Support Provision in Marriage: The Role of Emotional Similarity and Empathic Accuracy

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The goal of this investigation was to identify microlevel processes in the support provider that may foster or inhibit the provision of spousal support. Specifically, the authors focused on (a) how emotional similarity between the support provider and support seeker and (b) how empathic accuracy of the support provider relate to support provision in marriage. In a laboratory experiment, 30 couples were randomly assigned to 1 of 2 conditions (support provider: man vs. woman) of a factorial design. The couples provided questionnaire data and participated in a social support interaction designed to assess behaviors when offering and soliciting social support. A video-review task was used to assess emotional similarity and empathic accuracy during the support interaction. As expected, greater similarity between the support provider's and support seeker's emotional responses, as well as more accurate insights into the support-seeking spouse's thoughts and feelings were found to be predictive of more skilful support (i.e., higher levels of emotional and instrumental support and lower levels of negative types of support).

Keywords: social support, marriage, emotional similarity, empathic accuracy

The beneficial role of social support in promoting the physical and mental health of individuals who are confronted with a particular stressor has been widely recognized (for an overview, see Cohen, Underwood, & Gottlieb, 2000). In the past decade, the role of social support in close relationships has been of particular interest (e.g., Cutrona, 1996). The ability of spouses to help each other cope with personal difficulties and to provide everyday support for each other may play a central role in marital development (Bradbury & Karney, 2004; Cramer, 2004, 2006). Empirical studies have consistently shown that support behaviors are reliably linked to marital functioning and to changes in marital functioning (Conger, Rueter, & Elder, 1999; Pasch & Bradbury, 1998; Saitzyk, Floyd, & Kroll, 1997). To put it simply, spouses who receive more effective support from their partner report more positive marital outcomes than do unsupported spouses.

Despite the recent interest in how support operates in marriage, and despite important advances in our knowledge in this area, many fundamental issues regarding social support in marriage

remain unresolved (Verhofstadt, Buysse, Devoldre, & De Corte, 2007). In particular, little is currently known about the antecedents of social support and about the microlevel processes that can foster or inhibit support provision. This gap in our knowledge reflects the fact that, in social support research, most of the attention has been directed to the effects of social support on a broad range of individual outcomes and, more recently, on marital outcomes (see Cohen et al., 2000).

Nevertheless, the need to identify the determinants of social support has been recognized by many social support researchers (e.g., Gracia & Herrero, 2004; Iida, Seidman, Shrout, & Fujita, 2008; Verhofstadt et al., 2007). For example, Newcomb (1990) stated that determining the role of social support in psychological functioning is no more important than knowing how that support comes to be available. Investigating the antecedents of support provision is particularly important in light of the mounting evidence that unskilled support can be ineffective or even harmful to the support recipient (Bolger & Amarel, 2007; Gleason, Iida, Shrout, & Bolger, 2008). From a clinical point of view, it should be obvious that we cannot design intervention programs to foster more skilful and effective support until we know its antecedents (e.g., Bolger, Zuckerman, & Kessler, 2000; Cutrona, 1986; Rafaeli & Gleason, in press).

To date, marital research has not devoted much attention to the microlevel processes that determine whether or not spouses will actually render assistance to each other. In contrast, social psychological research on helping often focuses on the origins of such behavior (e.g., Dovidio & Penner, 2001; Penner, Dovidio, Piliavin, & Schroeder, 2005). Within this tradition, considerable attention has been given to specifying the cognitive and emotional processes that make helping more or less likely (e.g., Batson, Chang, Orr, &

Rowland, 2002; Cialdini, Brown, Lewis, Luce, & Neuberg, 1997). Thus, to better understand the microlevel processes in the support provider that may facilitate the provision of support to a spouse, in the present study we draw upon the social–psychological literatures on helping behavior, emotion theory, emotional empathy, and empathic accuracy. In particular, we advance and test hypotheses regarding two constructs that may contribute to the provision of support in marriage: (a) the emotional similarity between the support-seeking and support-providing spouse, and (b) the accuracy with which the support provider infers the partner's thoughts and feelings (i.e., empathic accuracy).

The Complex Process of Support Provision

A complex sequence of steps is involved in the giving and receiving of social support in close relationships (Bodenmann, 1995; Pierce, Lakey, Sarason, Sarason, & Joseph, 1997). Pearlin and McCall (1990) described three sequential stages in the supportive transactions between spouses. At the first stage, potential support providers must perceive that their partners face some problem and thus that offering support is a possible response. At the second stage, the partner evaluates the situation to determine whether to offer support, and if so, what form the support should take. At this stage, the potential support provider makes judgments regarding the extent of the support seeker's need, the kind of support that is available, and the likelihood of the support being successful. Finally, at the third stage, actual support is provided (or not) to the support seeker on the basis of the analysis occurring at the second stage.

It is assumed that the way in which these initial stages of support transactions are navigated will have important consequences for the success or failure of the actual enactment of support (Cutrona, 1996; Rafaeli & Gleason, in press). Indeed, it appears that a number of obstacles may be present during the earliest stage. In Pearlin and McCall's (1990) model, the essential first step is that the potential provider of support must perceive that another person either desires or needs assistance. One complicating factor at this stage is that the potential recipient may not have actively sought support from the potential provider (Pierce et al., 1997). For various reasons, people are often uncomfortable seeking help (e.g., it lowers self-esteem, it changes the balance of equity in a relationship, it calls into question the competence of the support seeker; see, Barbee, Rowatt, & Cunningham, 1998, for more details). If such concerns keep people from seeking help with a problem, then they may not communicate their need for support (Barbee et al., 1998).

