CHAPTER CONTENTS

9 Explaining Variations in the Effects of Supportive Messages

A Dual-Process Framework

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Although some recipients benefit from exposure to sophisticated and sensitive support messages, the effects of these messages are moderated (sometimes substantially) by characteristics of the recipient, the helper, and the situation. Thus, enhancing the success of helpers who provide support requires a comprehensive explanation of why support messages are effective in some circumstances but less effective in others. To understand why supportive messages work, we must understand how these messages are *worked on* (i.e., processed) by their recipients. This chapter uses a recently developed dual-process theory of supportive message outcomes to explain how and why multiple variables moderate the effects of supportive messages. We provide a comprehensive review of published research findings concerning the demographic, personality, cognitive, and situational moderators of supportive messages and show that these moderators can be interpreted as (1) factors influencing the message recipient's ability and/or motivation to systematically process these messages or (2) environmental cues that quickly trigger responses to the message.

INTRODUCTION

Supportive communication—"verbal and nonverbal behavior produced with the intention of providing assistance to others perceived as needing that aid" (Burleson & MacGeorge, 2002, p. 374)—is rapidly emerging as a core concern across the communication discipline. Supportive communication

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comprises a fundamental form of human interaction that plays critical roles in a host of contexts and settings. For example, considerable research indicates that supportive communication serves essential functions in the family (see review by Gardner & Cutrona, 2004) and other close relationships (see review by Burleson & MacGeorge, 2002). Additionally, supportive communication contributes to well-being in the workplace (see review by Apker & Ray, 2003), schools (e.g., Goldsmith & Albrecht, 1993; MacGeorge, Samter, & Gillihan, 2005), and the community (e.g., Albrecht, 1994). Much of the interest in supportive communication has been stimulated by research documenting the effects of social support on health, both physical (see review by Uchino, 2004) and mental (see review by Schwarzer & Leppin, 1992). These findings have motivated researchers to investigate supportive communication processes and outcomes that may enhance the prediction of health-related effects (see reviews by Albrecht & Goldsmith, 2003; Zoller & Kline, this volume). Likewise, scholars with interests in communication technology have probed whether the social and health benefits of supportive communication can be achieved through on-line support groups (e.g., Wright, 2002; Wright & Bell, 2003), while those with interest in gender issues have explored similarities and differences in men's and women's supportive communication practices and preferences (see reviews by Burleson & Kunkel, 2006; Goldsmith & Dun, 1997). Moreover, the study of supportive communication is increasingly a global concern, with researchers exploring cultural similarities and differences in supportive communication practices, preferences, and outcomes (e.g., Burleson, M. Liu, Y. Liu, & Mortenson, 2006; Feng & Burleson, 2006; Mortenson, M. Liu, Burleson, & Y. Liu, 2006; Xu & Burleson, 2004). Clearly, communication researchers have embraced social support as a key communicative phenomenon.

A major feature that differentiates communication-focused scholarship on social support from the extensive sociological and psychological literatures on this topic is the concern with the *messages* through which helpers seek to realize their supportive intentions (Goldsmith, 2004). That is, "from a communication perspective, the study of 'social support' *is the study of supportive communication"* (Burleson & MacGeorge, 2002, p. 384). Although supportive messages may exhibit a variety of help-intended goals, including dispensing information and advice, fostering a sense of belonging or inclusion, and enhancing the recipient's self-esteem (see Cutrona & Suhr, 1992; House, Landis, & Umberson, 1988), perhaps the most common goal pursued in supportive messages is the provision of *emotional support* (Burleson, 2003).

Messages that aim to provide emotional support—those intended to comfort, reduce suffering, and relieve distress—can powerfully affect the feelings, coping behavior, personal relationships, and even physical health of the recipient (Albrecht & Goldsmith, 2003; Goldsmith, 2004; Uchino, 2004; Wills & Fegan, 2001). Several research programs have sought to identify properties of more and less effective emotional support messages (see reviews by Burleson & MacGeorge, 2002; Cunningham & Barbee, 2000; Goldsmith, 2004). In particular, more empathic, person-centered, face-supportive, and solace-oriented messages are especially helpful at reducing the recipient's emotional distress and achieving other desirable outcomes (Burleson, 2003; Burleson & Goldsmith, 1998; Dunkel-Schetter, Blasband, Feinstein, & Herbert, 1992; Goldsmith, 1994).

However, a growing number of studies have concluded that the effects of support messages differ (sometimes substantially) as a function of several characteristics of the recipient, the helper, and the communication situation (see reviews by Lakey & Cohen, 2000; B. R. Sarason, I. G. Sarason, & Gurung, 1997; W. Stroebe & M. Stroebe, 1996). These variations in message outcome are theoretically interesting and pragmatically important. For example, these variations may define boundary conditions for the helpfulness of different support messages (see Helgeson, Cohen, Schulz, & Yasko, 2000) and, thus, indicate that certain support messages are more appropriately used with some recipients and/or contexts than others. Hence, maximally effective supportive practice requires knowing how relevant features of the recipient and context likely qualify the effects of various message options.[1] At the level of theory, variations in outcomes of supportive messages demand explanation: *Why* do certain variables moderate the effects of supportive messages in specific ways and on specific occasions? Answering this question should contribute to theory by generating a richer understanding of how people process supportive messages, how various factors affect message processing in particular ways, and why messages lead to characteristic outcomes. For example, what appear to be inconsistent results for various supportive messages may actually point to the operation of cognitive and affective processes in recipients that influence how they notice, process, and experience messages (e.g., Kaul & Lakey, 2003). Indeed, the research documenting moderators for the effects of support messages underscores what we take to be a fundamental axiom of message reception research—to understand how supportive messages work, we must understand how these messages are *worked on* (i.e., processed) by recipients.

Currently, we lack a comprehensive explanation for the factors that moderate the effects of support messages. Thus, the purpose of this chapter is twofold. First, we offer an integrative explanation for variations in support message outcomes by drawing from a recently developed theory of support message reception. Grounded in a *dual-process* approach to information processing (Chaiken & Trope, 1999; Todorov, Chaiken, & Henderson, 2002), this explanation suggests that many of the variables found to moderate the outcomes of supportive messages do so either through (1) their influence on the recipient's ability and/or motivation to systematically process these messages or (2) serving as cues that quickly trigger responses to the message. Second, the core of the chapter comprehensively reviews extant research findings on the moderators of support messages to determine if these findings can be explained within the dual-process framework. This review provides an evaluation of the integrative power and potential of the dual-process approach for support

message processing, and it organizes these findings for future research in this area.

Beyond helping to explain why the effects of supportive messages vary, our analysis contributes to an enhanced understanding of the fundamental, yet understudied, core communication process of *message reception* (see Berger, 2005). By extending the scope of the influential dual-process approach outside the realm of persuasion where it was originally developed, the current analysis explores the general utility of this approach as well as its value for addressing questions such as: Why do particular messages have certain effects with certain people in particular contexts but different effects with different people in other contexts? How do supportive messages influence the feelings, thoughts, and coping behaviors of those that they seek to assist? How and why do these messages work—or fail to work? Further, why do some supportive episodes and interactions have extended, lasting effects on health and well-being while others do not?

To address these and related issues, we begin by offering an overview of the properties of more and less helpful emotional support strategies and discussing some of the factors found to moderate the effects of these messages. We also note some limitations in existing theory and research on supportive messages that need to be addressed.

EFFECTIVE EMOTIONAL SUPPORT STRATEGIES: PROPERTIES AND MODERATORS

Properties of Effective Emotional Support Strategies

Numerous studies have sought to identify helpful forms of supportive behavior, and synthetic reviews of these empirical findings (e.g., Burleson, 2003; Burleson & MacGeorge, 2002; Cunningham & Barbee, 2000; Dunkel-Schetter et al., 1992; Goldsmith, 2004; Wortman, Wolff, & Bonanno, 2004) provide considerable insight about the behavioral features that distinguish the supportive efforts most people find more versus less helpful. We derive the following generalizations about the properties of more and less effective forms of support from these reviews, which offer many more details than the current space permits.[2]

Messages expressing positive helper intent, feeling, and commitment are broadly perceived as helpful. In particular, recipients perceive messages that convey acknowledgement, comprehension, and understanding and those that express sincere sympathy, sorrow, or condolence as sensitive and helpful. Similarly, recipients typically experience statements by helpers that provide legitimacy for feelings (and sometimes actions) as quite helpful, especially when helpers embed such statements in *highly person-centered* (HPC) messages that also encourage the articulation, elaboration, and exploration of those feelings (Burleson, 1994).

Not surprisingly, recipients consider low person-centered (LPC) messages (which deny, criticize, or ignore their feelings and perspectives) as especially unhelpful. Particularly dysfunctional messages include criticism of the recipient's experience and/or expression of negative feelings, statements or implications that the recipient's feelings are unwarranted or illegitimate, and telling the recipient how he or she should feel and think about the upsetting situation (Burleson & Goldsmith, 1998). Recipients also resent an extended focus by the helper on his or her own feelings about the current situation or about a similar situation in the past. Moreover, such responses prove unhelpful at improving recipient affect, although this form of support may be viewed more positively if it comes from someone with genuinely similar experiences (Dakof & Taylor, 1990). Finally, recipients do not benefit from helper "overinvolvement, intrusiveness, oversolicitousness, and overconcern" (Dunkel-Schetter et al., 1992, p. 97).

