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# *Cognitive Foundations of Communication in Close Relationships*

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Some 25 years after Skinner eschewed mental processes as hidden within an impenetrable black box (Skinner, 1953), social psychology underwent a "cognitive revolution" (Fiske & Linville, 1980, p. 543) marked by renewed appreciation for memory, cognitive processes, and schemas as fundamental to social experiences. In the seminal text, *Social Cognition and Communication*, Roloff and Berger (1982) took this revolution to the communication discipline, and provided a foundation for incorporating cognition into perspectives on interpersonal communication and facets of relationship development, escalation, and maintenance. Although Roloff and Berger were largely limited to drawing links between separate bodies of work on social cognition and communication in relationships, their contribution signaled the beginning of sustained efforts to integrate these literatures. In the ensuing two decades, the conceptions of social cognition that were the focus of scholarly attention in the 1980s have been applied to increasingly sophisticated portrayals of relationships.

Although contemporary thinking about interpersonal communication accepts the link between people's communication behavior and the ways they conceptualize their relationships as inherent and axiomatic, the complex nature of this relationship continues to inspire theory and research. People define and come to understand their relationships based on the meanings that are derived from interaction (Duck, 1995;

Wish, Deutsch, & Kaplan, 1976). In turn, cognitive perceptions of the relationship are used to enact relationally appropriate behaviors (Honeycutt & Cantrill, 2001) and interpret a partner's actions (Dillard, Solomon, & Samp, 1996). Yet questions remain about how close relationships are simultaneously defined in the minds of individuals and sustained by the communication that occurs between partners. Thus, interpersonal communication scholars are challenged to understand how both thoughts and words create, define, modify, maintain, and dissolve close relationships.

To provide a platform for continued efforts in this quest, this chapter highlights developments in research on cognition and communication in the context of close relationships that have emerged in the past 20 years. Whereas research leading up to the 1980s focused on discerning the structure of memory, a substantial amount of work in subsequent years has addressed the form and function of cognitive models of interpersonal relationships. Likewise, efforts to clarify the process of knowledge acquisition laid a foundation for theories examining how people draw inferences about their relationships from communication episodes. In addition, links drawn in the 1970s and 1980s between cognitive activity and message effects on attitudes are now being examined in the context of interactions between intimates. Because these lines of inquiry represent prominent themes in contemporary research on cognition, communication, and close relationships, we examine them each at length. To conclude this chapter, we suggest directions for future research that both advance and integrate these themes.

## COGNITIVE MODELS AND RELATIONSHIPS

*Cognitive models of relationships* refer generally to knowledge structures or schemas that organize expectations, beliefs, information, and experiences associated with types of social relations and specific interpersonal relationships. Schemas can be further distinguished in terms of the function and content of information contained therein. *Declarative knowledge* encompasses semantic knowledge of the world, such as general facts, definitions, and prototypes. *Procedural knowledge* consists of information about typical or normative sequences of activity. Although the dichotomy between declarative and procedural knowledge is not absolute, it does provide a framework for organizing the substantial literature applying these concepts to close relationships. Thus, the following sections discuss cognitive models of relationship states and cognitive models of relationship processes, in turn. After reviewing these lines of inquiry, we discuss methodological trends in the study of cognitive models of close relationships.



### Declarative Relationship Knowledge Structures

One prominent theme in work on cognitive models of relationships focuses on the structures that organize knowledge about relationship qualities. These abstract information stores are independent of the concrete experiences on which they are based, and they provide frames of reference for perceiving, comprehending, and making inferences about new experiences (e.g., Rumelhart, 1984). These structures can be further parsed by level of abstraction to distinguish the representation of relationship prototypes, expectations for specific behaviors within interpersonal situations, and experiences within a relationship with a specific partner (Fehr, 1988; Planalp, 1985; Shaver, Schwartz, Kirson, & O'Connor, 1987). In this section, we showcase characterizations of cognitive models at each of these levels.

A prototype is a special category of schema that contains information about the typical features that define the focal construct. Just as people have attributes that they associate with, for example, a prototypical bird (i.e., feathers, a beak, and an ability to fly), individuals develop prototypes for categories of social relations. Instantiations of the category might be more or less consistent with the prototype (e.g., a sparrow vs. an emu); nonetheless, the prototype exerts a substantial influence on people's expectations for experiences with members of the category. Whereas early work on social prototypes focused on the characteristics associated with personality traits (Cantor & Mischel, 1977, 1979) or social situations (Cantor, Mischel, & Schwartz, 1982), more recent work has explored prototypes for personal relationships. For example, Davis and Todd (1985) proposed a set of nine characteristics associated with friendships, and they argued that variations in the presence of these features differentiate types of friendship. Accordingly, Davis and Todd found that best friends, close friends of the same sex, close friends of different sexes, social acquaintances, and former friends were distinguished by the perceived viability, support, intimacy, enjoyment, spontaneity, success, and stability within those associations. In a line of research focused on a particular relationship quality, Fehr and Russell (1991; see also Fehr, 1988, 1993) mapped the prototype for love by identifying a variety of love subtypes (e.g., romantic love, motherly love, brotherly love). Although Davis and Todd's work focused on a type of social relationship and Fehr and Russell examined a relational quality, both lines of inquiry assume that people organize social knowledge using prototypical feature sets.