Moreover, in those cases in which people do seek help, their communication may take an indirect form, such as hinting or complaining, rather than direct communication. Furthermore, a distressed person's tactics for activating social support are often nonverbal in nature (e.g., sighing, fidgeting, facial expressions) and, as a result, somewhat ambiguous (Barbee et al., 1998; Cutrona, Suhr, & MacFarlane, 1990). Part of the problem is that people often assume that their relationship partners will be able to interpret such subtle signals without being explicitly told (Cutrona, 1996).

Once potential support providers have successfully perceived a need in their partners, they must, as a second step, evaluate the nature of the challenge to which the potential recipient's coping efforts are or will be directed. (i.e., the second stage in Pearlin & McCall's framework). Furthermore, the potential provider must assess/estimate the potential recipient's personal resources for dealing with the challenge, including an assessment of that individual's personal coping repertoire (Pierce et al., 1997). Thus, at this stage as well, support providers may be faced with making difficult decisions based on incomplete knowledge. How well equipped is the partner to deal with the stressor s/he is facing? How much distress is he or she experiencing? What type of support would be the most effective at this moment? Successfully answering all of these questions depends in part on making accurate inferences about the partner's thoughts and feelings.

In summary, providing support is more complicated than it may first appear, and a potential provider may fail to enact support that is desired, either because he or she fails to perceive the potential recipient's need for support or because he or she has wrongly evaluated the recipient's coping repertoire (Pierce et al., 1997). Effective support is more likely to be offered when the potential support provider has a more complete and accurate understanding of the support seeker's internal states during support transactions.

How to Gain an Understanding of Support Seekers' Needs?

We suggest that, in ongoing marital relationships, obtaining more and better insights into the support seeker's internal states may take place by means of two phenomena: emotional similarity and empathic accuracy. Both phenomena should contribute to the likelihood of support providers offering support to their support-seeking spouse.

Emotional Similarity

Emotional similarity refers to the fact that when an observer is exposed to a target in distress, he or she may experience affective states that match or reproduce the target's affective states (Davis, 1994; Staub, 1987). Several studies have found that viewing the emotional displays of another person can induce a corresponding emotion in the observer (for an overview, see Levenson & Ruef, 1992, 1997). Within the empathy literature, this sort of parallel affective reaction to an observed target is seen as relatively fast, involuntary, and effortless (Davis, 1994; Haxby & Gobbini, 2007; Preston & de Waal, 2002). Given the fact that these affective reactions are often extended to our closest intimates (Hodges & Wegner, 1997), it seems likely that when a potential support provider is confronted with a distressed spouse, a certain level of emotional similarity is likely to occur.

How would such similarity lead to support provision? We propose two broad mechanisms by which this may happen. First, emotional similarity seems likely to contribute to the potential support giver's motivation to provide support. This may occur, in part, because shared feelings of negative arousal serve as a cue that the partner is in need; unless a need is recognized, there will be no reason to offer support. In addition, once a need has been identified, negative arousal in the observer may provide an incentive for offering help, as considerable empirical evidence suggests (e.g., Cialdini, Darby, & Vincent, 1973; Piliavin, Dovidio, Gaertner, & Clark, 1981).

Second, emotional similarity may contribute to effective support provision by providing information that makes the offered support

both appropriate and timely. This proposition is consistent with the affect-as-information hypothesis (Clore et al., 2001; Gohm & Clore, 2002), which holds that emotional feelings arise when something emotionally significant has been detected, and "convey, in an embodied form, information about the interface between oneself and one's environment; as such they are directly useful as both motivation and information" (Gohm & Clore, 2002, p. 91). The information provided by emotional similarity should guide the support giver in selecting and carrying out specific support behaviors. This reasoning leads us to predict that, as the level of emotional similarity between the spouses increases, the support provider provides increasingly more effective support.

Empathic Accuracy

Empathic accuracy, defined as "the ability to accurately infer the specific content of another person's thoughts and feelings" (Ickes, 1993, p. 588), is the second phenomenon that we expect to contribute to support provision in marriage. It refers to "a form of complex psychological inference in which observation, memory, knowledge, and reasoning are combined to yield insights into the thoughts and feelings of other" (Ickes, 1997, p. 2).

Specifically, we propose that empathic accuracy will contribute positively to support provision through the same two broad mechanisms that we previously identified. That is, we expect that accuracy in inferring the partner's thoughts and feelings will generally increase the motivation to provide support and will also provide information useful in making such support more effective. Accurately recognizing a partner's distress will help signal the need to provide support, and accurately inferring the partner's specific thoughts and concerns will aid in the selection and enactment of support behaviors that are both appropriate and timely. This reasoning led us to predict that empathic accuracy will be positively associated with more effective support provision. This prediction is consistent with previous findings showing that empathic accuracy promotes constructive and positive communication behavior during the conflict discussions of married couples (Kilpatrick, Bissonnette, & Rusbult, 2002).

Emotional Similarity, Empathic Accuracy, and Other Empathy-Related Constructs

It may be useful at this point to offer a more explicit account of the relationships between emotional similarity, empathic accuracy, and other empathy-related constructs. To develop such an account, we begin with the broad distinction that many theorists and researchers make between affective empathy and cognitive empathy.

The affective position views empathy as an observer's emotional response to another person's experiences, although this emotional response can take various forms. Some investigators have argued that empathy consists of the observer experiencing the same (or similar) emotions as the target (e.g., Eisenberg & Strayer, 1987)—a response sometimes referred to as *parallel empathy* (Davis, 1994) or *emotional contagion* (Hatfield, Cacioppo, & Rapson, 1994). For others, empathy is defined as the specific emotional response of compassion/concern for the other person (Batson, 1991); this construct is also referred to as *empathic concern* (Davis, 1983) or *sympathy* (Wispé, 1986). The measure of emotional similarity used in the present research clearly falls

within the affective empathy tradition and can be seen as a form of parallel empathy. However, rather than indicating that the observer and target are sharing a specific emotion (e.g., anger, guilt), the measure used in the present investigation reflects a more general observer–target similarity in overall arousal and overall affective valence.

