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Abstract

In the past 25 years, relationship science has grown from a nascent research area to a thriving subdiscipline of psychological science. In no small measure, this development reflects the pioneering contributions of Ellen Berscheid and Elaine Hatfield. Beginning at a time when relationships did not appear on the map of psychological science, these two groundbreaking scholars identified relationships as a crucial subject for scientific psychology and began to chart its theoretical and empirical territory. In this article, we review several of their most influential contributions, describing both the innovative foundation they built as well as the manner in which this foundation helped set the stage for contemporary advances in knowledge about relationships. We conclude by discussing the broader relevance of this work for psychological science.

Ellen Berscheid, Elaine Hatfield, and the Emergence of Relationship Science

In 2012, Ellen Berscheid and Elaine Hatfield were awarded the Association for Psychological Science's (APS) highest scientific honor, the William James award, for their "pioneering contributions … [to] the science of interpersonal attraction and close relationships, now one of Psychology's most vibrant areas of inquiry." Much of the work for which this award was conferred was conducted prior to the birth of APS in 1988 – Berscheid and Hatfield's influential papers began appearing in the early 1960s. Nevertheless, it was not until the late 1980s and 1990s, when relationship science emerged as an important interdisciplinary field, that the full impact of their early work began to be realized. Thus it is timely to draw connections between the quarter-century in which APS has provided an organizational framework for psychological science and the "greening of relationship science" (Berscheid, 1999), which Berscheid and Hatfield both inspired and contributed to.

To be sure, some scholars studied attraction and relationships prior to Berscheid and Hatfield[1]. For example, Newcomb (1961) studied the acquaintance process, Harlow (Harlow & Harlow, 1962) investigated infant-mother bonding in nonhuman primates, Byrne (1961) examined links between similarity and attraction, Bowlby (1969) theorized about attachment, Thibaut and Kelley (1959) formulated interdependence theory, and Burgess (1926) and Terman (1938) conducted some of the earliest investigations of marriage. Yet these works, compelling as they were, did not foster a more general interest in relationships. Relationship science did not exist as an identifiable discipline or even subdiscipline at that time. Indeed, most psychological scientists paid little heed to adult relationships. Occasional exceptions aside, the topic was largely absent from leading journals, textbooks, and course syllabi. Psychology's dominant emphasis on processes residing within the individual seemed to preclude consideration of the causes, effects, and processes of individuals entering into,

maintaining, or ending adult dyadic relationships, much less on the implications of these relationships for other psychological processes and phenomena[2].

Fast forward to 2013. The scientific study of relationships is thriving within psychological science, and indeed, in many other disciplines related to psychological science. Several relationship-based interdisciplinary professional organizations exist and relationship research is presented regularly at major conferences. Articles that investigate the development, operation, and impact of relationships appear regularly in psychological journals and in the journals of other behavioral, biological, health, and social sciences. Relationship research is often found in field-defining handbooks and textbooks, and is included in the curriculum of many psychology departments. Much remains to be done, as described later in this article, but psychological science no longer ignores relationships.

In this article we describe some examples of major developments in the study of relationships in the past 25 years. To provide context for this discussion, we build on the early contributions of Ellen Berscheid and Elaine Hatfield. Their work established a foundation for what was to come; much as the shape of a house depends on its foundation, the development of this field in no small measure built on themes, principles, and approaches that they first proposed and articulated. Moreover, they have continued to play a major role in the construction built on that foundation over the years. Our review takes readers on a tour of this house. We begin with a brief account of why relationships matter and how they have been studied in the past quarter-century. We then review four central content areas of relationship research: interpersonal attraction, romantic love, emotion in relationships, and the allocation of benefits within relationships. We conclude by describing the need we see for deeper integration of relationship principles into psychological science. To foreshadow our conclusion, we anticipate that psychological science will be fundamentally altered for the

better by recognition of the often central role of relationship processes across the full range of psychological phenomena.

