers are particularly scrutinizing information regarding their own outcomes (e.g., De Dreu, Emans, & van de Vliert, 1992a; De Dreu, Lualhati, & McCusker, 1994; Dehue, McClintock, & Liebrand, 1993), probably making other's frame

communication relatively unimportant and uninteresting. Thus, the ultimate *Frame Adoption Hypothesis* is that negotiators tend to adopt their opponent's communicated frame, especially when they themselves have a gain rather than a loss frame. Consequently, other's communicated gain frame should induce less resistance to concession making than other's communicated loss frame, but less so when the focal negotiator has a loss frame rather than a gain frame.

Evidence for the Frame Adoption Hypothesis was obtained in three experiments (De Dreu, Emans, & van de Vliert, 1992b; De Dreu & Carnevale, 1992; De Dreu *et al.*, 1994). All experiments used the computer-simulation paradigm outlined above. In addition to the offers the preprogrammed buyer sent on each of the six negotiation rounds, there was a message to the seller (the subject) on each round of the negotiation. This message either evaluated the buyer's outcomes in terms of gains and profits (other's communicated gain frame), or in terms of losses and costs (other's communicated loss frame). An example is: 'I cannot make more concessions since my gains are really too small' (. . . my losses are really too large). Another example would be: 'I really have to make some profit out of this transaction' (. . . cut some losses in this transaction). Pretest data always revealed that the gain versus loss-frame messages did not differ in terms of cooperativeness and persuasiveness. During negotiation, subjects were not only prompted to make counter-offers, but also to create messages to their buyer. As in the study by De Dreu and Carnevale (1992) reported above, the subjects' messages were coded for frame content. Since subjects could refer to both other's, and own outcomes, we ensured that only explicit references to own outcomes were coded. Thus, a message containing statements such as 'my profits', 'my benefits' or 'my gains', was coded as communicated gain frame (but a message only containing a statement like 'your gains' was not). Likewise, a message containing statements such as 'my expenses', 'my costs' or 'my losses' was coded as communicated loss frame, but a message only containing a statement like 'your expenses' was not. Ambiguous messages, i.e., those reflecting both a gain and loss frame, were rare, and left out of the analyses. Note that the fact that ambiguous messages were rare corroborates our assumption (footnote 2, p. 100) that negotiators adopt either a gain or a loss frame.

In all three experiments, these content-analyses of the messages subjects sent to their buyer revealed support for the Frame Adoption Hypothesis. To illustrate this, Figure 4.2 summarizes the cell means (i.e., the number of frame-related messages divided by the total number of messages the subject sent during negotiation) from the study by De Dreu and Carnevale (1992; data patterns for the other two experiments closely matched this figure). The top figure shows that negotiators with a gain frame communicated a gain frame much more often than a loss frame when their opponent communicated a gain frame, but a loss frame much more than a gain frame when their opponent communicated a loss frame. Thus, negotiators with a gain frame

tended to reciprocate their opponent's communicated frame; they started to talk about their own outcomes in the way their opponent referred to his own outcomes. Things were different for loss framed negotiators, however. The bottom figure shows that loss framed negotiators communicated a loss frame much more than a gain frame, irrespective of the gain or loss frame communicated by the opponent. Thus, negotiators with a loss frame tended to stick to their interpretation of own outcomes as losses, and appeared insensitive to their opponent's communicated frame. On top of this, analyses of negotiator demands averaged over the six rounds of negotiation revealed that other's

Figure 4.2 Own communicated gain and loss frame as a function of own frame and opponent's communicated frame (based on De Dreu & Carnevale, 1992)

Table 4.3 Demand (averaged across rounds) as a function of outcome frame and opponent's communicated frame

Communicates	Outcome frame			
	Gain		Loss	
	Gain frame	Loss frame	Gain frame	Loss frame
1.	4,440 ^a	5,275 ^b	4,890 ^{ab}	5,006 ^{ab}
2.	4,747 ^x	5,074 ^y	5,124 ^y	5,128 ^y
3.	5,109 ^a	5,820 ^b	5,628 ^b	5,454 ^{ab}