In contrast to the affective position, the cognitive position views empathy as a primarily cognitive phenomenon. This view assumes that empathy occurs when the observer attempts to imagine the psychological point of view of the target. Although the act of perspective taking can lead to emotional responses (e.g., Stotland, 1969; Toi & Batson, 1982), it need not do so; thus, cognitive empathy does not require any affective change in the observer. Perspective taking can also promote a more accurate assessment of the target's internal states—in other words, empathic accuracy. Thus, empathic accuracy falls clearly within the cognitive empathy tradition. Furthermore, if the distinction is made between empathic processes and the outcomes of such processes (Davis, 1994), then perspective taking is best considered to be a process and empathic accuracy an outcome. That is, empathic accuracy occurs when an observer arrives at an accurate inference of the target's internal state, and this outcome may be achieved through various means, including taking the target's perspective.

Finally, although we expect emotional similarity and empathic accuracy to have similarly beneficial effects on social support, they may do so in different ways. Although we believe that each phenomenon may potentially provide observers with both the motivation to help and with the information needed to make such help effective, we believe that emotional similarity and empathic accuracy will differ in the extent to which they contribute to each of these factors. Specifically, we suspect that emotional similarity, given its decidedly affective nature, will be especially likely to increase the motivation to offer support; in fact, considerable research supports the view that emotional reactions to another's distress provide a motivation to help (Batson, 1991). On the other hand, empathic accuracy, which by definition consists of correctly understanding another's internal states, may be especially important for providing the observer with potentially crucial information for choosing the appropriate form of help and the proper way of delivering it. Because of this expected difference, no specific prediction is offered regarding the statistical relationship that may exist between empathic accuracy and emotional similarity, but evaluating the nature of this relationship is a secondary goal of the present investigation.

Overview of the Present Research

On the basis of the foregoing review of the available theory and research, in the present study, we sought to determine how emotional similarity and empathic accuracy between the support provider and support seeker relate to support provision within a sample of married couples. In a laboratory experiment, 30 couples were randomly assigned to one of two conditions (support provider: man vs. woman) of a factorial design. The couples provided questionnaire data and participated in a social support interaction in which we assessed the partners' behaviors when offering and soliciting social support. To assess the support provider's emotional similarity and empathic accuracy during support interac-

tions, a video review task took place immediately after the support interaction.

On the basis of the previous reasoning, we made the following two predictions:

> *Hypothesis 1:* Emotional similarity should be associated with social support, so that when the support provider's and support seeker's emotional responses (in terms of arousal and affect) are more similar, the provider will offer higher levels of positive types of support and lower levels of negative types of support.

> *Hypothesis 2:* Empathic accuracy should be associated with social support so that when the support provider possesses more accurate insights into the support seeker's thoughts and feelings, the provider will offer higher levels of positive types of support and lower levels of negative types of support to their spouse.

Method

Participants

The sample consisted of the 60 members of 30 married couples. The participants were recruited in Ghent, Belgium, by a team of research assistants who approached the couples whom they encountered in shopping areas. The couples who responded positively to the recruitment method were given a standard description of the study and were evaluated for their eligibility to participate. To participate, the members of each couple had to have been involved in their heterosexual relationship for at least 1 year and to be married for at least 6 months. The eligible couples who expressed interest in participating in the study were scheduled to attend a laboratory session. The mean ages for the men and the women were 37.28 ($SD = 10.93$; range $= 24–61$), and 35.21 ($SD = 11.12$; range $= 20–58$), respectively. On average, the men and the women had completed 14.72 ($SD = 2.05$; range $= 6–17$) and 15.21 ($SD = 1.95$; range $= 6–17$) years of education, respectively. The couples had an average of 1.14 children ($SD = 1.25$; range $= 0–5$). The average length of their marital relationships was 9.17 years ($SD = 10.33$; range $= 1–32$).

Procedure

After their arrival at the laboratory, the members of each couple independently completed a set of relationship questionnaires. For the purposes of the present study, only the marital satisfaction data are reported here. As preparation for the upcoming support interaction task, the spouses, working independently, used 5-point Likert-type scales ranging from 1 (*never*) to 5 (*very often*) to rate the extent to which they had discussed a number of personal problems with their partner. A personal problem was defined as any problem the source of which was not the partner or the relationship (e.g., dealing with work stress, changing a bad habit, exercising more).

Support Interaction Task

The support interaction task we used was similar to the one used in previous observational studies of marital support (e.g., Neff &

Karney, 2005; Pasch & Bradbury, 1998; Verhofstadt, Buysse, & Ickes, 2007). The participants were led into a laboratory that was furnished as a living room and was equipped so that the couple's interaction could be videotaped with their prior knowledge and consent (the spouses' consent to be videotaped was obtained by means of a written informed consent form). Following the procedure used in previous observational research on social support in marriage (see Verhofstadt, Buysse, Ickes, De Clercq, & Peene, 2005), one spouse was randomly designated to be the support seeker and the other spouse to be the support provider. For half of the couples, the husbands were designated as support seeker, and wives were so designated for the other half. Before the discussion, the partners selected the most salient personal problem reported by the designated support seeker (i.e., the one that received the highest frequency-of-discussion rating from the support seeker's list).

When both partners had agreed to discuss the issue, they were instructed to try to act much as they would at home when discussing an important personal problem with each other. The partners were allowed to interact as long as they considered necessary, up to a maximum time limit of 30 min.