Several other forms of emotional support elicit mixed reactions. Recipients occasionally perceive reassurance, particularly assertions that "the worst is over" and that "everything will work out," as helpful, but such statements can also be experienced as insensitive and unhelpful. Efforts aimed at distracting the target's attention from the upsetting situation may be helpful in some circumstances (Derlega, Barbee, & Winstead, 1994), but recipients can interpret them as invalidating and unhelpful in other circumstances (Barbee & Cunningham, 1995). Similarly, providing advice about how to manage aspects of the problem comprises a risky enterprise that frequently backfires; advice may be viewed as helpful, but it is also regularly identified as an unhelpful feature of supportive efforts (Goldsmith, 1994). Recent research indicates that individuals more likely perceive advice as helpful if it is contextually appropriate (i.e., solicited by the recipient and appropriately timed; Goldsmith, 2000; Jacobson, 1986), contains sound content (i.e., proposals that appear to be effective, implementable, and without significant disadvantages; MacGeorge, Feng, Butler, & Budarz, 2004), and is presented in a "face-supportive" way (i.e., in a manner that conveys positive regard and respects the target's autonomy; Goldsmith & MacGeorge, 2000; MacGeorge, Lichtman, & Pressey, 2002).

Factors Found to Moderate the Effects of Supportive Messages

Though substantial research indicates that some supportive messages are generally more helpful or effective than others, research increasingly finds that the effects of supportive messages are moderated by several characteristics of the recipient, the helper, and the communication situation (see reviews by Goldsmith, 2004; Lakey & Cohen, 2000; Sarason et al., 1997; W. Stroebe & M. Stroebe, 1996). More specifically, several *demographic factors* have been found to moderate the effects of supportive messages, including the recipient's age, nationality, ethnicity, social class (socioeconomic status), and sex.

Researchers have also determined that individual differences among recipients with respect to *personality traits* and *cognitive factors* moderate the effects of supportive messages, including attachment style, perceived support availability, locus of control orientation, gender schematicity, and interpersonal cognitive complexity. Finally, several features of the *interactional context* moderate the effects of supportive messages, including the recipient's need for support, the sex of the helper, the status of the relationship between the helper and the recipient, and certain features of the supportive message itself.

For example, numerous studies have found that the sex of the support recipient influences the outcomes of supportive messages. Specifically, although both men and women evaluate HPC comforting messages more positively than they do LPC messages, women tend to regard HPC messages more positively and LPC messages less positively than do men (see review by Burleson & Kunkel, 2006). Sex of the support provider also influences outcomes of supportive messages. Several studies (e.g., Glynn, Christenfeld, & Gerin, 1999; Samter, Burleson, & Murphy, 1987) report that recipients experience supportive messages originating from (or attributed to) female sources as more helpful than supportive messages coming from male helpers, even when researchers strictly control message content. Similar patterns of moderation have been detected for a broad range of individual and situational factors. The variable effects of supportive messages constitute a puzzle that we seek to explain through a comprehensive model of how various moderating factors influence the processing and outcomes of supportive messages.

The effects observed for most variables that moderate the impact of supportive messages typically have been rather modest in magnitude and rarely, if ever, completely qualify effects owing to message content. Despite their typically modest effect sizes, these moderators remain pragmatically important and theoretically interesting as indicated above. Currently, no comprehensive explanation exists for the moderating action of these variables on the effects of support messages, nor is it apparent that researchers recognize that the existence of these moderators constitutes a problem. Moreover, we lack agreement about which variables moderate the effects of supportive behaviors. The fragmented character of the literature has led many researchers to treat particular moderators in an isolated fashion, with several recent reviews of putative moderators focusing on largely different sets of variables (e.g., compare Goldsmith, 2004, pp. 16-19; Reis & Collins, 2000, pp. 146-165; Uchino, 2004, pp. 74-80). This practice has led to a complex and often confusing array of explanations for the effects of these moderators. Typically, the action of each moderating variable has been explained by a distinct theoretical mechanism—if researchers explain it at all.

Clearly, researchers concerned with the outcomes of supportive messages need a parsimonious theoretical account that provides a coherent explanation for the moderating effects of different variables on message outcomes. We believe that such an integrative account can be derived from a recently developed theory of support message processing, a theory that is grounded in a dual-process framework.

A DUAL-PROCESS THEORY FOR THE RECEPTION AND OUTCOMES OF SUPPORTIVE MESSAGES

Communication scholars are probably most familiar with dual-process approaches to human information processing in the context of persuasion (e.g., see Gass & Seiter, 2007; O'Keefe, 2002; Perloff, 2003). Approaches such as the Elaboration Likelihood Model of Petty and Cacioppo (1986; Petty, Rucker, Bizer, & Cacioppo, 2004) and Chaiken's Heuristic-Systematic Model (Chaiken, 1980; Todorov et al., 2002) were introduced in the early 1980s in an effort to resolve several problems in the persuasion and attitude-change literatures. In particular, dual-process models offered testable explanations for such puzzling phenomena as the varied (and even contradictory) effects of message, source, receiver, and contextual factors on attitude change; the variable strength and persistence of the attitude change achieved through persuasion, and the variable extent to which attitude change predicted behavioral change.

Bodie and Burleson (2006) suggested the potential of the dual-process approach for resolving similar problems in the supportive communication literature; they advocated this approach could explain (1) differences in the effects of various independent variables (message, source, receiver, and contextual factors) on recipient responses to supportive messages (e.g., message evaluations, changes in affect, coping, and behavior) and (2) differences in the persistence or endurance of changes in affect and coping achieved through supportive communication. The dual-process theory for supportive message outcomes (which we briefly summarize here) provides a detailed analysis of the varied processes through which changes in affect may occur, the processing modes that can be applied to supportive messages, the consequences that follow from particular processing modes for changes in affect and behavior, and determinants of the mode of processing employed by message recipients in particular contexts.[3] Figure 9.1 provides a graphic summary of the essential components of this model.

Processing Modes

Similar to dual-process theories developed for persuasive messages, the dual-process theory for supportive message outcomes assumes that people process supportive messages on an elaboration continuum that ranges from the highly systematic and thoughtful processing of messages to a very low level of thought. *Elaboration* refers to the extent to which an individual thinks with respect to message content. Thus, when processing messages systematically, recipients carefully reflect on the content of the message and the information

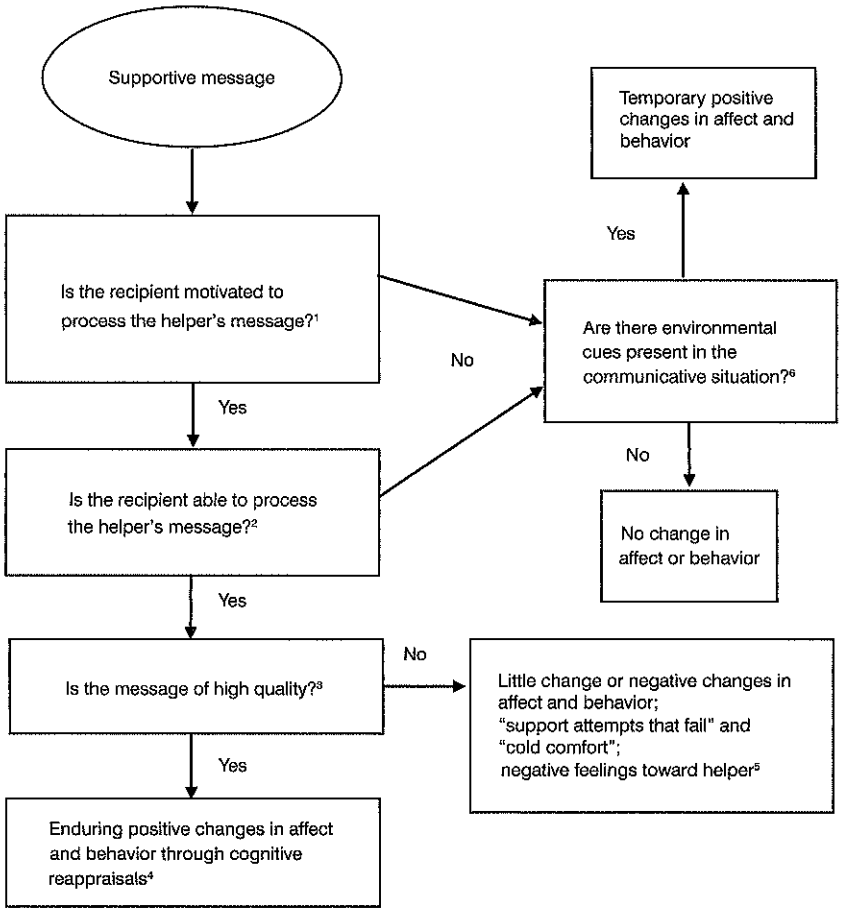

Figure 9.1 A dual process model for supportive communication (after Petty & Cacioppo, 1986)