Whereas prototypes are embodied by a list of typical features, the term *relational schema* usually refers to a more integrated system of knowledge about an interpersonal association. In her foundational

work on this topic, Planalp (1985) defined relational schemas as "coherent frameworks of relational knowledge that are used to derive relational implications of messages and are modified in accord with ongoing experience with relationships" (p. 9). Although Planalp recognized that relational schemas could address general to specific relationship knowledge, her research examined schemas for types of relationships. In particular, Planalp examined patterns of recall for a generic student–professor interaction, and she concluded that relational schemas specify the behavioral rights and obligations that characterize types of relationships (cf. Smith, 1995).

An alternative explication of the relational schema construct offered by Baldwin (1992) articulated three elements of relational schemas. The *self schema* is a sense of identity as experienced in relation to another person. The *partner schema* represents the impression individuals have of their partner, influenced by what that person is typically like, as well as what he or she is like within the context of the relationship. The *interpersonal script* combines procedural and declarative information to represent a typical sequence of actions and events for interaction; conceptualized as a set of if–then contingencies, interpersonal scripts link specific behaviors to responses or outcomes. Consistent with this view, the activation of relational schemas has been found to exert an impact on evaluations of the self (e.g., Baldwin, 1997), such that priming of a critical versus accepting significant other corresponds with reports of more negative versus positive self-evaluations (Baldwin, 1994; Baldwin, Carrell, & Lopez, 1990; Baldwin & Holmes, 1987). Similarly, the activation of positive interpersonal expectations has been found to correspond with increased emotional support-seeking behaviors (Pierce & Lydon, 1998). Notably, Baldwin presented an interdependent model of relational schema as the perception of self in relation to another (Holmes, 2000).

Of course, individuals also have a wealth of specific information about particular others; accordingly, several scholars have proposed that relationship-specific schemas exist to represent knowledge that is relevant to a particular other person and one's relationship with that person (Markus & Zajonc, 1985; Park, 1986). Relationship-specific schemas are likely to contain references to the qualities of the relationship, information about the self in relation to the partner, evaluations of the particular relationship in comparison to other relationships, and expectations based on typical interactions or action sequences involving the partner (Planalp, 1985; Wyer & Srull, 1986). Importantly, relationship-specific knowledge structures are more than the sum total of episodic memories involving the partner; they are abstractions of that wealth of information that, in turn, guide expectations, information processing, and behavior.



## Procedural Relationship Knowledge Structures

Procedural knowledge is distinguished from declarative knowledge by its focus on sequences of activity. Procedural knowledge is activated by cues in the situation, including the setting, participants, activities, and goals, that have become associated over time with behavioral routines (e.g., Schank & Abelson, 1977). Whereas declarative knowledge captures the "what is" that characterizes social relations, procedural knowledge addresses the "how to" associated with enacting relationships. Baxter (1987) highlighted two types of relationship process cognitions: (a) those related to trajectories of relationship development and dissolution, and (b) those focused on strategies for achieving particular outcomes within relationships. The following paragraphs discuss research examining these facets of relationship knowledge structures.

Research on cognitive models of relationship trajectories is best exemplified by Honeycutt's work on memory structures for the rise and fall of close relationships (Honeycutt, 1995; Honeycutt, Cantrill, & Allen, 1992; Honeycutt, Cantrill, & Greene, 1989). Honeycutt and Cantrill (2001) defined a relational memory structure as "a type of schema that reflects time-ordered behaviors in the development of a relationship" (p. 104). Honeycutt et al. (1989) concluded that scripts for relational escalation could be parsed into the following six phases: (a) meeting and making small talk; (b) dating, displaying physical affection, and sharing informal activities; (c) self-disclosing; (d) having sexual intercourse; (e) meeting parents, exchanging gifts, talking about the other, and stating a commitment; and (f) marrying. Likewise, Honeycutt et al. (1992) sequenced relational deescalation into six phases: (a) stopping self-disclosures; (b) disagreeing, arguing, and making aversive statements; (c) decreasing contact; (d) reevaluating the relationship; (e) increasing attention to others; and (f) terminating the relationship. Taken together, these studies document the nature of scripts for relationship trajectories, and the features of those scripts that are typical among college-aged individuals.

People also have scripts for performing more specific routines that occur within interpersonal relationships. In their most general form, social scripts reflect culturally shared expectations for behavioral sequences that are relevant to a type of interaction and goal. For example, Rose and Frieze (1989; see also Pryor & Merluzzi, 1985) documented typical scripts for behaving on a first date that encompassed (a) preparing for the date, (b) meeting the date, (c) engaging in shared activities, and (d) ending the date. Similarly, Miller (1991) documented scripts for conflict in friendship, which typically included (a) the offended party questioning the friend, (b) the friend apologizing or making excuses, (c)

the first party accepting or rejecting the friend's position, and (d) the friends resolving the conflict to some degree. In this body of work, scripts are comprised of the actions that are reported by a sizable subset of study participants; therefore, they are best conceived of as cultural scripts for addressing interaction situations.