Video Review Procedure

Immediately after their interaction had been recorded, the partners were seated separately and completed a video-review task (e.g., Verhofstadt et al., 2005). The partners were asked to imagine living through and re-experiencing their interaction again while they each viewed a videotaped copy of the interaction. At regular points of time, the videotape was paused automatically by a computer. This computerized procedure (Video Annotation System [VIDANN]; De Clercq et al., 2001) served the purpose of selecting a number of time samples from the interaction. These time samples were defined as the 3-s intervals immediately before the computer paused the videotaped interaction. The samples were assumed to be representative of the entire course of the interaction in terms of the spouses' emotional similarity, empathic accuracy, and support behavior.

To obtain a comparable number of time samples for each couple, the computer was programmed to pause every 30 s when the interaction lasted for less than 10 min, every 45 s when the interaction lasted between 10 and 15 min, and every 60 s when the interaction lasted for more than 15 min. This procedure resulted in an average number of 18 time samples (minimum, 10; maximum, 30) for each couple.

Each time the tape was stopped, the participants were instructed to indicate their online level of arousal and affect (by means of 9-point rating scales) at that specific point of time in the interaction. At each stop point, the participants were also instructed to report the content of each of their unexpressed thoughts and feelings at that point in the interaction. The instructions explicitly required the participants to fully report all thoughts and feelings and to do so as accurately and honestly as possible. In addition, participants were instructed to make inferences about the unexpressed thoughts and feelings of their spouse at this time in the interaction. More specifically, they were required to infer what the spouse was thinking or feeling and to record the specific content of this inferred thought or feeling.

At the end of the session, the members of each couple were fully debriefed.

Measures

Behavioral Observation Coding

The Social Support Interaction Coding System (SSICS, Bradbury & Pasch, 1992) was used to analyze the support provider's behavior as it was recorded on videotape during the support interaction task. The support provider's behavior could be assigned to one of six categories: positive emotional, positive instrumental, negative, neutral, positive other, or off-task (see Pasch, Harris, Sullivan, & Bradbury, 2004, for a detailed description). For the purposes of the present study, only the positive emotional, positive instrumental, and negative categories were analyzed. The other three categories did not clearly represent social support behaviors. Previous evidence for the reliability and validity of the SSICS measures can be found in the review by Pasch et al. (2004).

The positive emotional category includes behaviors that reassure, console, or otherwise encourage the support solicitor; letting the solicitor know that he or she is loved and cared for; and behaviors that encourage expression or clarification of feelings (see Appendix for examples). The positive instrumental category includes behaviors such as making specific suggestions to the support solicitor, giving helpful advice, and offering to assist in the development or enactment of a course of action for solving the problem (see Appendix). The negative category includes behaviors such as accusing or criticizing the support solicitor, giving useless advice, and insisting that the support solicitor takes sole responsibility for dealing with the problem (see Appendix).

When coders watched the videotaped interaction, the computer program paused the videotape at exactly the same moments in the interaction as during the video-review task. The trained observers then coded the support provider's behavior that occurred during the 3-s time samples that occurred immediately before each stop point. The observers coded for the presence or absence of each support provision category described earlier. Each time sample could potentially include one or more forms of support.

Two clinical psychologists participated in a coder training in which they memorized the description of the various support provision categories and then practice-coded a set of pilot tapes. They then compared their scoring and discussed their coding problems with each other. With respect to each of the 30 interactions included in the present study, they were told only the topic of discussion and whose issue was discussed (the man's or the woman's). They were unaware of all the other variables being studied. During the actual coding process, the trained observers viewed the entire support interaction once before coding it and then coded the behavior of the support provider in each interaction in the manner described earlier.

A randomly selected 20% of the interactions were coded by both observers, and the levels of interobserver agreement were calculated with Cohen's kappa. All of the interobserver kappa values indicated good levels of interobserver reliability (Cohen's $\kappa = .67$ for positive emotional, .69 for positive instrumental, and .84 for negative). We reduced the coding of each support provision category obtained for each time sample to the percentage of behavior displayed during the interaction, using the number of times the

support provision category was present as the numerator and the total number of time samples during the entire interaction as the denominator. This percentage-of-behavior index was used as the dependent measure in the analyses reported later. It reflects how often a particular support provision behavior was displayed during the total number of time samples that were taken during the interaction.

Self-Report Measures

Marital satisfaction. Marital satisfaction was assessed with the Dyadic Adjustment Scale (DAS; Spanier, 1976). In the present study, the internal consistency (with Cronbach's alpha) of the DAS was .90 for men and .90 for women. The men and women reported average marital satisfaction scores of 116.48 ($SD = 11.38$; range $= 95–135$) and 115.28 ($SD = 12.15$; range $= 99–138$), respectively. DAS norms (Spanier, 1989) indicated an average marital satisfaction score of 114/115 for a married sample, thereby suggesting that our sample is comparable with an average group of married couples in terms of marital satisfaction.

Emotional similarity. Emotional similarity was operationalized as the degree of similarity between the emotional arousal and affect of the support seeker and the support provider. Consistent with a biphasic approach to emotion (e.g., Bradley, 2000), emotional arousal is defined as a continuous bipolar dimension that extends from an unaroused state (e.g., calm, relaxed) to high arousal (e.g., excited, stimulated). Affect can be described as a bipolar continuous dimension that ranges from positivity (pleasant states; e.g., happy, satisfied) to negativity (unpleasant states; e.g., unhappy, unsatisfied).