Notes

1. Motivation to process supportive messages is influenced by both situational factors (e.g., severity of problem, timing of message, message content) and individual-difference factors (e.g., perceived support availability, attachment style, affiliative need, locus of control).
2. Ability to process supportive messages is influenced by both situational factors (e.g., presence/absence of attention distracters) and individual-difference factors (e.g., age, cognitive complexity, communicative competence).
3. Quality of supportive messages is influenced by factors such as the explicit statement of helping intentions, verbal person centeredness, facework or politeness, and nonverbal immediacy, among others.
4. Mechanisms through which cognitive reappraisals effect enduring positive changes in affect and behavior are described by Burleson and Goldsmith (1998).
5. The harmful consequences of poor quality supportive messages that receive thoughtful processing are detailed in Burleson (2003).
6. Environmental cues that can activate low elaboration affect change mechanisms include sex and attractiveness of the helper and type of the relationship between the helper and recipient.

contained within it, thoughtfully consider this information in relation to prior ideas, and give close attention to the full content of a message. In contrast, when engaged in a low level of elaboration, recipients of supportive messages pay comparatively little attention to the content of the message. Instead, environmental cues (e.g., sex of the helper, status of the relationship with the helper) largely influence communication outcomes. These cues may activate mechanisms of affect change that require relatively little thought, including certain cognitive heuristics—tacit interpretive and decisional rules (e.g., "women provide sensitive support;" "friends provide helpful support")—and distraction, refocusing attention away from the cause of upset.[4]

Undoubtedly, people systematically process many of the supportive messages that they receive. Often, individuals explicitly seek support and assistance from others, and, when they do, they appear to attend quite thoughtfully to message content (e.g., Barbee & Cunningham, 1995; Derlega, Winstead, Oldfield, & Barbee, 2003; Larose, Moivin, & Doyle, 2001). However, research also provides convincing evidence that people do, at least on occasion, engage in little elaboration when processing supportive messages. For example, some research indicates that people often report feeling comforted by the mere presence of others and cannot remember (or report) the content of the supportive messages generated by these others (e.g., Lehman, Ellard, & Wortman, 1986; Lehman & Hemphill, 1990). These results suggest that recipients did not attend to or deeply process the content of helpers' supportive messages; rather, the presence of a particular kind of helper served as the basis for recipient response. Further, in certain circumstances, people are affected more by the perception that a helper could be supportive than by whether the helper actually produced a well-crafted supportive message (see Mankowski & Wyer, 1997).

Consequences of Processing Mode

Both low and high elaboration of supportive messages can produce desirable outcomes (e.g., improved affect and coping), especially in the short term (Burleson, in press). Yet, the reasons for these outcomes, as well as their duration and stability, differ. For instance, many cognitive heuristics triggered by various environmental cues in support situations imply to recipients that they *should* feel better about things owing to the presence of these cues (e.g., receiving support from a woman or a friend) and rules associated with these cues (e.g., support from women and friends is helpful). However, the changes in affect and coping generated by such heuristics (and other low-elaboration mechanisms of affect change such as distraction) are likely to be short-lived since affect-change mechanisms activated by environmental cues do not act on the causes of upset, which—along with emotion scholars such as Lazarus (1991)—we assume to be the recipient's *appraisals* of the problematic situation.

In contrast, persuasion research (e.g., Haugtvedt & Petty, 1992; Petty, Haugtvedt, & Smith, 1995) suggests that when recipients elaborately process supportive messages, the content of these messages will have a considerable and lasting effect on outcomes. In particular, under conditions of high elaboration, messages exhibiting high levels of empathy, solace, person centeredness, and face support should yield desirable outcomes; messages exhibiting low levels of these characteristics should yield few or even harmful outcomes. Environmental cues should have comparatively little effect on outcomes when supportive messages are processed systematically; they may add somewhat to the effects of systematically processed message content when consistent with that content (e.g., a female helper using a HPC comforting strategy), but they tend to be discounted when inconsistent with systematically processed message content (see Todorov et al., 2002, for a discussion of the additivity and attenuation hypotheses).

The brief duration of emotional and behavioral changes achieved through low-elaboration affect change mechanisms may not be a cause for concern when recipients experience relatively mild forms of distress (see Endnote 2). In such instances, the recipient's mild distress and the problem underlying that distress likely decay rapidly on their own accord. Simple supportive strategies that rely on mechanisms such as heuristics or distraction might be quite effective in these circumstances (Burleson, in press); helpers may need to provide only a temporary lift in the recipient's affect until the upset dissipates and attention is refocused.[5]

The use of simple supportive strategies that rely on low-elaboration mechanisms of affect change (e.g., heuristics, distraction) are likely to be much less effective when recipients suffer from more intense emotional upsets and consequential problems. Once the cue is absent and the associated change mechanism is no longer active, negative affect and dysfunctional coping likely resurface, especially if the problematic situation is severe (Pennebaker, 1997). More distressed persons may cheer up only briefly when cues activating positive affect are present and then return to ruminating about the upsetting situation (Nolen-Hoeksema & Larson, 1998; Nolen-Hoeksema & Morrow, 1993).

For recipients dealing with a serious upset, lasting changes in affect and coping (as well as related outcomes such as improvements in mental and physical health) usually occur when they systematically process high-quality forms of emotional support (i.e., those providing empathy, solace, face support, and HPC comforting). Burleson and Goldsmith (1998) identified *cognitive reappraisal* as an affect change mechanism that can produce stable improvements in affect and coping; reappraisal involves changing judgments about the meaning and personal significance of events and tends to happen when recipients elaborately process high quality supportive messages. HPC comforting messages and other beneficial forms of support are more likely than their unhelpful counterparts to facilitate a cognitive reappraisal of the problematic situation (Jones & Wirtz, 2006). Because these messages address the underlying causes of emotional states and coping orientations—the recipient's cognitive appraisals of the problematic situation—the systematic processing of these messages has a good chance of yielding enduring changes in the recipient's thoughts, feelings, and behaviors (e.g., Donnelly & Murray, 1991; Lepore & Helgeson, 1998; Lepore, Ragan, & Jones, 2000).

Determinants of Processing Mode

The character of the changes in affect and coping achieved through low versus high elaboration of support messages makes it important to understand the factors that influence recipient processing. Systematic processing of messages most likely occurs (and occurs most extensively) when recipients are *motivated* to attend to the message and posses the *ability* to consider its content thoughtfully (Petty & Cacioppo, 1986). According to Petty and Cacioppo, motivational factors comprise those "that propel and guide people's information processing and [give] it its purposive character" (p. 218); whereas, ability factors "encompass a person's capabilities and opportunities" (Petty & Wegener, 1999, p. 53).

Both qualities of the individual (e.g., personality traits, cognitive capacities, demographic variables) and the situation (e.g., characteristics of the message source, aspects of the topic, features of the interactional setting) influence the motivation and ability to carefully consider message content. For example, situational factors that can increase the recipient's motivation to systematically process supportive messages include the severity of the problematic situation and the intensity of emotional upset experienced. Motivation to systematically process support message content can also be enhanced by several personality dispositions (e.g., need for cognition, perceived support availability). Situational factors likely to decrease the ability to process supportive messages systematically include environmental distractions (e.g., noise) and increased cognitive load (e.g., other tasks demanding cognitive resources). Finally, several social-cognitive capacities (e.g., interpersonal cognitive complexity, emotional intelligence), which reflect individual differences in ability, can promote systematic processing of support message content.

When either the motivation or ability to process supportive messages is low, environmental cues that activate low-elaboration processes more strongly influence responses to supportive behavior. For example, some feature of the message, source, or communication situation (i.e., a cue) may activate a decisional heuristic. The operation of heuristics activated by peripheral cues appears to be governed by three principles (Todorov et al., 2002). Specifically, as Todorov et al. observed, the use of a particular heuristic is most likely to occur when an individual has a heuristic (decision rule) stored in memory (*availability principle*) that recipients can access during the presentation of a message (*accessibility principle*) and apply to the decision making task at hand (*applicability principle*). Factors such as the recency and frequency of the

heuristic's use govern principles such as the accessibility of a heuristic (and, thus, the triggering potential of its associated environmental cue). For example, in contemporary American society, many will have available the heuristic that women provide helpful emotional support (see Burleson & Kunkel, 2006); this heuristic may be easily accessible for some owing to its frequent use (e.g., those high in gender schematicity), and it becomes applicable in a particular situation when a female helper seeks to provide comfort.

Summary

In sum, the dual-process theory of supportive message outcomes maintains that the effects of supportive messages vary as a joint function of the way in which individuals process messages (low to high elaboration) and features of the communicative situation (message content versus environmental cues). This theory further maintains that the likelihood of processing supportive messages systematically is influenced by factors that impact the motivation and ability to scrutinize message content in supportive contexts. The next section seeks to apply this theory to explaining moderators of supportive message outcomes.