At a more idiosyncratic level, individuals develop their own scripts for interaction situations or for interactions with particular partners. For example, Douglas (1984) documented differences between high and low self-monitors in their scripts for initial interactions, such that the scripts of high self-monitors included more goal-related conversation topics and specified more conditional conversation behaviors. Partners within a relationship also jointly develop scripts for recurrent interaction scenarios. For instance, within the cultural norms for sexual behavior that exist (see Baumeister, 2000; Simon & Gagnon, 1986), couples also negotiate their own sexual scripts that identify the appropriate content, sequence, and boundaries of sexual contact (Metts & Spitzberg, 1996). Because relationship-specific scripts reflect the routines that individuals develop for particular situations or the patterns that evolve and are shared between partners, they may exert a particularly strong influence on behavior in close relationships.

The research reviewed in this section reveals the significant advances in the study of social cognition and relationship processes since the early 1980s. The notion of behavioral scripts predates Berger and Roloff's (1982) publication (e.g., Abelson, 1981; Bower, Black, & Turner, 1979; Schank & Abelson, 1977), and was just gaining a foothold in close relationship research at the time of Berger and Roloff's review of the literature. In the time since, however, scripts detailing sequences of behaviors associated with both relationship trajectories, in general, and specific situations within close relationships have been documented. To the extent that these knowledge structures become guideposts for behavior, they exert a profound influence on communication in close relationships.

## Approaches to Studying Cognitive Models and Relationships

The study of cognitive models and relationships has its foundation in research on schemas and scripts, in general. Accordingly, the methods employed in this body of work often mirror the procedures used to evaluate the content and structure of human memory. Three main approaches to assessing cognition are apparent in the literature previously reviewed: self-reports of the content of knowledge structures, ratings of features proposed to characterize knowledge structures, and recall of or recognition for information implicated by knowledge structures.



The use of self-report methods is most frequently employed to document the content of cognitive models relevant to close relationships. For example, prototype analysis typically begins with an open-ended solicitation of features or subtypes associated with the focal construct (e.g., Fehr & Russell, 1991). Likewise, identifying the sequences defining relationship trajectories or interaction scripts involves asking study participants to report, in order, the actions that occur to transform a relationship or to accomplish an interaction goal (e.g., Douglas, 1984; Honeycutt et al., 1992; Honeycutt et al., 1989; Miller, 1991; Rose & Frieze, 1989). In all of these cases, the methodology presumes that those features or actions that come easily to mind for participants reflect core content within their relational knowledge structures.

Beyond open-ended self-report, some scholars have asked participants to rate a predetermined list of relationship features or behaviors in a script on dimensions designed to reveal each item's centrality in the knowledge structure. For example, Davis and Todd (1985) asked participants to rate the extent to which relationship features characterized their friendships. Likewise, Miller (1991) asked respondents to report which of three responses they would enact at four stages of conflict in five different conflict scenarios. Similarly, Honeycutt and his colleagues (Honeycutt, 1995; Honeycutt et al., 1992; Honeycutt et al., 1989) verified the structure of procedural knowledge for relationships by soliciting ratings of how typical and how necessary each event was to relationship change. Again, these procedures assume that people's self-reports of beliefs about relationships reflect underlying cognitive structures.

Because the form and content of relational knowledge is expected to influence information processing and recall, a third category of methods has examined recall or recognition memory for schema-relevant or irrelevant details. Planalp (1985) and Smith (1995) evaluated patterns of recalled items, forgotten items, and incorrectly remembered items to reach conclusions about the content of relational schemas. Baldwin (e.g., Baldwin, Fehr, Keedian, Seidel, & Thompson, 1993; Baldwin & Meunier, 1999; Baldwin & Sinclair, 1996) used a lexical decision task to assess the cognitive structure of relationship knowledge; these procedures involve activating a relational schema and then examining response times for recognizing related or unrelated stimuli. In their explication of love as a prototype, Fehr and Russell (1991) examined response times for judging whether an experience (e.g., patriotic love) was a type of love to determine the centrality of subtypes within the love prototype. In contrast to the methods previously discussed, recall and response time measures focus on information retrieval and accessibility to draw inferences about the contents and structure of relational knowledge.

Just as querying the nature of human memory was a dominant theme in the reemergence of social cognition in the 1970s, the application of cognitive principles to close relationships has prioritized clarifying the form of relational knowledge. These points of emphasis no doubt reflect the pervasive impact that information storage systems exert on information processing and behavior. At the same time, research on knowledge structures tells us little about how people gather the information that allows them to access or build those cognitive models. In the following section, we examine the role of cognition as people extract social knowledge from their interpersonal interactions.