Spouses were asked to indicate their level of emotional arousal and affect during the support interactions by using the paper-and-pencil version of the Self-Assessment Manikin (SAM), an affective rating system devised by Lang (Lang, Bradley, & Cuthbert, 1997). In this system, the arousal and affect dimensions are depicted through a series of five graphic figures. To depict the arousal dimension, the SAM ranges from an excited, wide-eyed figure to a relaxed, sleepy figure. The verbal anchors for the arousal dimension were *stimulated, excited, frenzied, jittery, wide-awake,* and *aroused* (the wide-eyed figure) versus *relaxed, calm, sluggish, dull, sleepy*, and *unaroused* (the sleepy figure). To depict the affect dimension, the SAM ranges from a smiling, happy figure to a frowning, unhappy figure. The verbal anchors for the affect dimension were feeling *happy, pleased, satisfied, contented*, and *hopeful* (the smiling figure) versus feeling *unhappy, annoyed, unsatisfied, melancholic, despaired*, and *bored* (the frowning figure).

Participants could select any of the five figures on each scale, or a point between any two figures, which resulted in a 9-point rating scale for each dimension. Responses were scored so that a score of 1 represents a low rating on each dimension (i.e., low levels of emotional arousal and negative affect) and a score of 9 represents a high rating on each dimension (i.e., high levels of emotional arousal and negative affect). Data gathered with the SAM have established its validity and reliability when used to assess the arousal and affect dimensions of emotional experience (see Lang et al., 1997).

Emotional similarity scores were then created—for arousal and affect—for each couple. First, at each point where the videotape was stopped, absolute difference scores were computed by sub-

tracting the support provider's arousal and affect scores from the support solicitor's arousal and affect scores. Next, we averaged these absolute moment-by-moment difference scores to create separate overall absolute difference scores for arousal and for affect. The average internal consistencies for those difference scores across the time periods were .92 for arousal and .91 for affect. We then reversed these overall scores so that higher scores represent stronger emotional similarity between the support provider and the support solicitor.

This approach was used instead of an interpartner correlation approach, which could not be applied because of the small and varying number of time sampling points for the dyads in this sample (an average of 18 tape stops, with a range of 10 to 30). Clearly, it would not be possible to obtain a stable and reliable estimate of interpartner correlations with as few as 10 paired observations, and the average of 18 paired observations also falls short of the number (usually greater than 40) that most statisticians would argue are needed to reliably estimate this statistic. For this reason, we used a simpler and easier-to-justify procedure, which was to create indexes based on the average of the partners' absolute difference scores across the successive tape stops that occurred during their particular interaction.

Empathic accuracy. Five trained independent raters coded the empathic accuracy data in accordance with the coding procedure developed by Ickes and his colleagues (Ickes, Stinson, Bissonnette, & Garcia, 1990). The task of the raters was to compare the written content of each of the actual thoughts and feelings reported by one spouse with that of the corresponding inference made by the other spouse. For each thought/feeling inference, the degree of similarity was rated using a 3-point scale on which 0 = *different content from the actual thought and feeling*; 1 = *similar, but not the same, content as the actual thought and feeling*; and 2 = *essentially the same content.*

The interrater reliability of these empathic accuracy ratings was high in the present sample (Cronbach's alpha for the five raters was .94 for the husbands' empathic accuracy scores and .96 for the wives' empathic accuracy scores). Given this high level of interrater reliability, the accuracy ratings for each inference were averaged across the five raters, and these mean ratings were then aggregated across all of the inferences made to create an overall empathic accuracy score for each spouse.

This overall score was first divided by 2 (a step that was needed to convert the 0-to-2 rating scale to a 0-to-1 scale) and then divided by the total number of inferences made by the perceiver to obtain a percentage–analogue index of empathic accuracy. The resulting measure, which has become the standard in empathic accuracy research, varies from 0% (zero accuracy) to 100% (perfect accuracy), with higher scores reflecting more accurate insights from the support provider into the support solicitor's thoughts and feelings. For the purposes of the present study, only the support provider's empathic accuracy scores were analyzed.

Results

Relations Among Measures of Emotional Similarity and Empathic Accuracy

In Table 1, we report the sample-based means, standard deviations, and ranges for our primary variables of emotional similarity, empathic accuracy, and support provision.

Table 1
Descriptive Statistics for Emotional Similarity, Empathic Accuracy, and Support Provision

Variable	M	SD	Minimum	Maximum
Arousal similarity	−1.55	0.77	−3.21	0
Affect similarity	−1.11	0.55	−2.86	−0.13
Empathic accuracy	0.11	0.08	0.01	0.27
Emotional support	0.58	0.21	0.11	0.88
Instrumental support	0.25	0.16	0.00	0.60
Negative support	0.11	0.15	0.00	0.64

Note. $N = 30$ husbands and 30 wives. The negative values for the emotional similarity measures reflect the fact that the absolute difference scores for arousal and for affect were reversed so that higher scores represent stronger emotional similarity.

We computed Pearson correlation coefficients to explore the interconnections between emotional similarity and empathic accuracy. Results revealed nonsignificant correlations between empathic accuracy and emotional similarity (for arousal: $r = .24$, *ns*; for affect: $r = .03$, *ns*; see Table 2). Furthermore, no significant correlation was found between the arousal and affect components of the emotional similarity measure ($r = .20$, *ns*). The analyses also revealed significant correlations between emotional support provision on the one hand and instrumental support provision ($r = .51$, $p < .01$) and negative support provision ($r = −.44$, $p < .05$) on the other hand. The association between instrumental support provision and negative support provision was found to be nonsignificant ($r = −.21$, *ns*). It seems likely that the largest nonsignificant associations reported earlier did not reach a conventional significance level because of the small sample size in the present research.

Tests of Hypotheses

We used hierarchical multiple regression analyses to test whether the support provider's behavior could be predicted by considering the level of emotional similarity (in terms of both arousal and affect) between the support provider and the solicitor during marital support interactions and by considering the provider's level of empathic accuracy with respect to the support solicitor. Separate regressions were conducted for each of the support provision behaviors: positive emotional, positive instrumental, and negative. In each regression model, the observed support behavior of the spouse that was assigned the role of support provider served as the dependent variable.