Note: Data in row 1 ($N = 141$) are based on De Dreu, Emans, and van de Vliert (1992b); those in row 2 ($N = 103$) on De Dreu and Carnevale (1992), and those in row 3 ($N = 107$) on De Dreu *et al.* (1994). Means could range between 0 and 8,000, with higher numbers indicating higher demands. ^{a,b} Means in each row not sharing equal superscripts are significantly different at $p < 0.05$; ^{x,y} Means in each row not sharing equal superscripts are significantly different at $p < 0.10$.

communicated frame interacted with the negotiator's own frame to influence negotiator demand as predicted. Consistent with the Frame Adoption Hypothesis, results repeatedly demonstrated that negotiators with a gain frame demand less when their opponent communicates a gain rather than loss frame. When negotiators have a loss frame, other's communicated gain or loss frame does not affect negotiator demand. Table 4.3 summarizes the cell means obtained by De Dreu, Emans, & van de Vliert (1992b), De Dreu and Carnevale (1992), and De Dreu *et al.* (1994).

Foreknowledge about Other's Frame

The preceding section showed that negotiators may become aware of other's frame through other's communication, and how this exchange of information leads to convergence of frame. In addition to communication, negotiators often have foreknowledge about their opponent's frame, for example due to information search prior to the negotiation, or to information conveyed in the mass media. Also, negotiators may have some assumptions about their opponent's frame, for example based upon their own gain or loss frame (De Dreu, Emans & van de Vliert, 1991). Two distinct lines of research studied the influence of foreknowledge about other's frame. The first line of research studied its effects in the realm of negotiations and shows that other's loss frame compared to other's gain frame enhances competitive responses. The second line of research studied effects of foreknowledge about other's frame in the realm of allocation behavior and satisfaction with distributions of outcomes between oneself and some other party, and tends to show that other's loss frame elicits more cooperative responses than other's gain frame. Thus, at least at first sight, results of these two lines of research appear to be inconsistent. Besides reviewing these two lines of research, the current section attempts to reconcile these apparent differences.

Recall that losses loom larger than equivalent gains, and that increasing one's losses is considered to be more painful than decreasing one's gains. An interesting implication is that another party's concession may be perceived as larger and as more painful to the opponent when he or she is assumed to have a loss rather than gain frame. Put differently, a conceding other party may be perceived as more cooperative when the other supposedly has a loss rather than gain frame. De Dreu *et al.* (1994) tested this hypothesis. Using the computerized buyer-seller paradigm, they provided subjects with information about other's issue-charts in such a way that other's concessions implied an increase in other's losses (other's loss frame condition), or a decrease in other's gains (other's gain frame condition). As in all previous experiments, the buyer was simulated by a computer-program, and pursued a concession strategy that was independent of what the subject did, and that was similar in every experimental condition. However, consistent with the hypothesis that losses loom larger than equivalent gains, the other party was perceived as more cooperative and less competitive in the other's loss rather than gain frame condition. Moreover, subjects tended to exploit this apparent cooperativeness by making smaller concessions themselves when the opponent had a loss frame (and was perceived as relatively cooperative) rather than a gain frame (and was perceived as relatively competitive). On the basis of these results, De Dreu *et al.* (1994) concluded that foreknowledge about other's outcome frame may substantially bias the perception of other's behavior, and thereby affect the perceiver's negotiation behavior considerably.³

As noted, these data, although consistent with predictions derived from Prospect Theory, appear inconsistent with data obtained in a second line of research. De Dreu, Emans, and van de Vliert (1992a) provided subjects with outcome-matrices (i.e., Decomposed Prisoner's Dilemma Games; Pruitt, 1967). These matrices provided subjects with either positive outcomes (own gain frame) or negative outcomes (own loss frame), and the other party with either positive outcomes (other's gain frame) or negative outcomes (other's loss frame). Subjects were then asked to make decisions between a cooperative alternative and a non-cooperative alternative (no information about other's choice-behavior was provided). Results showed more cooperation when subjects were informed that the other party had a loss frame, than when