EXPLAINING MODERATORS OF THE EFFECTS OF SUPPORTIVE MESSAGES: A DUAL-PROCESS APPROACH

The dual-process theory of supportive message outcomes suggests an inclusive, yet parsimonious, framework for organizing and explaining the results of studies showing that numerous source, recipient, message, and contextual factors moderate outcomes of supportive messages. Specifically, this theory suggests that these moderating factors can (1) affect how recipients process supportive messages by influencing their ability and/or motivation to elaborate on message content or (2) serve as cues in low-elaboration processes such as the use of decisional heuristics.[6] In an effort to explain extant findings about moderators of support message effects and evaluate the integrative potential of the dual-process theory of supportive message outcomes, we present a comprehensive review of the various demographic, personality, cognitive, and situational factors found to moderate the effects of supportive messages. For each moderator documented by extant research, we consider whether it can be reasonably viewed as impacting the recipient's processing mode (by influencing the motivation and/or ability to process message content) or cuing the use of quick decisional judgments under low elaboration conditions. In addition, to evaluate the heuristic potential of our dual-process theory, we suggest several as-yet unexamined factors that may moderate the effects of supportive messages by either of the aforementioned processes.

Explaining Demographic Moderators of the Effects of Supportive Messages

Researchers have determined that several demographic characteristics of message recipients moderate the effects of supportive messages. We suggest that the sex, culture, age, and social class of a support recipient affect the motivation and/or the ability to process supportive messages in a systematic manner.

Sex Differences

Sex of the support recipient serves as a reliable moderator of the effect of supportive behavior. Numerous studies (see review by Cutrona, 1996) indicate that women are less satisfied with the support that they receive than are men; this sex difference holds true in marital relationships (Acitelli & Antonucci, 1994) and early adolescence (Shirk, Van Horn, & Leber, 1997). Numerous studies (Burleson & Samter, 1985b; Jones & Burleson, 1997; Kunkel & Burleson, 1999; MacGeorge, Graves, Feng, Gillihan, & Burleson, 2004; Samter, Whaley, Mortenson, & Burleson, 1997) reveal that, although both men and women evaluate and respond more positively to HPC comforting messages than to LPC messages, women respond somewhat more favorably to HPC messages than do men; whereas, men respond more favorably to LPC messages than do women (see review by Burleson & Kunkel, 2006). Other studies (Carels & Baucom, 1999) provide evidence that women's evaluations of supportive interactions with their spouses are more influenced by the content of the interaction (i.e., the messages) than are men's evaluations of supportive interactions with their spouses.

Women, thus, appear to discriminate more critically and carefully than men among the supportive messages that they receive, perhaps because they are more motivated and/or better able to evaluate the supportive messages they receive do than men. Compared to men, women report a stronger desire for support (especially emotional support; e.g., Xu & Burleson, 2001), and they place a greater value on the supportive skills of friends and family members (e.g., Burleson, Kunkel, Samter, & Werking, 1996; MacGeorge, Feng, & Butler, 2003). These findings coincide with the notion that women are more motivated than are men to systematically process the supportive messages they receive. Other findings suggest that women are better able than men to systematically process these messages. For example, women exhibit higher levels of cognitive complexity (e.g., Samter, 2002), empathy (e.g., Trobst, Collins, & Embree, 1994), and emotional intelligence (e.g., Brackett, Mayer, & Warner, 2004) than do men, all of which appear to influence the capacity to systematically process support messages, especially highly sophisticated messages (see Burleson & Caplan, 1998).

Cultural Differences

Ethnicity and nationality of the support recipient also moderate the effects of supportive messages. Members of different ethnicities in contemporary America (African Americans, Asian Americans, European Americans) all evaluate HPC comforting messages more positively than LPC comforting messages. However, European Americans evaluate HPC messages more favorably than do African Americans; whereas, African Americans evaluate LPC messages more favorably than do European Americans (Samter et al., 1997). Somewhat similarly, though highly sensitive comforting messages and coping behaviors are evaluated more positively than less-sensitive support behaviors by both Americans (Burleson & Samter, 1985a) and Chinese (Burleson et al., 2006), Americans respond somewhat more favorably to HPC messages than do Chinese; whereas, Chinese respond much more favorably to LPC messages than do Americans (Burleson & Mortenson, 2003; Mortenson et al., 2006).

One explanation for these cultural differences in responses to supportive messages builds on the distinction between low- and high-context communication. Specifically, European Americans and members of other, more individualist cultures routinely engage in *low-context* communication; whereas, Chinese, Asian Americans, African Americans, and members of other, more collectivist cultures are more inclined to engage in *high-context* communication (Gudykunst & Matsumoto, 1996; Hall, 1976). As Hall explained, in low-context communication, "the mass of information is vested in the explicit code" (p. 70), yet, in high-context communication, "most of the information is either in the physical context or internalized in the person" (p. 79). Thus, when Chinese receive support from in-group members such as friends and family, they probably are less motivated than are Americans to examine the content of these messages and rely less on the specific content of support behaviors to infer the helper's intentions and concerns. Rather, a provider's concerned desire to help can be taken for granted, with these assumed intentions providing the context or interpretive frame for processing and evaluating verbal messages (see Chang & Holt, 1991). Moreover, within a collectivist culture, the distressed person—who probably already feels guilty about disturbing social harmony by sharing unpleasant feelings—may be especially motivated to avoid further upsetting social harmony by critically (i.e., systematically) evaluating what may be less-than-tactful behavior from a friend (Gao, Ting-Toomey, & Gudykunst, 1996).

In contrast, low-context Americans appear more motivated to scrutinize and evaluate what helpers actually say (i.e., systematically process supportive messages). Individualist Americans who experience emotional upset appear to be more focused than are collectivist Chinese on having their personally distressing feelings and problems addressed (Feng, 2006; Taylor et al., 2004); this orientation may motivate them to draw sharper distinctions among various supportive messages. The individualist desire for others to directly address their distressed feelings may also account for Americans viewing highly sensitive support messages as slightly, but significantly, more helpful than Chinese (see Burleson & Mortenson, 2003). In sum, members of distinct groups appear differentially motivated to scrutinize the content of the supportive messages that they receive.

Age Differences

To date, only a few studies have examined how age moderates the effects of support messages. Utilizing a sample that included adults ranging in age from 19 to 85, Segrin (2003) found that age moderated the effect of social support on well-being, with older individuals indicating satisfaction even with decreased levels of social support when compared to their younger counterparts. Some theorists maintain that, as the end of life nears, people become more detached and withdrawn and less interested in social interactions (see review by Blieszner, 2000), all of which may lead to less effort being expended in processing supportive messages. Thus, the moderating effect of age might represent lesser motivation by older adults than by their younger counterparts to systematically process the content of the supportive messages they receive.

Other studies suggest that age influences the ability to understand sophisticated comforting messages (Clinton & Hancock, 1991) and that younger children do not discriminate among supportive messages that vary in sensitivity to the same extent as adolescents and adults (R. A. Clark & MacGeorge, 2006; Denton & Zarbatany, 1996). Thus, age differences in evaluations of supportive messages may reflect differences in recipients' ability to process these messages systematically. According to Clinton and Hancock, younger children, in particular, may not be able to appreciate differences among various support strategies, given their more limited linguistic, cognitive, and social skills. Consistent with this view, research indicates that youngsters generally do not develop the cognitive and social skills needed to produce highly sensitive support strategies until late childhood or early adolescence (Burleson, 1984; Ritter, 1979). Similarly, the oldest of adults, who may have diminished cognitive and social capacities (Antonucci, 1990), may be less able to differentiate among the supportive messages they receive.

Social Class

Very few studies have examined whether social class (socioeconomic status) moderates the effects of supportive messages. Some research suggests that the provision of emotional and esteem support is more salient and relationally significant for the middle class than the working class (Bergin, Talley, & Hamer, 2003). As with sex, the importance placed on certain types of support behaviors by individuals in different socioeconomic classes may speak to the motivation to process supportive messages. R. A. Clark and MacGeorge (2006) found that

upper-middle-class children and adolescents viewed simple support messages as less helpful than did working-class children and adolescents; in addition, the message evaluations of the upper-middle-class participants were more sensitive to situational differences than the message evaluations of working-class participants. This finding implies that social class may be a marker of the ability to process supportive messages. Consistent with this interpretation, numerous studies report a positive correlation between socioeconomic status and the social and cognitive abilities needed to produce highly sophisticated supportive messages (e.g., Applegate, Burke, Burleson, Delia, & Kline, 1985; Dekovic & Gerris, 1992). Together, these findings suggest that socioeconomic status may contribute to the motivation and ability to process supportive messages; however, future research should directly assess these proposed associations.

Summary

Demographic variables, including the sex, culture, age, and socioeconomic class of the support recipient, moderate outcomes of support messages. Our review reveals that sex and socioeconomic class may affect either the motivation or the ability to process these messages systematically. Further, studies suggest that culture appears to affect motivation, and age impacts the ability to process these messages. Additional research needs to further specify the precise mechanisms through which these variables impact message outcomes.

Explaining Personality Moderators of the Effects of Supportive Messages

Several aspects of the recipient's personality have been found to moderate the effects of supportive messages, including affiliative need, locus of control orientation, perceived support availability, attachment style, depression, communication values, self-concept, and gender schematicity. As we suggest below, these aspects of personality appear to affect the individual's motivation to process supportive messages.