To control for possible effects of marital satisfaction, the average level of husband and wife satisfaction was entered in the first step (husband and wife satisfaction was significantly correlated; $r = .72$, $p < .01$). In the second step, spouses' level of emotional similarity in arousal and affect and the provider's level of empathic accuracy were entered. Before each regression analysis, we performed collinearity diagnostics using the variance inflation factors (VIF) as criteria. No multicollinearity was evident because the VIF for the predictors ranged between 1.07 and 1.14 (<10; Cohen, Cohen, West, & Aiken, 2003).

Before conducting the regression analyses, we conducted a multivariate analysis of covariance (MANCOVA), with gender of the support provider entered as the between-couples factor, the

Table 2
*Within-Spouse Correlations Among Emotional Similarity,
Empathic Accuracy, and Support Provision*

Variable	1	2	3	4	5	6
Arousal similarity	—					
Affect similarity	.20	—				
Empathic accuracy	.24	.03	—			
Emotional support	.49**	.48**	.19	—		
Instrumental support	.40*	.31	.44*	.51**	—	
Negative support	−.55**	−.26	−.43*	−.44*	−.21	—

Note. $N = 30$ husbands and 30 wives.
* $p < .05$.　** $p < .01$.

three support provision behaviors serving as the dependent variables, and level of empathic accuracy and emotional similarity entered as covariates. The results of these analyses revealed that the interactions among each of the covariates and the between-couples factor were nonsignificant. For Gender of Support Provider × Arousal Similarity: Wilks's $\lambda = 0.77$, $F(3, 19) = 1.92$, *ns*; for Gender of Support Provider × Affective Similarity: Wilks's $\lambda = 0.80$, $F(3, 19) = 1.60$, *ns*; and for Gender of Support Provider × Empathic Accuracy: Wilks's $\lambda = 0.84$, $F(3, 19) = 1.23$, *ns*. These results indicate that the contribution of emotional similarity and empathic accuracy to support provision behavior did not differ across gender of the support provider. Therefore, no separate regression analyses were conducted for support transactions in which the husband was the support provider and for support transactions in which the wife was the support provider.

When predicting spouses' emotional support provision behavior, their marital satisfaction accounted for 2% of the variance but did not make a significant contribution in the regression model when entered first, $F(1, 28) = 0.47$, *ns* (see Table 3). The variables entered in the second step of the model (spouses' level of similarity in arousal, spouses' level of similarity in affect, and the provider's level of empathic accuracy) accounted for an additional 39% of the variance, $F(3, 25) = 5.45$, $p < .01$. Overall, the model was found to be significant, $F(4, 29) = 4.26$, $p < .01$; and it accounted for 41% of the variance in emotional support provision. Both similarity in arousal and similarity in affect contributed significantly to the model, with higher levels of emotional similarity between the support provider and solicitor corresponding with higher levels of emotional support provision: For arousal, $t(29) = 2.31$, $p < .05$, $\beta = 0.38$; for affect, $t(29) = 2.55$, $p < .05$, $\beta = 0.41$. On the other hand, the support provider's level of empathic accuracy did not significantly contribute to the emotional support provision model, $t(29) = 0.71$, *ns*.

When predicting spouses' instrumental support provision behavior, their marital satisfaction accounted for 7% of the variance but did not make a significant contribution in the regression model when entered first, $F(1, 28) = 2.24$, *ns* (see Table 3). The emotional similarity and empathic accuracy variables entered in the second step of the model accounted for an additional 32% of the variance, $F(3, 25) = 4.46$, $p < .05$. Overall, the model was found to be significant, $F(4, 29) = 4.12$, $p < .05$; and it accounted for 39% of the variance in instrumental support provision. Emotional similarity between the support provider and the support seeker did not contribute significantly to the model: For arousal, $t(29) = 1.30$,

ns; for affect, $t(29) = 1.48$, *ns*. In contrast, the support provider's level of empathic accuracy did significantly contribute to the model, with higher levels of empathic accuracy in the provider corresponding with higher levels of instrumental support provision, $t(29) = 2.52$, $p < .05$, $\beta = 0.41$.

When predicting spouses' negative support provision behavior, their marital satisfaction accounted for 4% of the variance but did not make a significant contribution in the regression model when entered first, $F(1, 28) = 1.19$, *ns* (see Table 3). The emotional similarity and empathic accuracy variables entered in the second step of the model accounted for an additional 48% of the variance, $F(3, 25) = 8.25$, $p < .01$. Overall, the model was found to be significant, $F(4, 29) = 6.72$, $p < .01$; and it accounted for 52% of the variance in negative support provision. The arousal component of the emotional similarity between the provider and the solicitor contributed significantly to this model, with higher levels of emotional similarity, in terms of arousal, corresponding with lower levels of negative support provision, $t(29) = -3.24$, $p < .01$, $\beta = -0.48$. On the other hand, the affective component of emotional similarity did not contribute significantly to the model, $t(29) = -1.60$, *ns*. However, the support provider's level of empathic accuracy did significantly contribute to the model, with higher levels of empathic accuracy in the provider corresponding with lower levels of negative support provision, $t(29) = -2.10$, $p < .05$, $\beta = -0.30$.