³ It should be noted that in this experiment, the opponent also communicated a gain or a loss frame. Thus, in addition to having foreknowledge about other's frame, subjects also received frame-related communication from their opponent. Interestingly, however, foreknowledge of frame and communicated frame did not interact, and whereas foreknowledge did affect perception of cooperativeness but not own frame-related communication, other's communicated frame affected own frame-related communication but not the perception of cooperativeness. Thus, foreknowledge about other's frame seems to evoke rather different processes than other's communicated frame. That is, foreknowledge about other's frame affects the perception and interpretation of other's behaviors, and communicated frame affects one's own frame and motivation.

they were informed that the other party had a gain frame. De Dreu, Lualhati, and McCusker (1994) obtained a conceptual replication of this finding. This study provided subjects with a series of distributions of outcomes between the subject and a co-worker. Some distributions provided subjects with advantageous inequality, some with equality, and the rest with disadvantageous inequality. Subjects were informed that the outcomes to the other party either were less than the other expected (other's loss frame condition) or more than the other expected (other's gain frame condition). Results showed that subjects rated advantageous inequality (getting more than the other) as more dissatisfying when the other party had a loss rather than a gain frame. We explained these data by arguing that people feel more inclined to help someone reducing his or her losses, than to increase his or her gains (De Dreu, Emans, & van de Vliert, 1992a; De Dreu, Lualhati, & McCusker, 1994).

Taken together, some research on foreknowledge about other's frame tends to indicate that other's loss frame enhances cooperative responses more than other's gain frame. Other research, in contrast, suggests that other's loss frame enhances cooperative responses more than other's gain frame. Closer examination of the differences between these studies reveals that (1) in the first line of research, information about other's behavior was provided, whereas the second line of research did not give any such information, and that (2) the first line of research may have used subjects with rather selfish attitudes, whereas the second line of research may have used more pro-socially oriented subjects. Especially the second difference may prove to be important in explaining the different results obtained. That is, in the negotiation study by De Dreu *et al.* (1994), the other party was perceived as more cooperative when he had a loss rather than gain frame, and subjects tended to exploit this apparent cooperativeness. There is ample evidence, however, that at times negotiators may have more pro-social attitudes toward their opposing negotiator (Carnevale & Pruitt, 1992; De Dreu & Van Lange, in press), and one may speculate that more pro-social negotiators reciprocate rather than exploit the other party's perceived cooperativeness. Thus, the subjects' low versus high concern for the other party may be the key variable in explaining why some studies found other's loss frame to enhance competitive action, whereas other studies tended to find the reverse. Research is needed, however, to affirm these speculations.

OUTCOME FRAMES AND CONFLICT ESCALATION

The research discussed so far indicated that (1) the loss frame induces more resistance to concession making than the gain frame, and (2) the loss frame is more easily adopted and less readily changed into a gain frame than vice versa. This might suggest that, as a rule, the loss frame should be avoided since it enhances the probability of mutual hostility, conflict escalation and

stalemate rather than settlement (De Dreu, Emans, & van de Vliert, 1992b; De Dreu, Lualhati, & McCusker, 1994; McCusker & Carnevale, in press; Neale & Bazerman, 1991). In contrast with this, however, research has begun to show that the loss frame may, compared to the gain frame, enhance the quality of decision making and negotiator performance.

To understand this, it is important to realize that most negotiations involve *integrative potential*. The term 'integrative' has its origins in the concepts of *integration* (of both parties' interests; Follett, 1940), *integrative bargaining*, which refers to the process through which high joint benefit is developed (Walton & McKersie, 1965), and *integrative agreement* meaning that participants are all satisfied with their outcomes and feel that they have gained as a result of the negotiation (Deutsch, 1973; Pruitt, 1981). Integrative potential thus refers to the mere possibility of integration, and of reaching integrative agreement. To illustrate this, imagine a brother and a sister negotiating the division of an orange (Follett, 1940). After some discussion, they decide to split the orange in two equal parts—they accept a fifty-fifty compromise. Ironically, however, the sister now drinks the juice from her half, and throws away the peel, whereas the brother squeezes his half to use the peel for a cake he is baking. Clearly, this negotiation between brother and sister had integrative potential, in that both parties could have been better off than they were by splitting the orange. The perfect solution here was, of course, to give the brother the whole peel, and the sister all the juice.