## COGNITION AND RELATIONAL INFORMATION PROCESSING

*Relational information processing* encompasses the methods by which people draw inferences about their relationships from messages exchanged during interaction. A long history of research spanning a variety of disciplines has examined the dimensions on which people define their associations with others (Bateson, 1935, 1958; Burgoon & Hale, 1984; Kemper, 1973; Leary, 1957; Rogers & Farace, 1975; White, 1980; Wiggins, 1982). Likewise, a variety of theoretical perspectives have been offered to describe how people generate and use judgments about relationships (e.g., expectancy violations theory, Burgoon & Hale, 1988; discrepancy arousal theory, Cappella & Greene, 1982; a functional perspective on nonverbal messages, Patterson, 1983). Relative to research on relational knowledge structures, the study of relational communication places greater emphasis on the messages communicated between interaction partners, and cognitive processes are often only implied. One exception is relational framing theory (Dillard, Solomon, & Palmer, 1999; Dillard et al., 1996), which positions cognitive processes as essential to drawing relational inferences from ambiguous social cues. To illustrate how social cognition is at the core of relational communication processes, we review the claims advanced by relational framing theory. Then, we discuss the methods employed in this body of work.

### Relational Framing Theory

As noted previously, a wealth of research has attended to the substance of relational communication. With remarkable consistency, these efforts have identified elements of dominance or power, liking or affiliation, and intensity or engagement as central to conceptions of the social domain. Although more nuanced distinctions have been validated (Burgoon & Hale, 1987; Hale, Lundy, & Mongeau, 1989), these gradations align with the broader characterizations of relationship dimensions (Dillard et al., 1999). Of course, social cues themselves are often ambiguous. Even a message as explicit as a profession of love has different connotations depending on the relational context (family members or romantic partners), the relational history (a new romance or an established partnership), and aspects of the situation (over a romantic dinner or as a prelude to separation). Relational framing theory draws on thinking about the fundamental dimensions of social relationships to explain how people use social cues to support conclusions about their relationships.



A central assumption of relational framing theory is that interactions tend to be framed in terms of either dominance–submission or affiliation–disaffiliation (Dillard et al., 1999; Dillard et al., 1996). *Relational frames*, defined as mental structures consisting of organized knowledge about social relationships, simplify the problem of interpreting social reality by directing attention to particular behaviors, resolving ambiguities, and guiding inferences. Because many behaviors and messages may convey either dominance or affiliation information, effective processing requires that cues activate one relational frame and inhibit the competing interpretive frame. In other words, the theory suggests that dominance–submission and affiliation–disaffiliation frames displace each other as a necessary part of comprehending otherwise ambiguous relational cues.

Relational framing theory characterizes frame activation as dependent on a variety of situational parameters (Mundinger, 2001; Solomon, Dillard, & Anderson, 2002; Tusing, Dillard, & Morrill, 2001). Certainly, specific utterances ("I'm in charge here" or "I hate you") can signal the relevance of either the dominance–submission or affiliation–disaffiliation frame. In addition, the type of interaction episode (Dillard et al., 1999; Dillard et al., 1996), the prior relationship between participants (Mundinger, 2001), individual differences (Solomon et al., 2002; Tusing, 2000), and social norms (Tusing et al., 2001) are assumed to inform relational frame activation. The integration of these sources of information results in a cognitive set that privileges interpretations of messages in terms of the most relevant relational frame. In the meantime, the alternative frame is relegated to the background, from which it can be easily retrieved as warranted by changing circumstances. In this sense, relational framing theory characterizes dominance–submission and affiliation–disaffiliation as mutually inhibitory, but not mutually exclusive frameworks for processing social interaction (Lannutti & Monahan 2002; Tusing, 2000).

We previously noted a third dimension of relational communication emerging from prior research: *involvement* or the intensity of engagement in an interaction. Although relational framing theory suggests that all social cues are understood in terms of dominance–submission and affilia-

tion–disaffiliation, the role of relational frames is most apparent when social cues are polysemic. Because involvement has no experiential content, it can inform judgments of either dominance or affiliation. More specifically, relational framing theory specifies that the active relational frame gives meaning to content-free involvement cues. In this manner, involvement contributes to the perceived intensity of either affiliation or dominance, depending on the salient relational frame.

To clarify how cognitive structures and interaction cues work in tandem to support relational inferences, consider the process by which people comprehend letters, words, and sentences in written form (e.g., van Dijk & Kintsch, 1983). Of course, the marks on a page are essential inputs into discourse processing. At the same time, the top-down application of syntactic and semantic rules facilitates people's ability to recognize letters and words. As readers progress through a text, they formulate a mental model of the discourse, which not only directs their attention to relevant interpretations of a passage, but also suppresses alternative meanings. Thus, people rely on both existing knowledge and developing expectations to decode written discourse. In an analogous fashion, relational information processing occurs when individuals observe cues within interaction, and they interpret those cues through the lens of their existing knowledge.

As this review makes clear, social cognition and communication are interwoven in relational information processing. The activation or suppression of cognitive structures provides the context in which interaction behaviors become meaningful. In turn, communicated messages are among the cues that activate the relational frames through which subsequent messages are viewed. Over the course of an interaction, the top-down structure provided by cognitive structures brings order to the somewhat unpredictable, ambiguous, and fast-paced course of interaction. In this sense, social cognition provides the steadying beat that grounds the rapid melodies of interpersonal interaction.