Table 3
*Summary of Hierarchical Multiple Regression Analyses to
Predict Emotional, Instrumental, and Negative Support
Provision From Emotional Similarity and Empathic Accuracy*

Variable	Beta	ΔR^2	F for ΔR^2
Predicting emotional support provision			
Step 1: Marital satisfaction	.01	.02	0.47
Step 2: Emotional similarity			
Arousal	.38*		
Affect	.41*		
Empathic accuracy	.11		
		.39	5.45**
R^2 Total $= .41$, $F(4, 29) = 4.26$**			
Predicting instrumental support provision			
Step 1: Marital satisfaction	−.22	.07	2.24
Step 2: Emotional similarity			
Arousal	.22		
Affect	.24		
Empathic accuracy	.41*		
		.32	4.46*
R^2 Total $= .39$, $F(4, 29) = 4.12$*			
Predicting negative support provision			
Step 1: Marital satisfaction	−.20	.04	1.19
Step 2: Emotional similarity			
Arousal	−.48**		
Affect	−.23		
Empathic accuracy	−.30*		
		.48	8.25**
R^2 Total $= .52$, $F(4, 29) = 6.72$**			

Note. $N = 30$ husbands and 30 wives.
* $p < .05$.　** $p < .01$.

Discussion

The primary goal of this investigation was to identify microlevel processes in the support provider that may foster the provision of spousal support. More specifically, the present study focused on how the emotional similarity between the support provider and support seeker and how the empathic accuracy of the support provider contribute to support provision in marriage. Lacking previous empirical evidence that might guide our predictions, we drew from the social–psychological literatures on helping behavior and empathy in making our predictions.

We first predicted that, during support interactions, emotional similarity would contribute to a more accurate understanding of the partner's needs, thereby making effective support more likely (Hypothesis 1). Consistent with this prediction, in couples with a greater similarity between the emotional responses of the support provider and the support seeker, husbands and wives were found to provide more emotional support and less "negative support" to their spouse. Following the same general reasoning, we expected greater empathic accuracy in the support provider to contribute to a more accurate understanding of the partner's needs during support interactions, thereby contributing to more effective support provision (Hypothesis 2). Consistent with this prediction, support providers who had more accurate insights into their support-seeking spouse's thoughts and feelings were found to provide more instrumental support and less "negative support" to their spouse.

These findings suggest that husbands' and wives' observed support provision behavior is, at least in part, shaped by their level of emotional similarity (in terms of arousal and affect) and their level of empathic accuracy. It is important to note that the significant effects that were found for emotional similarity on support provision proved to be unique effects that were independent of the contribution of empathic accuracy to marital support provision. The same was true for the unique effects of empathic accuracy on marital support; their contribution was independent of that made by emotional similarity. In addition, measures of emotional similarity and empathic accuracy proved to be unrelated in the present study. These findings led us to our first conclusion—that emotional similarity and empathic accuracy independently improve the support provider's performance.

However, our analyses led us also to a second major conclusion—that there seem to be differential effects of empathic accuracy and emotional similarity on support provision in marriage, depending on what type of support is examined. First, emotional support provision was uniquely predicted by the support provider's level of emotional matching with the support seeker, but not by his or her level of empathic accuracy. These findings suggest that emotional matching may be a sufficient condition for providing comfort and reassurance to a support-seeking partner and that empathic accuracy contributes little, if anything, to this type of support behavior. Emotional support may thus depend more on support givers *feeling* something in response to a spouse's distress and less on support givers accurately discerning the spouse's specific thoughts and feelings.

Second, and in sharp contrast, instrumental support provision was uniquely predicted by the provider's level of empathic accuracy but not his or her level of emotional similarity. These findings suggest that empathic accuracy may be a sufficient condition for understanding and providing the specific information and/or material help that the help seeker needs and that emotional matching contributes little, if anything, to this type of support behavior. Instrumental support may thus depend more on support givers making an accurate assessment of their spouse's specific needs and how they should be met and less upon simply matching their spouse's affective states. In summary, whereas matching the partner's emotion during a support-seeking interaction may provide a sufficient basis for understanding the partner's current affective state(s) and responding with appropriate emotional support and consolation, understanding the partner's specific thoughts and feelings during a support-seeking interaction may provide a sufficient basis for understanding what kind(s) of help the partner desires and how to provide such help in an acceptable way.

Finally, both similarity and accuracy were related to negative support. Specifically, providers who were unsuccessful in adopting their partner's perspective, and who were less likely to experience affective states that matched those of their support-seeking spouses, were the most likely to criticize and denigrate them. Apparently, unhelpful forms of support are particularly likely to the degree that *both* forms of empathic understanding are lacking: that is, a lack of affect-based similarity and a lack of cognitive understanding about what kind(s) of help the partner desires and how best to provide it. Not having a clear sense of how the partner is feeling or what kind(s) of help and support may be called for, the help provider may express his or her confusion and attendant frustration in ways that are ultimately unhelpful and even counterproductive.

It should be emphasized that the interpretations we have just proposed are still somewhat tentative and that additional research will be needed to confirm them more definitively. Although the data supported our predictions, a few of the regression coefficients were around .20 in magnitude and did not attain a conventional level of significance because of our relatively small sample size. Overall, however, the pattern of findings reported here is intriguing, theoretically coherent, and deserving of further study.

It is important to note that the patterns of results described earlier were not qualified by the spouse's gender or by the average level of marital satisfaction which the members of the couple reported. With regard to gender, the relative contribution of emotional similarity and empathic accuracy to social support that was provided by a husband to his support-seeking wife was comparable with the contribution of emotional similarity and empathic accuracy to social support that was provided by a wife to her support-seeking husband. With regard to marital satisfaction, the contribution of emotional similarity and empathic accuracy to marital support provision was found to be independent of the couple's marital satisfaction level (which was treated as a covariate in the statistical analyses).