The example shows that negotiations may involve integrative potential, that is not always easily discovered and may require substantial information exchange in addition to creative problem solving, but which imply much better joint outcomes than the more obvious fifty-fifty compromise (Lax & Sebenius, 1986; Walton & McKersie, 1965). According to Dual Concern Theory (Pruitt & Carnevale, 1993; Rubin, Pruitt, & Kim, 1994), negotiators use the integrative potential better when they have a high rather than low concern for their opponent's goals and interests, but especially when this high concern for other's outcomes is combined with a high rather than low resistance to concession making. This is because integrating own and other's interests satisfies both the high resistance to concession making, and the high concern for other's outcomes (for some empirical evidence, see Ben-Yoav & Pruitt, 1984; Pruitt & Lewis, 1975; for a critique, see Thompson, 1990). From Dual Concern Theory it thus follows that compared to gain framed negotiators, loss framed negotiators may engage in more contending when they have a low concern for other's outcomes, but in more integrative bargaining when they have a high concern for other's outcomes.

Carnevale *et al.* (1994) noted that most prior research on effects of outcome frames induced a rather low concern for the other party. Usually, subjects were told that they could make some real money from the negotiation, based on how well they would perform, irrespective of their opponent's

performance. Some studies went even further, by explicitly instructing subjects 'to disregard the buyer's needs and interests' (for a more detailed analysis, see De Dreu & McCusker, 1994). To test the hypothesis that, compared to gain framed negotiators, loss framed negotiators would contend more in case of low concern for other's outcomes, but engage in more integrative bargaining in case of a high concern for other's outcomes, Carnevale *et al.* (1994) simultaneously manipulated outcome frame (gain versus loss) and the negotiator's concern for other's outcomes. As to the latter, negotiators were instructed to be concerned for other's needs and interests (high concern for other), or to disregard other's needs and interests (low concern for other). Results supported the hypothesis: in the low concern for other condition, loss framed negotiators had lower settlement rates than gain framed negotiators, reflecting the now classical observation that the former engaged in more contending than the latter. In the high concern for other condition, however, loss framed negotiators reach settlement as frequently as gain framed negotiators, but with higher joint benefit, reflecting more integrative bargaining. Thus, Carnevale *et al.* (1994) showed that resistance to concession making due to frame may lead to enhanced hostility when paired to a low concern for other's outcomes, but to more problem solving and increased quality of settlement when paired to a high concern for other's outcomes. A similar conclusion was reached by De Dreu and McCusker (1994) in their research on frame effects in Prisoner's Dilemma games. This series of experiments showed that the loss frame induced more competition than the gain frame when decision makers had individualistic motives (i.e. low concern for other's outcomes), but more cooperation when decision makers had pro-social motives (i.e. high concern for other's outcomes).

The provocative message these more recent studies seem to send is that framing outcomes in negative terms, as losses, may turn out to be very profitable, in the sense that loss framed negotiators seem more 'consistent' negotiators. That is, negotiators with a loss frame cooperate more than those with a gain frame when joint outcomes are at stake (high concern for other), but they compete more when personal outcomes are at stake (low concern for other). In a sense, these data are consistent with other findings in the domain of negotiation and social interdependence. First, as mentioned, there is quite some evidence suggesting that loss framed decision makers take more time to make decisions (De Dreu, Emans, & van de Vliert, 1992a; Schneider, 1992). Second, there is some evidence that loss framed negotiators scrutinize decision alternatives better than gain framed decision makers (De Dreu, Emans, & van de Vliert, 1992a; Dunegan, 1993). Third, there is increasing evidence that loss framed negotiators are less concerned about equality than gain framed negotiators (De Dreu, Lualhati, & McCusker, 1994). Especially in bilateral negotiations, striving for equality is satisficing rather than optimizing (Rubin, Pruitt, & Kim, 1994).

Together, these pieces of evidence suggest that loss framed negotiators are, in a sense, 'better' decision makers: they scrutinize alternatives in a more systematic and thoughtful way, and they are less preoccupied with satisficing rather than optimizing heuristics like the equality rule. Of course, all this leads to more thorough decision making, which may enhance decision quality at the expense of efficiency. When time is precious, outcomes should perhaps be framed as gains rather than as losses.