### Approaches to Studying Social Cognition and Relational Information Processing

As noted at the opening of this section, cognition has taken a back seat to an analysis of relational messages in research on relational communication. As a result, the methods for assessing relational judgments have become increasingly sophisticated, whereas the measurement of cognitive structures and processes remains rather simple. Self-report scales on which participants and observers report relational judgments have been developed, validated, and subjected to meticulous measurement analysis (Burgoon & Hale, 1987; Dillard et al., 1999). In addition, experimental paradigms and interaction studies designed to manipulate and



parse relational messages have been crafted (e.g., Burgoon, 1991; Burgoon & Buller, 1994; Walther & Burgoon, 1992). Conversely, the cognitive structures or processes assumed to participate in relational information processing have been operationalized in largely unsophisticated ways.

The general procedures employed in tests of relational framing theory require participants to consider a variety of interaction scenarios and to rate the relevance of concepts associated with dominance–submission and affiliation–disaffiliation to making sense of those episodes (see Dillard & Solomon, 2005, for details). The procedures commence with an example designed to clarify the difference between relevance judgments and evaluations of the amount of dominance, submission, affiliation, or disaffiliation that is communicated. Then, participants are instructed to rate the relevance of each of a series of word pairs to interaction scenarios. In the first use of this measure (Dillard et al., 1996), the items assessing activation of the dominance–submission frame were dominance–submission, persuade–concede, influence–comply, and controlling–yielding; the affiliation–disaffiliation scales were affection–disaffection, liking–disliking, attraction–aversion, and positive regard–negative regard. In every case, judgments are made on a 5-point scale ranging from 1 (*completely irrelevant*) to 5 (*completely relevant*). Although these scales have demonstrated reliability and are distinct from judgments of relational qualities themselves (Tusing, 2000), self-report scales remain at best an indirect measure of cognitive activation.

The cognitive processes posited by relational framing theory largely complement the roles ascribed to prototypes, schemas, and scripts that we reviewed previously in this chapter. In both cases, existing cognitive structures are assumed to guide people's communication within specific interaction episodes. Shifting the focus to relational information processing, however, highlights more fluid aspects of social cognition. In particular, relational framing theory characterizes cognitive structures as shifting with the dynamics of interaction, while imparting meaning to relational messages. In the following section, we examine programs of research that focus directly on the interplay of cognitive states and interaction in close relationships.

## COGNITION AND INTERACTION IN RELATIONSHIPS

Thus far in this chapter, we have examined the cognitive structures or mechanisms that organize the relational implications of interpersonal communication. We now shift attention to research on the intersection of specific cognitive states and interaction in close relationships. In doing so, we demonstrate (a) how characteristics of close relationships produce cognitive states that shape communication, and (b) how com-

munication influences cognition in ways that have implications for close relationships. We conclude this section of the chapter with a discussion of the methods employed in these pursuits.

## Relationship Qualities, Cognition, and Communication

Fletcher and Kininmonth (1991) suggested that partners "attitudes, expectations, or other cognitions existing prior to an interaction episode are related in a fundamental way to broader relationship processes" (p. 238). Put differently, a variety of relationship qualities have implications for cognitive states that are immediately relevant to interactions with a relationship partner. Of course, a myriad of individual characteristics or states are germane to communication (e.g., self-esteem, anxiety). Moreover, other chapters in this volume reveal a variety of cognitive phenomena that influence communication behavior (e.g., goals, plans, attitude accessibility). Within the context of close relationships, we see increasingly sophisticated models linking relationship characteristics to cognitive states and, in turn, to communication experiences (Bradbury & Fincham, 1991; Solomon & Knobloch, 2004). As two examples, research on relational instability and satisfaction illustrate how relationship qualities affect cognition in ways that shape communication in close associations.

The path of relationship development and maintenance is marked by fluctuating levels of intimacy and involvement, and these periods correspond with efforts to make sense of relationships. Solomon and Knobloch (2001, 2004) reasoned that the transition from casual to serious dating corresponds with heightened levels of uncertainty about involvement in the relationship. Consistent with that model, Knobloch and Solomon (2002) observed that hypothetical uncertainty-provoking events prompted more doubts about the relationship among individuals at moderate levels of intimacy in dating relationships. Moreover, Fletcher, Fincham, Cramer, and Heron (1987) found that conscious cognitive activity is greater when (a) involvement in the relationship is increasing or decreasing, (b) relationships are of shorter duration, (c) relationships are perceived as unstable, (d) partners are separating, or (e) commitment to the relationship is increasing. In addition, Surra and Bohman (1991) reported that cognitive processing during periods of instability is characterized by three goals: (a) to obtain information about the partner, (b) to identify characteristics of the relationship and evaluate interpersonal qualities and abilities, and (c) to explain partners' behaviors and the occurrence of relationship-relevant events. Taken together, these efforts suggest that periods of instability or transition spark unique cognitive states for relationship participants.