Affiliative Need

A series of studies by C. A. Hill and his colleagues (C. A. Hill, 1987, 1997; C. A. Hill & Christensen, 1989) indicate that individuals high in affiliative need (the motivation or drive to be close to others during times of stress) report more stress-buffering effects from enacted support than do individuals low in affiliative need. C. A. Hill (1997) suggested that "[greater] dispositional affiliative need is likely to increase the sensitivity of recipients to the interpersonal rewards available from contact with relationship partners" (p. 158). Indeed, research affirms that those with a high level of the affiliative need trait want to receive support (especially emotional support) during stressful times (Manne, Alfieri, Taylor, & Dougherty, 1999). Thus, individuals with a high level of dispositional affiliative need tend to be more motivated to systematically process the support messages that they receive from others.

Locus of Control

Locus of control (LOC) references the tendency to see events as caused by (or under the control of) either (1) the self and, more generally, individuals (an internal LOC) or (2) external forces, God, powerful others, or luck or chance (an external LOC; Lefcourt, 1982). Internals more often take responsibility for solving problems than do externals and believe that they can alter the circumstances producing their distress (Manne et al., 1999). Thus, internals should be more motivated than externals to attend to the support messages that they receive and to process these messages systematically. Consistent with this view, the stress-buffering effects of social support have been found largely for internals; externals generally do not benefit from the supportive messages that they receive (Cummins, 1988; Lefcourt, Martin, & Saleh, 1984; Sandler & Lakey, 1982).

Perceived Support Availability

A growing body of research reveals that people process and respond to support messages based on their general level of *perceived support availability*, the global perception that support will be accessible to them when needed (see review by Lakey & Lutz, 1996). Specifically, Lakey and Cassady (1990) proposed that perceived support availability "operates in part as a cognitive personality variable that influences how supportive transactions with others will be interpreted and remembered" (p. 341). Several studies indicate that people with high levels of perceived support availability evaluate standard support messages more favorably than do people with low levels of perceived support (Kaul & Lakey, 2003; Lakey, McCabe, Fiscaro, & Drew, 1996; Lakey, Moineau, & Drew, 1992; Mankowski & Wyer, 1996; Pierce, B. R. Sarason, & I. G. Sarason, 1992), especially when these messages exhibit high levels of empathy or person-centeredness (Servaty-Seib & Burleson, 2007). In addition, several studies have discovered that people with high levels of perceived support availability recall the support messages they receive better than do their counterparts with low perceived support availability (e.g., Lakey & Cassady, 1990; Lakey et al., 1992). These findings suggest that those with high levels of perceived support availability are more motivated to systematically process the support messages that they receive. Persons with low levels of perceived support availability generally hold a lower expectation of receiving helpful support from others and, thus, may be less motivated to carefully scrutinize message content. In contrast, those with high levels of perceived support availability have a greater expectation of receiving helpful support from others, which may incline them to thoughtfully consider the support messages that they receive.

Attachment Style

Global perceptions of perceived support availability are closely associated with attachment style.[7] Those who consider support to be generally available more likely have secure attachment styles; whereas, those who see support as less available more likely have anxious and/or avoidant attachment styles (Asendorpf & Wilpers, 2000; Ognibene & Collins, 1998). Thus, not surprisingly, attachment style influences responses to support messages (Collins & Feeney, 2004; Herzberg et al., 1999; Larose et al., 2001; Lemieux & Tighe, 2004), with securely attached persons generally responding more favorably to these messages than those with anxious and/or avoidant attachment styles. Moreover, Jones (2005) found that the influence of attachment style on evaluations of comforting messages varied as a function of the person-centered quality of the messages evaluated. Hence, persons with secure attachment styles seem more motivated (and prone) to systematically process the support messages that they receive than those with non-secure attachment styles. Consistent with this view, Miller (2001) reported that persons with secure attachment styles had better memories for supportive interactions that they observed than did those with non-secure attachment styles; this result implies that a secure attachment style promotes greater attention to and processing of supportive interactions.

Results similar to those obtained for attachment style have been observed for personality traits conceptually linked to particular attachment styles. For example, Lepore (1995) determined that those high in the personality trait of cynical hostility (which constitutes a key component of the avoidant attachment style) did not benefit from social support provided in a stressful situation; whereas, those low in cynicism did benefit from supportive messages (exhibiting lower levels of cardiovascular reactivity than those in a control group who did not receive supportive messages). A plausible explanation for these findings is that those with high levels of cynical hostility (who generally mistrust others) are less motivated to reflect on the supportive messages that they receive and, therefore, process these messages less systematically and gain less from them than do those with low levels of cynicism.

Depression

Depressed individuals often believe that others cannot help them cope with their distressed states or the perceived causes of those states (see reviews by Segrin, 1998; Weary, 1990). Indeed, some research indicates that depression is inversely associated with the perceived availability of support (e.g., Schwarzer & Leppin, 1992; Vinokur, Schul, & Caplan, 1987). Thus, depressed individuals may be less motivated to systematically process the supportive messages that they receive from others, leading them to view such messages as less helpful than do non-depressed individuals. Consistent with this reasoning, studies (Hollander & Hokanson, 1988; Shirk et al., 1997) find that depressed persons

evaluate standardized support messages less positively than their non-depressed counterparts. Though these results fit with the notion that depression reduces the motivation to systematically process supportive messages, depression may also reduce the ability to process such messages; Gotlib, Yue, and Joormann (2005) argued that depression negatively affects cognitive performance by reducing the attentional resources available for information processing tasks (see also review by Gotlib, Roberts, & Gilboa, 1996).

Communication Values

Communication values reflect an aspect of personality captured by the importance that individuals place on various communication skills; hence, *supportive communication value* is the importance (i.e., value) that people put on the skill of providing support, especially emotional support. Two recent studies (Burleson, in press; Study 1; Burleson & Mortenson, 2003) found that people who highly value supportive skills evaluate HPC comforting messages more positively, and LPC messages more negatively, than do people who place less value on supportive skills. It seems reasonable to assume that people who prioritize emotional support skills will be more motivated to process supportive messages, and, thus, they should discriminate more sharply between better and worse forms of these messages than people who value emotional support skills to a lesser extent.

A second method of assessing communication values involves identifying the goals that individuals indicate they would be likely to pursue in support situations. Researchers (Barbee & Cunningham, 1995; Burleson & Gilstrap, 2002) have identified several goals that potential helpers might pursue in support situations, including providing solace, solving problems, dismissing problems, and escaping from the other's negative emotional state. People who regard the goal of providing solace as particularly important clearly value the provision of emotional support. Those who value the provision of solace discriminate more sharply between better and worse forms of these messages in comparison to those who place less value on solace and/or greater value on other goals for support situations (Burleson & Mortenson, 2003; Kunkel, 2002; Mortenson et al., 2006). This pattern of results coincides with the notion that those who highly regard solace are comparatively more motivated to systematically process supportive messages.

Self-concept

Responses to supportive messages appear to be influenced by at least two aspects of the self-concept—people's self-definitions as expressive and as instrumental. People who perceive themselves as highly expressive believe themselves to be emotional, kind, warm, gentle, and sensitive to the feelings of others; people who consider themselves to be highly instrumental believe themselves to be

independent, active, decisive, confident, and persistent (Spence & Helmreich, 1978). In contemporary American society, individuals often associate an expressive orientation with femininity; an instrumental orientation is typically linked with masculinity (Prentice & Carranza, 2002; Spence & Buckner, 1995), although men and women vary widely in their self-perceived degrees of expressiveness and instrumentality.[8] Given the centrality of affect in their self-definitions, high expressives might be expected to evaluate HPC comforting messages more positively, and LPC messages less positively, than to low expressives. In contrast, given their focus on solving practical problems, high instrumentals might be expected to evaluate MPC messages more favorably than low instrumentals. To date, two studies (Burleson, in press, Study 2; MacGeorge, Graves, et al., 2004) have examined the influence of expressive and instrumental orientations on evaluations of comforting messages that differ in person centeredness. Both of these studies revealed that high instrumentals more positively evaluated MPC comforting messages than did low instrumentals; whereas, high expressives more positively evaluated HPC messages, and more negatively evaluated LPC messages, than did low expressives. These results are consistent with the our predictions that (1) high expressives are more motivated to systematically process LPC and HPC messages than low expressives and (2) that high instrumentals are more motivated to systematically process MPC messages than are low instrumentals.

Gender Schematicity

Some personality variables may moderate the effects of support messages by decreasing the likelihood that these messages receive systematic processing. One such variable is *gender schematicity*, a trait that reflects an individual's reliance on and investment in culturally prevalent (i.e., traditional) conceptions of masculinity and femininity. Gender schematics hold specific, comparatively rigid expectations for men's and women's behavior, readily employ gender-based schemata in the interpretation and evaluation of others' behaviors, and respond negatively to "gender-bending" conduct (e.g., Markus, Smith, & Moreland, 1985). Thus, high gender schematics may often use sex of the helper as a cue that guides the evaluation of supportive behavior.