SUMMARY OF THE CONCLUSIONS

The goal of this chapter was to review research on the impact of outcome frames on negotiator cognition, motivation, concession making and communication processes. The review boils down to five conclusions. The *first conclusion* is that negotiator frames affect the negotiator's resistance to concession making: negotiators with a gain frame demand less, concede more, and settle easier than negotiators with a loss frame. This conclusion alters the assumption early theorists made, and some researchers continue to make, namely that the outcome frame affects negotiation because of variation in risk-tolerance. Although research so far has not really falsified the risk-tolerance hypothesis, it can be rejected nevertheless because an equally plausible, yet more parsimonious, explanation is available.

The *second conclusion* is that negotiator frames affect the choice of linguistic labels to describe and evaluate overtly the anticipated or obtained outcomes: gain framed negotiators communicate more about gains and profits (communicated gain frame) than about losses and costs (communicated loss frame), whereas loss framed negotiators do the reverse. An important implication of this conclusion is that third parties such as mediators or constituents may detect the negotiator's frame through careful reading. For example, mediators wishing to settle the dispute quickly and thus to reduce resistance to concession making may, via careful scrutiny of the parties' communications, detect whether concession making is slowed down due to one or both parties' loss frame.

The *third conclusion* builds upon the second one. It is that negotiators are influenced by their opponent's communicated gain or loss frame, in that they adopt other's communicated frame, albeit especially when they themselves have a gain rather than loss frame. Frame adoption goes hand in hand with the negotiator's low versus high resistance to concession making and subsequent low versus high demands. An important implication of the Frame Adoption Effect is that because loss framed negotiators are less subject to frame adoption than gain framed negotiators, it requires only one negotiator to communicate in loss terms for both to end up with a loss frame and its concomitant high resistance to concession making. It thus appears that the

loss frame is the dominant perspective in negotiation and, most likely, in other forms of social conflict.

The *fourth conclusion* deals with effects of foreknowledge about other's frame. Foreknowledge about other's frame appears to evoke two distinct processes. First, foreknowledge appears to affect helping motives, with other's loss frame eliciting stronger inclination to help than other's gain frame. This process is likely to occur especially when there is high concern for other's outcomes. When there is low concern for other's outcomes, no effects of other's frame on intentions to help are to be expected. In addition to helping motives, foreknowledge about other's frame appears to bias the perception of other's concessionary behavior, in that the other party looks more cooperative when he or she has a loss rather than gain frame. When negotiators have a low concern for other's outcomes, this perception of other's cooperativeness may evoke exploitation. But one might speculate that in case of a high concern for other's outcomes, this tendency to exploit may be replaced by a tendency to reciprocate perceived other's cooperativeness (cf. Pruitt & Carnevale, 1993).

The *fifth and last conclusion* of this review is that although the loss frame more than the gain frame predisposes the negotiator to act in ways that trigger escalation rather than de-escalation of the social conflict, research commences to show that this effect is especially true when the loss frame comes hand in hand with low concern for the other party's needs and interests. When the loss frame is paired to high concern for other, there may be even more constructive problem solving and integrative negotiation than in the case of a gain frame.

Before closing, two limitations to these conclusions should be mentioned. First of all, we explained effects of outcome frames in bilateral negotiation in terms of the loss framed negotiators heightened concern for own outcomes. We cannot, however, exclude the possibility that entirely different processes at least contribute to explaining the fact that loss framed negotiators demand more, concede less, and settle less easily than gain framed negotiators. Second, our conclusions pertaining to frame communication and frame adoption may have restricted generalizability due to the subject samples we used (undergraduate students), and due to the computerized buyer-seller paradigm we relied upon. Future research should corroborate our findings at least with different samples, such as professional negotiators, and with different methodologies, such as negotiations over land-use, or over social contracts, rather than over the sales transaction of home appliances.

Despite these potential limitations, the current chapter informs us that the negotiator frame is dynamic because it is subject to revision following frame-related communication by the negotiators themselves. It underscores Kahneman's (1992, p. 310) argument that 'it is useful to view messages that negotiators exchange as attempts by each side to communicate its reference

point and to affect the other side by inducing anchors and norms'. More generally, this chapter indicated how the opponent's communications affect the individuals' representation of outcomes which—in interaction with the disputants' concern for other—determines constructive versus destructive conflict management.

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