Empirical evidence indicates that the cognitive outcomes of relational instability influence communication in close relationships. Knobloch and Solomon (2003b) found that uncertainty-increasing events are more likely than certainty-increasing events to elicit communication behaviors marked by distance, distributiveness, and avoidance. Likewise, doubts about relationship involvement correspond with more topic avoidance (Afifi & Burgoon, 1998; Knobloch & Carpenter-Theune, 2004; Knobloch & Solomon, 2002) and less direct communication about relational irritations (Theiss & Solomon, in press). Knobloch and Solomon (2005) also found that relational uncertainty compromises people's ability to draw strong inferences about their relationship from interactions with partners. Thus, the cognitive outcomes of relational instability or change, in this case relational uncertainty, are manifest in communication within close relationships.

The role of cognition in linking relationship qualities to communication outcomes is also demonstrated in the substantial body of research on attribution in close relationships. The association between relationship satisfaction and attributions is well documented (e.g., Bradbury & Fincham, 1990). In a satisfying relationship, a partner's positive behaviors are attributed to internal and stable causes, and his or her negative behaviors are explained in terms of external and unstable causes. Conversely, people who are dissatisfied with their relationship locate a partner's positive behaviors in external and unstable causes, whereas negative behaviors are attributed to internal and stable causes. Not surprisingly, longitudinal studies have shown that these patterns of adaptive and maladaptive attributions lead to the perpetuation of relationship satisfaction or dissatisfaction over time (Fincham & Bradbury, 1987, 1993; Karney & Bradbury, 2000).

As was the case in our example of relational instability, research clearly indicates that the cognitive outcomes of relationship satisfaction are manifest in communication between partners. An extensive body of research demonstrates the impact of attributions on communication behavior in relationships (for reviews, see Fincham & Bradbury, 1991; Manusov & Harvey, 2001). For example, Bradbury and Fincham (1992) found that maladaptive attributions in marriage are associated with less effective problem-solving behaviors, more negative behaviors, and a greater tendency to reciprocate negative behaviors during interaction. Similarly, Miller and Bradbury (1995) reported that wives who make maladaptive attributions are less integrative, more negative, and more likely to reciprocate their husband's negative behaviors; husbands who make maladaptive attributions are more likely to behave negatively in response to wife's neutral behaviors. Coupled with evidence linking relationship satisfaction and attributions, findings such as these clarify

how relational qualities influence cognitions in ways that shape communication in close relationships.

Research on social cognition in the last two decades has documented a wide range of cognitive phenomena that are relevant to communication behavior. Within the domain of close relationships, these efforts have emphasized cognitive states that arise from relationship circumstances and affect interactions with partners in important ways. Our review of research on the cognitive and communicative consequences of relational instability and satisfaction illustrate the advances made on this front. In the following section, we examine the complementary process by which communication influences cognitive outcomes in relationships.

## The Cognitive Consequences of Communication in Close Relationships

Interaction imposes demands on cognition as communicators interpret ambiguous verbal and nonverbal signals, integrate multiple or conflicting pieces of information, plan and adapt to complex behavioral sequences, reconcile conflicting goals, and respond in real time (Kellerman, 1992; Waldron & Cegala, 1992). In turn, the cognitive outcomes of interaction are influenced by the inherent properties and requirements of the communication process (Sillars, Roberts, Dun, & Leonard, 2001). Others in this volume address the effect of communication on cognition during interpersonal interactions (e.g., Berger, chap. 3, this volume); these consequences take on heightened importance in the context of close relationships. Recent work by Sillars and his colleagues (Sillars, 1998; Sillars et al., 2001; Sillars, Roberts, Leonard, & Dun, 2000) exemplifies contemporary developments in research on the cognitive consequences of communication in close relationships.

Sillars (1998) advanced the somewhat counterintuitive claim that properties of communication in close relationships might render intimate associations more vulnerable to misunderstanding than less intimate alliances. Sillars argued that although familiarity in close relationships might promote greater understanding, familiarity also breeds greater subjectivity, emotionality, and opportunity for selective recall (see also Sillars & Scott, 1983). Sillars also noted that communication's intrinsic ambiguity is not ameliorated by intimacy; in fact, close relationship partners may be more likely to tackle abstract and ambiguous relational topics with misplaced confidence in the accuracy of their perceptions. In addition, Sillars highlighted how people can draw selectively from a close relationship's rich history to construct narratives that cast themselves in a positive or persuasive light. When these circumstances of intimacy coincide with the demands of interaction, the cognitive consequences are nontrivial.



Although any interaction with a close relationship partner is subject to the biasing forces outlined by Sillars (1998), he emphasized how the demands of conflict interactions tax information processing in critical ways. In his view, "relationship conflicts are often one-sided affairs, in which the parties neither participate in the same issues nor observe the same sequence of events" (p. 89). Empirical evidence supports this pessimistic view of cognition during conflict in close relationships. For example, Sillars et al. (2000) found that thoughts during conflict interactions were limited in complexity, concerned predominantly with relationship issues or the communication process, and rarely reflected perspective taking. Likewise, Sillars et al. (2001) found that 58% of thoughts following conflict interactions were either evaluations of partner, self, or relationship, or inferences about interaction goals and strategies. Moreover, the majority of person appraisals that occur during conflict interactions are negatively valenced thoughts about the partner (Sillars et al., 2001; Sillars et al., 2000).