Consistent with this view, Holmstrom, Burleson, and Jones (2005) reported that highly gender-schematic women responded more favorably to a comforting message when it was attributed to a female helper than when it was attributed to a male helper; in contrast, women low in gender schematicity did not differ in their responses to the message as a function of helper sex. These findings suggest individual differences in reliance on the "women provide good support" heuristic. Highly gender-schematic women appear to be more reliant on it than are less schematic women. In contrast, women low in gender schematicity appear to process comforting messages more systematically; they respond more to the content of the messages used and less to the environmental cue of the helper's sex. Somewhat similarly, W. G. Hill and Donatelle (2005) found that gender-schematic men exhibited a lower capacity to recognize support when it was available to them, thus diminishing their appreciation of the benefits of supportive relationships. These findings coincide with research that indicates certain personality traits (e.g., the need for cognitive closure) reduce the motivation to process messages systematically and increase the likelihood of processing them through less elaborate means (e.g., Webster & Kruglanski, 1994).

Summary

Existing research affirms the notion that several personality traits (including affiliative need, locus of control, perceived support availability, attachment style, communication values, self-concept, and gender schematicity) impact the outcomes of supportive messages by increasing (or decreasing) the motivation to process support messages in a systematic manner. Depression also appears to reduce the motivation to systematically process supportive messages, although this variable potentially impedes the ability to process support messages. Several other personality factors, such as need for cognition (Cacioppo & Petty, 1982) and self-esteem (Nadler, 1986), may also affect the motivation to systematically process supportive messages. These possibilities should be evaluated in future research.

Explaining Cognitive Moderators of the Effects of Supportive Messages

Research demonstrates that several cognitive variables moderate the effects of supportive messages, including interpersonal cognitive complexity and communicative competence. We suggest that these cognitive factors affect the ability to systematically process supportive messages.

Cognitive Complexity

Interpersonal cognitive complexity is a stable, individual difference in the ability to represent and process social information; cognitively complex perceivers have more differentiated, abstract, and organized constructs or schemes for processing social information and, thus, possess more advanced social perception skills than do less complex perceivers (Burleson & Caplan, 1998). Considerable research suggests a positive relationship between cognitive complexity and the ability to generate sophisticated, helpful support messages (see reviews by Applegate, 1990; Burleson & Caplan, 1998; Coopman, 1997). Thus, cognitively complex recipients also should be better able to systematically process the support messages that they receive than less complex recipients. Consistent with this notion, Burleson and Samter (1985b) discovered that

cognitively complex perceivers evaluated HPC comforting messages more positively than did less complex perceivers. Similarly, Samter, Burleson, and Basden-Murphy (1989) provided evidence that complex perceivers acquired more information about the message source from comforting messages than less complex perceivers, with the greatest difference between low- and high-complexity perceivers involving those exposed to HPC messages. These findings imply that complex perceivers are able to spontaneously process supportive messages more deeply and, thus, get more from these messages—particularly their more sophisticated forms—than are less complex perceivers.

Communicative Competence

Communicative competence (CC) refers to an individual's general ability to achieve desired communicative goals effectively, efficiently, and appropriately (Parks, 1994; Wilson & Sabee, 2003). As more skilled communicators, those with high levels of CC should be better able to process supportive messages in a systematic manner than are those with lower levels of CC. Anderson, Carson, Darchuk, & Keefe (2004) generated results consistent with this hypothesis. Anderson et al. tested participants for social skill (CC) and subsequently asked them to complete a disclosure task in which they discussed an emotionally painful event with either a highly skilled or low-skilled facilitator. The skill level of the facilitator did not influence the affect of low-CC disclosers; however, high-CC disclosers reported significantly greater positive affect when paired with a high-skill facilitator than when paired with a low-skill facilitator. These results suggest that high-skill disclosers gained more from the support offered by high-skill facilitators than do low-skill disclosers.

Summary

Research indicates that certain cognitive factors, including cognitive complexity and CC, affect a support recipient's ability to process support messages in a systematic manner. Other cognitive factors—such as working memory capacity (Barrett, Tugade, & Engle, 2004), mental retardation (Lunsky & Benson, 2001), and emotional intelligence (Brackett et al., 2004)—may also influence the ability to systematically process supportive messages and, hence, should be explored in future research.

Explaining Situational Moderators of the Effects of Supportive Messages

Several features of the communicative situation moderate the effects of supportive messages, including the recipient's need for support, the status (or quality) of the relationship between the helper and the recipient, the sex of the helper, and features of the helper's message such as its timing and content.

Next, we address how the effects of these contextual features can be explained through our dual-process framework.

Recipient's Need for Support

One set of factors that moderates the effects of supportive messages includes aspects of the recipient's need or desire for support (e.g., severity of the stressor, intensity of negative affect). Theoretically, as stressors or negative affect states become more severe, so should the desire for support and the motivation to systematically process supportive messages received from others. Consistent with this prediction, Hagedoorn and colleagues (2000; also see Kuijer et al., 2000; Kuijer, Buunk, & Ybema, 2001) found that the marital satisfaction of cancer patients was higher when their spouses used more helpful support strategies (i.e., those reflecting active engagement) and lower when spouses employed less helpful support strategies (i.e., those reflecting protective buffering or overprotection). Most important, the effects for type of spousal support strategy on recipient marital satisfaction were stronger for those recipients with a greater need for support (i.e., those in poor psychological and physical condition). This latter finding, in particular, suggests that recipients process supportive messages more deeply when their need for support intensifies.

More recently, Burleson (in press, Study 3) asked participants to assume that they experienced either a mild version of a problem (e.g., receiving a $25 parking ticket) or a more serious version of the problem (e.g., getting one's car towed and having to pay $350 in fines and fees to get the car released); the participants subsequently read and evaluated six comforting messages that varied in level of person-centeredness. Analyses revealed that participants confronting the serious problem discriminated more sharply between LPC and HPC comforting messages than did those confronting a mild problem. These results suggest that problem severity increased the motivation to process the supportive messages systematically.

We suspect that problem severity (and related factors such as stress and emotional intensity) has a curvilinear effect on the motivation to process supportive messages. As Burleson's results (in press) suggest, persons experiencing only a mild degree of irritation or upset may not have much motivation to thoughtfully consider the content of any supportive messages that they happen to receive. In contrast, those experiencing moderate-to-strong upset are likely to be quite motivated to scrutinize supportive messages that they receive for helpful content. However, at extremely high levels of emotional upset, persons may be unmotivated (and unable) to process supportive messages in a systematic fashion; they may be "paralyzed by fear," "overcome with grief," or "consumed by anger." In such cases, supportive messages likely have little impact, at least until the intensity of the recipient's emotional state becomes less extreme. Ethical considerations preclude most experimental assessments of extreme emotional upset on message

processing, but evidence relevant to its effects on processing might be obtained from field studies or retrospective self-reports.

Relationship Status

Another set of situational factors that moderates the effects of supportive messages includes the status (e.g., acquaintance versus friend) or quality (i.e., closeness, intimacy, positivity) of the relationship between the support provider and the recipient. For example, R. A. Clark et al. (1998) determined that recipients perceived standard supportive messages as more helpful and comforting when attributed to a close friend than to a casual acquaintance. This finding indicates that relationship status functions as an environmental cue associated with a decisional heuristic for processing messages in support situations (e.g., "close friends provide helpful support in times of need"). Indeed, Fincham, Garnier, Gano-Phillips, and Osborne (1995) demonstrated that, when the status of a relationship is easily accessible from memory, this cue exerts a stronger influence on responses to supportive behavior than when it is less accessible from memory.[9]

Several other studies have reported results consistent with the notion that relationship status constitutes an environmental cue associated with the heuristic processing of supportive messages (e.g., Christenfeld et al., 1997; Knobloch, MacGeorge, & Lucchetti, 2004; Uno, Uchino, & Smith, 2002; Young, 2004). In addition, numerous studies provided evidence that satisfaction with support efforts is greater when messages come from providers that the recipient perceives as particularly intimate or close (Cutrona, Cohen, & Igram, 1990; Dakof & Taylor, 1990; Frazier, Tix, & Barnett, 2003; Hobfoll, Nadler, & Leiberman, 1986).

Pierce, I. G. Sarason, and B. R. Sarason (1991) suggested that individuals "develop sets of expectations about the availability of social support for each of their specific significant relationships" (p. 1028). Thus, a particular person (e.g., one's mother) can act as an environmental cue that activates a heuristic (e.g., "mother cares about me" or "mother doesn't care about me") that guides the individual's response to messages received in support situations. Pierce et al. (1992) reported that daughters' evaluations of standard support messages attributed to their mothers were substantially influenced by the daughters' perceptions of the quality of the mother-daughter relationship. In sum, relationship status can serve as a cue that promotes low-elaboration processing of supportive messages, at least under certain circumstances.