Strengths and Limitations of the Present Study

The present study both complements and elaborates upon existing theory and research on social support. Our aim was to take into account the complexity of support provision, as described earlier, allowing an assessment of several types of support provision behaviors as well as the underlying processes in the support provider that facilitate such behavior. The importance of this kind of microanalytic examination of social support transactions has

recently been acknowledged and emphasized by marital interaction researchers, who have called for more research of this type (e.g., Bradbury, Fincham, & Beach, 2000; Gottman & Notarius, 2000). The present study is one of the first to explore how specific support behaviors that occur during actual support episodes are related to the immediately preceding emotional and cognitive responses of the spouse who was the provider of these types of support.

More specifically, this study brings together research traditions that have been largely separate until now. Investigations of empathic accuracy have been conducted for nearly 20 years (Ickes, 2007), but to our knowledge have never before been conducted in the context of social support. Similarly, emotional similarity has rarely been examined as a proximal influence on the quality or quantity of social support. Thus, this investigation opens a potentially fertile line of inquiry that combines an important aspect of close relationships—social support—with a technique for examining the microprocesses that shape the provision of such support.

In fact, this strategy may be extended even further by incorporating other concepts from the empathy literature into examinations of the processes that govern support behavior. For example, the emotional response of empathic concern is characterized by feelings of sympathy and compassion for a target (Davis, 1994; Eisenberg et al., 1991). Because empathic concern produces an altruistic motivation to reduce the other person's distress and a readiness to help that person (see Batson, 1991), it may play an important role in motivating support provision in marriage. Thus, future research that included a measure of the support provider's feelings of empathic concern during the interaction may provide another variable with unique effects on support.

The present research also contributes to the methodology of this research area in a number of ways. First, we combined observational measures, which provide an objective view of support transactions, with self-report measures which tap the internal states of relational partners during support transactions. Second, we used computer-aided data collection and coding, video-editing, and video-playback methods that made it possible to study not only the overt and covert levels of support interaction but also their dynamic interplay. Third, we collected and analyzed data from both the support seeker and the support provider, in contrast to the majority of studies that focus on just one of these role occupants but not the other (Badr, Acitelli, Duck, & Carl, 2001). Fourth, we allowed the couples in our study to discuss the target problem as long as considered necessary (with a limit of 30 min), thereby enabling more naturalistic interactions to occur. In most observational research, couples are asked to discuss a problem for a much more restricted amount of time, usually 5–10 min.

In addition to these various strengths of the present study, we note some important limitations. The most important of these undoubtedly have to do with the sample used in the present study. A sample size of 30 couples is small and reflects the fact that the data presented here are time- and labor-intensive to collect. In addition, we used a sample of White, middle-class, nonclinical couples, thereby limiting somewhat the generalizibility of the results. Replication of these findings with samples that are larger and more heterogeneous will be important (e.g., couples from different racial and ethnic backgrounds, homosexual as well as heterosexual couples, and distressed couples).

Similarly, it will be valuable to determine the robustness of these findings in research using alternative methods of assessing social support, accuracy, and similarity. Although we believe that our methodology is a major strength of the present investigation, it represents only a single way of operationalizing the constructs of interest. For example, the present study examined participants' self-ratings of arousal and affect while they were watching their video to measure emotional similarity during the couples' support interactions. This way of operationalizing emotional empathy, however, may not index the unconscious, involuntary, and rapid emotional reactions that typically constitute emotional empathy. We therefore recommend the inclusion of psychophysiological measures (e.g., heart rate, galvanic skin reflex) of emotional similarity in future research on the antecedents of support provision.

Finally, it is important to note that the temporal order of the microlevel processes under investigation cannot be tested in the present data. The possibility exists that support provision leads to emotional similarity and empathic accuracy, rather than the other way around (e.g., the support provision of asking how someone feels may help the support giver to accurately infer what the other person is feeling). The usual recommended caution should therefore be exercised in inferring causality from our results, as the issue of causal ordering needs to be resolved in future research.

Conclusions and Implications

This study provides an initial glimpse of the ways in which moment-by-moment processes may shape the quality and quantity of marital support. This is valuable because existing microlevel work on social support in the marital research area has tended to focus on the point in the process at which assistance is rendered by a provider and on how support processes are experienced by the support recipient (e.g., Carels & Baucom, 1999; Verhofstadt et al., 2005). This work is also potentially valuable for the insights it offers regarding support interventions or social support therapy with couples. It sheds light on the degree to which support provision is influenced by relatively controlled processes (e.g., empathic accuracy) and by automatic ones (e.g., emotional similarity). Finally, our results reinforce the claim by previous empathy researchers that there is value in focusing on both affective and cognitive processes (Davis, 1994; Hodges & Wegner, 1997). In the present study, both affective as well as cognitive forms of empathy play a meaningful role in shaping marital social support. These findings suggest that the empathy literature may be particularly informative for our theoretical and empirical work on the origins of social support in marriage.

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Appendix

Examples of Support Provision Measurements Taken in the Tape Stops

The husband (who had been assigned the role of support seeker in this couple) had to write a project for which the deadline was almost expired and to do this while keeping up with his usual workload. He started the discussion with his wife by explaining that he felt overwhelmed by all this work and that he also felt compelled to meet his boss's expectations. Below are some examples of how his wife (who was assigned the role of support provider) responded to her husband during this interaction.

Examples of the Wife's Emotional, Instrumental, and Negative Support Provisions

"You could try to start writing your project this evening instead of tomorrow, which would give you some extra time. Would that help?" (instrumental support provision)

"I can give you one of the projects I have written to use as an example." (instrumental support provision)

"You shouldn't start off by thinking that you are definitely going to miss the deadline for submitting this project." (emotional support provision)

"You underestimate yourself." (emotional support provision)

"It isn't the first time that you have to deal with deadlines; you should know better by now." (negative support provision)