Sillars and his colleagues are not alone in their conclusion that conversation poses cognitive demands that can undermine comprehension. Nonetheless, their work brings to light the importance of the relationship as the context for communication and cognition. This line of inquiry emphasizes the additional constraints and demands introduced by a history of shared experiences, presumed insight, and an investment in shaping the relationship narrative. Coupled with evidence that cognitions during problem-solving interactions correspond with relational distress (Halford & Sanders, 1988; Sillars et al., 2000), these findings highlight how communication in close relationships produces cognitive outcomes of consequence for partners.

## Approaches to Studying Cognition and Interaction in Relationships

The research reviewed in this section highlights the methodological techniques that have been used to assess the interplay of cognition and interaction. Research on the impact of cognition on communication must begin by measuring or stimulating various cognitive states that are believed to influence interaction. Conversely, studying the effect of communication on cognitive processes employs interaction as the starting point, and measures cognitions evoked by the episode. We discuss these approaches in turn.

Studies focused on the impact of cognition on communication typically begin with self-report measures to assess the relationship characteristics considered relevant to cognitive states (e.g., Miller & Bradbury, 1995; Surra & Bohman, 1991). Likewise, self-report measures are used to index the cognitive phenomena that link relationship qualities to com-

munication behaviors. In fact, the conceptualization and measurement of both relational uncertainty (Knobloch & Solomon, 1999) and relational attributions (Fincham & Bradbury, 1992) have been subjected to careful scrutiny. Finally, these studies include procedures to instantiate communication. In some cases, participants are asked to engage in a videotaped interaction with their relationship partner (e.g., Miller & Bradbury, 1995). Alternatively, participants are asked to recall or imagine a communication situation and to characterize their actual or probable interaction behaviors on self-report scales (e.g., Knobloch & Solomon, 2002, 2003b). Although some exceptions are noted, our review highlighted the prominence of self-report measures to index relationship qualities, cognitions, and communication within this body of work.

Research examining the impact of communication on cognition also relies heavily on self-report to operationalize cognition; however, procedures are designed to ground these accounts within the dynamics of interaction. One method that has become increasingly popular is the use of video-assisted recall (Ickes & Tooke, 1988; Waldron & Cegala, 1992). As a first step, participants engage in a conversation with their partner that is typically focused on a point of disagreement within their relationship. Then, individuals review a videotape of the interaction and report on the thoughts they recall having at various points throughout the exchange. In this way, self-reports of cognitions are tied to very recent communication experiences and aided by the cues provided in the video. As a final step, the self-reported thoughts are coded into categories based on their content (e.g., Sillars, Dun, & Roberts, 1999).

The body of research on the associations between cognition and communication is somewhat more diffuse than work defining the domains previously discussed. To demonstrate how social cognition has informed the study of close relationships, we focused our discussion in this section on cognitive states that arise from relationship characteristics and communication episodes that are unique to intimate partners. Although our review is by no means exhaustive, it reveals the integration of social cognition into models of intimate relating that is characteristic of current research.

## FUTURE DIRECTIONS FOR RESEARCH ON SOCIAL COGNITION IN RELATIONSHIPS

Throughout this chapter, we have seen the substantial and focused attention afforded questions about the form of cognitive models of close relationships. In considering the processes by which conclusions about relationships are extracted from conversation, we showcased one recent perspective on relational information processing. Finally, we examined research on the cognitive antecedents and consequences of communication in close relationships. Although these lines of inquiry represent important advances over the last 20 years, their limitations reveal several avenues for the future. Thus, we conclude this chapter by identifying directions for research on social cognition and communication in relationships.



First and foremost, we see a need for research methods that do justice to the cognitive structures or processes implicated in communication between relationship partners. Our discussions of the procedures typically employed to study cognitive models of relationships, relational information processing, and cognition as it relates to interaction within close relationships consistently highlighted the predominance of self-report instruments in this literature. Certainly, cognitive phenomena such as relational uncertainty and attributions may be accessible only by asking participants to report their states, perceptions, or thoughts. Of greater concern is the use of self-reported information to draw inferences about cognitive processes that are inaccessible to respondents (Nisbett & Wilson, 1977).

What alternatives do we see on the horizon? Within the body of work on relationship prototypes and schemas, we noted examples of indirect methods for diagnosing cognitive phenomena that circumvent the problems of self-report data. For example, reaction time studies that index patterns of concept activation can reveal both the structure of cognitive stores and the activation of particular states. Accordingly, these procedures could provide an important test of the accessibility of the information processing frames that figure so prominently within relational framing theory. Similarly, methods that involve the subliminal priming of concepts (e.g., Ratcliff & McKoon, 1981) might be fruitfully applied in efforts to link cognitive states to communication behavior. To the extent that future efforts position social cognition as integral to communication in close relationships, we anticipate the adoption of increasingly sophisticated measures of cognitive processes.