Sex of Helper

Sex of the support provider constitutes another feature of the situation that moderates the outcomes of supportive messages. For example, several experiments using identical, standardized messages (Glynn et al., 1999; Samter et al., 1987; Uno et al., 2002) determined that participants respond more favorably

to these messages when they are attributed to female helpers as opposed to male helpers. Burleson (in press, Study 3) found that participants evaluated standard comforting messages attributed to a female helper more positively than those attributed to a male helper but only when participants confronted a mild upset (and, therefore, were presumably engaged in a low level of message elaboration). When participants confronted a more serious upset, Burleson did not find any difference in message evaluations due to the sex of the helper, presumably because the more upsetting situation motivated a high, rather than a low, level of elaboration. Other research has shown that men who use HPC messages when comforting distressed males elicit less favorable reactions than women who employ such messages (Burleson, Holmstrom, & Gilstrap, 2005).

Together, these results suggest that sex of the helper serves as an environmental cue linked to the heuristic "women provide good support" (or "women provide better support than men"). Several lines of evidence affirm the existence of such a heuristic. First, research provides support for a broadly shared cultural expectation that women will be ready and willing providers of warm, nurturing support (Ashton & Fuehrer, 1993; Barbee et al., 1993; Prentice & Carranza, 2002; Wood, 1994). Second, and consistent with this cultural stereotype, many studies have found that, compared to men, women are more nurturing, "tender minded," expressive, and emotionally supportive (Eagly, 1987; Feingold, 1994). Third, numerous studies document that women tend to provide more sophisticated forms of support than men (e.g., solace, face support, HPC comforting) to those in need (e.g., Basow & Rubenfeld, 2003; Goldsmith & Dun, 1997; MacGeorge, Gillihan, Samter, & Clark, 2003; MacGeorge, Graves, et al., 2004, Study 1; Oxley, Dzindolet, & Miller, 2002). Collectively, these findings underscore the existence of the "women provide sensitive support" heuristic; the experimental finding that people respond more favorably to standard support messages from female rather than from male helpers suggests the use of this heuristic when processing supportive messages, at least under certain conditions.

Timing or Sequencing of Support Messages

The effects of supportive messages are moderated by their timing or sequential placement in the supportive interactional episode; as Jacobson (1986) observed, the "same behavior, offered by others and intended to be supportive, may be seen as helpful by the recipient if provided at the right time and as unhelpful if provided at the wrong time" (p. 255). This conclusion holds especially true for messages that give informational support (i.e., advice; Goldsmith & Fitch, 1997). Though recipients often evaluate advice negatively (Dunkel-Schetter et al., 1992), they respond more positively when advice is solicited (Goldsmith & MacGeorge, 2000; MacGeorge, Feng, et al., 2004) or when it is offered following the provision of emotional support (Feng, 2006, Study 3; Jacobson, 1986). One explanation for these results is that recipients are more motivated to attend to advice and, thus, process these messages more systematically at

particular points in the support episode (Feng & MacGeorge, 2006; Parkes, 1982). Simply put, extending from Feng (2006), when recipients want advice and are ready to receive it (i.e., they are motivated), they more likely process the advice that they receive in a systematic manner, get more from that advice, and respond more favorably to it, assuming the advice contains good content. This explanation receives support from recent research by Feng (2007), who found that individual differences in the motivation to process message content moderated the effects of the sequential placement of advice in an interaction on judgments of advice quality, implementation intention, and facilitation of coping. In sum, when recipients want advice and are ready to receive it, they more likely process that advice in a systematic manner, get more from that advice, and respond more favorably to it (assuming that advice contains good content; Feng, 2006, 2007; Feng & MacGeorge, 2006; MacGeorge, Feng, et al., 2004).

Message Content

An understudied factor in the support situation that may moderate the effects of support messages includes certain features of these messages. In particular, Burleson and Goldsmith (1998) suggested that the content of a supportive message may itself serve to encourage (or discourage) systematic processing. Specifically, these theorists maintain that HPC comforting messages (and, possibly, other highly sensitive forms of supportive communication) encourage recipients to articulate and elaborate their thoughts and feelings about upsetting situations (i.e., engage in systematic thought about them). According to appraisal theories of emotion (e.g., Lazarus, 1991) and related theories of coping (e.g., L. F. Clark, 1993; Smyth & Pennebaker, 1999), this sort of systematic thinking about the nature and causes of the distressful situation should engender functional reappraisals of these situations and, thereby, result in improved affect. In contrast, LPC comforting messages discourage recipients from expressing and exploring their thoughts and feelings (by telling recipients how they should act and feel) and, thereby, undermine systematic thinking about the upsetting situation.

Recently, Jones and Wirtz (2006) provided direct evidence that exposure to HPC versus LPC comforting messages encourages more thought about an upsetting situation. Jones and Wirtz directed participants to disclose an upsetting experience to confederates who responded with low, moderate, or highly person-centered comforting messages; the interactions between participants and confederates (which generally lasted about five minutes) were recorded and subsequently transcribed. The researchers found that participants exposed to HPC messages utilized more positive emotion words, negative emotion words, and cognitive mechanism (e.g., causal analysis) words during the course of the discussion with the confederate than participants exposed to less person-centered messages. These findings suggest, then, that the content of a supportive message

may play an important role in motivating systematic thinking about the support situation, the stressful event, and even support messages themselves.

Summary

As shown above, several aspects of the support situation appear to influence the motivation to process supportive messages, including features of message content, the timing or sequence of the supportive message, and the recipient's need for support. Other situational variables, such as sex of the helper and status of the relationship with the helper, appear to serve as cues that foster reliance on heuristics when processing supportive messages (at least in some circumstances). Additional situational factors that may influence the processing of supportive messages encompass the recipient's mood state (Forgas, 2001; Petty, Schumann, Richman, & Strathman, 1993; Schwarz, Bless, & Bohner, 1991), environmental distracters that disrupt attention (Petty & Brock, 1981), the privacy of the setting (Burleson, Samter, et al., 2005), and the perceived attractiveness or similarity of the helper (Suitor & Pillemer, 2000).

CONCLUSION

Though much research has identified the general characteristics of more and less helpful supportive messages, other research indicates that the effects of these messages are moderated (sometimes substantially) by properties of the recipient, the helper, and the situation. Our review comprises the first comprehensive synthesis of research findings regarding these moderators and provides the first unified explanation for their effects. We argue that a dual-process analysis of message reception provides an integrative framework that explains how and why diverse moderating factors affect the outcomes of supportive messages. As with dual-process approaches to persuasive messages, this theory maintains that support messages receive more or less cognitive elaboration from recipients. The degree of message processing, in conjunction with the qualities of the message and features of the interactional situation, jointly determine the outcomes of the supportive episode. Application of this theory enabled us to explain why numerous demographic, personality, cognitive, and situational factors moderate the effects of supportive messages in the ways that they do. We demonstrated that these moderators can be interpreted as affecting message outcomes either through their influence on the ability and/or motivation to systematically process these messages or by acting as cues that trigger certain low elaboration processes such as heuristics. Table 9.1 summarizes our review, indicating the roles that different moderating variables serve within our dual-process framework.

The dual-process framework enabled us to organize and explain most of the existing findings about moderators of the effects of supportive messages

Table 9.1 Variables Shown to Moderate Effects of Supportive Messages

Individual factors influencing the motivation to process systematically	
Variable	*Citations*
Affiliative need	Hill, 1987, 1997; Hill & Christensen, 1989
Attachment style	Collins & Feeney, 2004; Herzberg et al., 1999; Jones, 2005; Larose et al., 2001; Lemieux & Tighe, 2004; Miller, 2001
Communication values	Burleson, in press; Burleson & Mortenson, 2003; Kunkel, 2002; Mortenson et al., 2006
Culture of support recipient	Burleson et al., 2006; Burleson & Mortenson, 2003; Mortenson et al., 2006; Samter et al., 1997
Depression	Hollander & Hokanson, 1988; Shirk et al., 1997
Gender schematicity	Hill & Donatelle, 2005; Holmstrom et al., 2005
Locus of control	Cummins, 1988; Lefcourt et al., 1984; Sandler & Lakey, 1982
Perceived support availability	Kaul & Lakey, 2003; Lakey & Cassady, 1990; Lakey et al., 1996; Lakey et al., 1992; Mankowski & Wyer, 1996; Pierce et al., 1992; Servaty-Seib & Burleson, 2007
Self-concept	Burleson, in press; MacGeorge, Graves, et al., 2004
Sex of support recipient	Burleson & Samter, 1985b; Carels & Baucom, 1999; Jones & Burleson, 1997; Kunkel & Burleson, 1999; MacGeorge, Graves et al., 2004b; Samter et al., 1997
Situational factors influencing the motivation to process systematically	
Message content	Jones & Wirtz, 2006
Message timing or sequential placement	Feng, 2006; Goldsmith & MacGeorge, 2000; MacGeorge, Feng, et al., 2004
Recipient need for support	Burleson, in press; Hagedoorn et al., 2000; Kuijer et al., 2001; Kuijer et al., 2000
Individual factors influencing the ability to process systematically	
Cognitive complexity	Burleson & Samter, 1985b; Samter et al., 1989
Communicative competence	Anderson et al., 2004
Social class	Clark & MacGeorge, 2006
Environmental cues tied to decisional heuristics	
Cue	*Decisional Heuristic and Citations*
Relationship status	"Close others provide helpful support in times of need." Christenfeld et al., 1997; R. A. Clark et al., 1998; Fincham et al., 1995; Knobloch et al., 2004; Pierce et al., 1992; Uno et al., 2002; Young, 2004
Sex of helper	"Women provide good support." Burleson, in press; Burleson, Holmstrom, et al., 2005; Glynn et al., 1999; Samter et al., 1987; Uno et al., 2002

within a single, cohesive account. Previously, these findings were diverse and fragmented, mostly explained through a host of unconnected mechanisms. The dual-process theory of supportive message outcomes is more parsimonious, and it exhibits greater integrative power, thereby enhancing our understanding of why support strategies affect particular people as they do on particular occasions. Of course, our framework is not the only possible one for explaining why diverse factors moderate the effects of supportive messages. Indeed, we encourage other scholars to propose alternative explanatory frameworks for these moderators; doing so will only deepen our understanding of why supportive messages work as they do.