Within the body of work on cognitive models of relationships, the dominant focus on relationship types or cultural scripts, in general, constitutes an important limitation. Although Planalp (1985) conceptualized relational schemas as applicable to the wealth of knowledge people have about particular interpersonal associations, the call to document the nature and operation of relationship-specific knowledge stores has largely been ignored (but see Ostrom, Pryor, & Simpson, 1981). Mapping an individual's schema for a particular relationship and then observing how that schema interacts with communication experiences would seem to defy a social scientific focus on patterns that transcend individuals. Nonetheless, progress toward understanding how people store, access, and revise information about their own partic-

ular relationships is the next step in clarifying how cognitive models of relationships influence people's interpersonal communication and relationship experiences.

Within the domain of relational information processing, we saw theorizing about the operation of cognitive systems that far outstripped the methods used to assess cognition. Thus, the need to develop alternative measures of cognition noted previously is a high priority for research on this topic. More generally, research on relational communication has emphasized the content of relational messages largely to the exclusion of questions about the processes by which relational judgments are made. The assumption that interpersonal interaction functions to define the relationship between participants is a long-standing claim within the communication discipline (Watzlawick, Beavin, & Jackson, 1967); more than 35 years later we still know very little about how people extract relational information from their conversations with others. Relational framing theory and research on the conditions under which relational judgments may be compromised (Knobloch & Solomon, 2005) are promising signs of developments in this arena, and we look forward to future efforts to disentangle the link between interpersonal communication and conceptions of relationships (e.g., Knobloch & Solomon, 2003a).

The variety of cognitive antecedents and consequences discussed in our review of communication in close relationships highlights a need to integrate different conceptions of cognition in future work on this topic. We drew from diverse research programs to illustrate the interplay of cognition and communication in close relationships. As a result, we noted conceptions of cognition ranging from specific thoughts during interaction (e.g., Sillars et al., 2001; Sillars et al., 2000) to confidence in one's knowledge about relationship involvement (Knobloch & Solomon, 1999). Moreover, the cognitive phenomena emphasized as antecedent to communication behavior were often of a different order than the cognitive responses examined as communication outcomes. Cognition can be characterized in terms of the amount of cognitive activity, the contents of short- and long-term information stores, the processes that act on inputs, the organization of information, and an individual's style or way of thinking (Cloven, 1992). As models of interaction that position cognition as the context for interaction continue to gain ground (e.g., Bradbury & Fincham, 1991; Sillars, 1998), we call for research that brings together different facets of cognitive inputs and outputs within interpersonal episodes.

Our mission in this chapter was to illuminate prominent themes in contemporary research on cognition and communication within interpersonal relationships. In doing so, we drew on distinct areas of research representing a focus on cognitive models of relationships, relational information processing, and the interplay of cognition and interaction within intimate associations. As our final call for future research, we note the need to assimilate these levels of analysis. Certainly, cognitive models such as prototypes and schemas inform relational information processing (e.g., Planalp, 1985); nonetheless, further research is needed to reveal the processes by which knowledge about relationships is used to make sense of the relational implications of interaction episodes. Correspondingly, we see a need for perspectives on relational information processing to clarify how cognitive models of relationships participate in the activation of relational frames and the development of relational judgments. Finally, both conceptions of relational knowledge and relational information processing need to be informed by what we know about the dynamics of interaction. Social cognition encompasses the relatively static information stores that organize knowledge about communication and relationships, the mechanisms by which people process messages and their relational implications, and the states and thoughts that are proximal to interaction. The foundation laid by Roloff and Berger (1982) has come to fruition in the advances made in each of these areas. As we look forward to the next 20 years, we encourage researchers to begin weaving these threads together in the study of cognition, communication, and close relationships.



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# 7

# *Attribution and Interpersonal Communication: Out of Our Heads and Into Behavior*

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The term *attribution* is common in our everyday social vocabularies. We think and we talk about things that happened in our personal or social worlds, identifying our best guesses (our attributions) for why those events or behaviors happened as they did and who or what is responsible for them. We also try to understand others and their actions—as well as our behaviors and ourselves—by figuring out what could have motivated or contributed to a particular behavior. These attempts to understand behavior, as reflected in our thoughts and talk, we often call attributions. Attributions in this everyday sense involve the inferences, assumptions, beliefs, and other explanatory forms that frequent our thoughts and our talk (Burleson, 1996; Hilton, 1990); they are our commonplace efforts to understand what underlies our own and others' actions.

These efforts have been given ample attention by research scholars with an interest in social cognition, especially as it relates to attributions of achievement (for a review, see Bell-Dolan & Anderson, 1999). The past 20 years have also seen particular attention to attributions by communication scholars. Bolstered by two key chapters written in 1982 (Seibold & Spitzberg, 1982; Sillars, 1982), attribution now shows up as a key word in an array of organizational (e.g., Dugan, 1989), intercultural (e.g., Armstrong & Kaplowitz, 2001; Ehrenhaus, 1983; Gao & Gudykunst, 1995), instructional (e.g., Beatty & Friedland, 1990; Bippus & Daly, 1999), and media studies (e.g., Power, Murphy, & Coover, 1996