In addition to synthesizing and integrating existing findings, the dual-process framework generates a rich set of predictions about other potential moderators of supportive message outcomes. For example, this model proposes that the recipient's motivation to systematically process may be influenced by several additional personality traits (e.g., need for cognition, need for cognitive closure, self-esteem) and several other contextual factors (e.g., physical attractiveness of helper, stage or phase of the recipient's grieving process, privacy of the setting). Similarly, this model suggests that the recipient's ability to systematically process supportive messages may be impacted by additional cognitive variables (e.g., emotional intelligence) and other contextual factors (e.g., attention distraction, information processing demands). Thus, this dual-process approach provides a heuristic theoretical framework for subsequent research on factors that may influence the processing and effects of supportive messages.

Of particular note, the dual-process theory enabled us to treat aspects of supportive message content as moderators of message outcomes. That is, this theory positions message content not only as an object to be processed but as a factor that influences degree of elaboration. This attribute represents an important extension of dual-process approaches—one that stands to have more general applicability (i.e., to persuasive and informative messages as well as supportive messages). More generally, our review reveals the applicability and utility of a dual-process approach for analyzing the outcomes of supportive communication. Up until now, dual-process models have been developed almost exclusively with respect to persuasive communication (see Chaiken & Trope, 1999). By demonstrating the fruitfulness of the dual-process approach with another, quite distinct domain of communication, this review will hopefully contribute to the development of more general theories of message reception and outcome.

Finally, we believe that our review and the dual-process theory that informed it hold considerable pragmatic potential. In particular, this theory has the potential to generate an empirically sound basis for prescribing the types of support strategies to be used on various occasions with various recipients. If this potential is borne out by empirical research, our theory may contribute to improving the training and effectiveness of the laypersons, therapists, counselors, pastors, and

other formal and informal helpers who provide support to others. For example, our review suggests when simple, brief support messages may be just as effective (and, perhaps, more effective) than longer, more complex messages that require considerable cognitive processing to yield desirable effects. Our review further indicates that, when longer more complex support messages are needed and simple, brief messages are likely to be ineffective—or even counterproductive. Ultimately, our analysis reiterates that helpers should implement a recipient-centered and contextually sensitive approach to providing support. We believe that the principles guiding this approach to support provision can be incorporated in various forms of clinical practice (e.g., Greenberg, 1993) and professional practice (e.g., Hullett, McMillan, & Rogan, 2000), in the design of community support groups (e.g., Helgeson et al., 2000) and support interventions (e.g., Gottlieb, 2000), and in the development of more helpful and supportive social networks (Cutrona & Cole, 2000).

Several limitations in our explanatory efforts should be noted. For example, we are presently unable to specify whether certain factors that moderate the effects of supportive messages (e.g., recipient sex, recipient depression) do so by affecting processing ability, processing motivation, or both of these. Research designs that employ tests for different sets of potential mediating variables will help reduce this ambiguity. In this context, however, it is important to underscore a fundamental claim of dual process models—many variables may serve multiple roles, sometimes influencing processing mode, sometimes functioning as a cue, and sometimes functioning as an influence on cognitions and behaviors through high-elaboration processes (Petty et al., 2004; Todorov et al., 2002). Hence, future theoretical developments and research need to pinpoint the precise role served by particular variables in particular sets of circumstances. Researchers could accomplish this task by designing studies that incorporate variables hypothesized to impact the ability and motivation to process support messages; they should also test proposed mediators (e.g., elaboration) through the use of hierarchical regression, path analysis, or structural equation modeling. Without careful tests of specific connections and linkages implied by our theory, the powerful dual-process framework will quickly devolve into a morass of non-falsifiable propositions (Stiff, 1994; Stiff & Boster, 1987).

The major limitation with our dual-process analysis of how moderating variables affect the outcomes of supportive messages is that it has not yet been subjected to direct test. We maintain that the moderating effects of demographic, personality, cognitive, and situational factors on supportive message outcomes occur because these factors affect the processing of supportive messages. Thus, direct tests of our claims need to examine the extent to which elaboration or processing depth (as assessed by thought listing, reaction time, or self-reports; see Petty & Cacioppo, 1986) mediates the effects of moderators on supportive messages. We are currently engaged in a program of research designed to provide these tests by examining the mediating effects of processing depth

with regard to several moderators, including several potential moderators not previously examined with regard to supportive communication (e.g., need for cognition) and those that have received only limited attention thus far (e.g., cognitive complexity). This empirical work should lead to refinements in our analysis and a better understanding of how supportive messages produce their effects under various conditions with diverse groups of people.

Limitations notwithstanding, the current review offers a heuristic framework for understanding an otherwise fragmented set of findings within an area central to many domains of communication research. Our review also crosses disciplinary boundaries and could potentially influence theory building and practice in counseling, social cognition, message processing, and epidemiology, among other areas. Building a better understanding of supportive processes in everyday life is important for scholars, practitioners, and everyday social actors.

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NOTES

1. The contingent nature of the effects of supportive messages suggest that, like persuasion, the provision of support is an *art* that would be usefully informed by a theoretically sophisticated and empirically valid *rhetoric of support*.
2. Most studies examining properties of more and less helpful messages have focused on contexts where the recipient is (or appears to be) experiencing moderate to severe emotional upset. Little research to date has examined supportive behavior in the context of mild upset or has sought to determine whether the message forms found helpful in contexts of moderate and severe upsets are equally helpful in coping with mild upsets.
3. A rather different effort to apply the logic of the dual-process approach to therapy and counseling was presented more than 20 years ago by Petty et al. (1984). Little development or extension of this model has occurred in the intervening years.
4. Multiple mechanisms exist through which the communicative effects of helpers can foster affect change in distressed recipients. Here, we focus on one mechanism that requires a high degree of cognitive elaboration—reappraisal—and two mechanisms that generally require low levels of elaboration, distraction and the use of heuristics. In future work, we plan to explore systematically multiple mechanisms of affect change.

5. Of course, it remains important for helpers to avoid using minimization strategies and other invalidating behaviors that have been found to exacerbate the recipient's upset; as numerous studies show, clumsy efforts at providing support can make things worse rather than better (e.g., Barbee et al., 1998; S. L. Clark & Stephens, 1996; Hays et al., 1994).
6. Readers familiar with dual-process theories of persuasive message processing will recognize that variables can serve a third function in these models—they can bias both the valence and outcome of message processing (for details, see Petty et al., 2004; Todorov et al., 2002). We do not discuss this potential function of moderating factors here as, to date, we discovered no efforts directed at examining this function in the context of supportive communication, and few of the extant findings appear consistent with this function. Of course, future research focused on extending the dual-process theory of supportive message outcomes should investigate the possibility that moderators of message effects exert their influence through this biasing function.
7. Attachment theory is generally attributed to Bowlby (1969, 1973) who observed that, when separated from their primary caregiver, infants displayed diverse emotional reactions. Ainsworth and her colleagues (1978) subsequently provided a three-category system for identifying the primary attachment style of an infant based on the consistency with which his or her primary caregiver attended to needs. Applying this theory to adult romantic relationships, Hazan and Shaver (1987) described attachment along these same three dimensions: Individuals with a *secure* attachment style are comfortable with intimate relationships, enjoy becoming somewhat dependent on others, and do not often worry about abandonment. The *avoidant* style refers to difficulty in trusting other people and a general reluctance to get close. Finally, the *anxious/ambivalent* individual desires to be close with others but is apprehensive that others will not share this feeling.
8. Several scholars (e.g., Bem, 1974; Spence & Helmreich, 1978) advocate using items tapping self-perceptions of expressiveness and instrumentality as assessments of gender-role orientation. These measures, however, have often been only moderately correlated with biological sex and other measures of gender (Burleson et al., 2003; MacGeorge, Graves, et al., 2004); thus, they appear to be less measures of gender than of personality traits that may be manifest in members of both sexes.
9. This result was present only for husbands but not for wives, suggesting that some men may use a heuristic pertaining to general relationship satisfaction to judge supportive behaviors of their wives (e.g., "My wife provides good support"). Consistent with research on sex differences in support message evaluations, however, wives may be more motivated or able to process support messages systematically regardless of their relationship attributions.

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