The Why and How of Relationship Science

From the beginning, Berscheid and Hatfield recognized that adult relationships contribute in a critical way to happiness, health, and productivity in nearly all domains of human activity. This key insight had at least two roots: their prescience as scholars, expressing an hypothesis that has since been robustly substantiated (see below); and their status as early leaders in psychology's inclusion of women. It is no coincidence that the entry of female scholars into the field led to a science "that has integrated, and has been enriched by, the different experiences and views that female social psychologists have brought to their work" (Berscheid, 1992, p. 527). Women, particularly in the cultural contexts in which psychological science has emerged, typically emphasize dyadic relationships in their lives more than men do (see Dindia & Canary, 2006, for a collection of reviews). This example of the importance to science of diversity in its practitioners almost surely is one reason why two female scholars were so successful in directing our collective scientific attention to the centrality of relationships for understanding human behavior.

Subsequent evidence has strongly supported their early emphasis on the importance of relationships in the lives of both men and women. People who participate in successful, satisfying relationships experience better health (Cohen, Doyle, Skoner, Rabin, & Gwaltney, 1998), heal more quickly (Kiecolt-Glaser et al., 2005), and tend to live longer (Holt-Lunstad, Smith, & Layton, 2010; House, Landis, & Umberson, 1988; King & Reis, 2012). The existence of a satisfying intimate relationship has been shown to be one of the strongest predictors of happiness and emotional well-being in both reviews of the scientific literature (e.g., Diener, Suh, Lucas & Smith, 1999) and representative national surveys (*Time Magazine*,

2005). Relationship distress, on the other hand, is a leading cause of pathological loneliness (Cacioppo & Patrick, 2008) and depression (Beach, Sandeen, & O'Leary, 1990), and is the most-cited reason why people seek help from psychotherapists or lay counselors (Veroff, Douvan, & Kulka, 1981). More broadly, a far-reaching review by Hartup and Stevens (1997) concluded that the ability to relate successfully to others was fundamental to success in virtually all domains of human activity in every stage of the life cycle from birth to old age. As such, it comes as no surprise that economic analyses have shown that relationship distress and dysfunction yield enormous financial and human capital costs that harm individuals, their social networks, and their communities (e.g., Becker & Tomes, 1994; Forthofer, Markman, Cox, Stanley, & Kessler, 1996). It follows, therefore, that any psychological science concerned with human well-being must consider relationships.

How did Berscheid and Hatfield propose that the field pursue the scientific study of relationships? Earlier work—the small amount of it that existed when they launched their own research programs—had tended to follow either of two approaches: laboratory experiments involving unacquainted college students or surveys in which responders described existing relationships. Although these methods served their limited purposes well, they were unsuitably narrow to foster a broad, accurate, deep, and practical understanding of relationships (Berscheid, 1985; Clark & Reis, 1988; Huston & Levinger, 1978). In the past 25 years, some key methodological developments in relationship science have included:

- conducting true experiments involving live interaction between relationship partners;
- expanding the participant base to examine actual, ongoing relationships across the life span, and across social class and cultures;

- taking advantage of modern technologies to examine interaction processes in more detail, such as in behavioral observation and everyday experience studies (e.g., the Internet, digital video recording, smartphones);
- capitalizing on sophisticated statistical tools such as dyadic and multilevel methods to test more complex ideas and foster finer and more robust insights;
- applying fine-grained social-cognitive methods (e.g., priming, implicit assessment) to closely examine mental processes associated with relationships;
- supplementing traditional social-psychological methods with tools from other psychological sciences, such as psychophysiology, neuroscience, and longitudinal approaches;
- suggesting that clinical work on relationship problems ought to be better integrated with basic research, and testing basic theories in interventions.

All of these developments (among others) have been essential to the growth and increasing visibility of relationship science.

Interpersonal Attraction

We begin as most voluntary relationships do, with attraction. Fittingly, the empirical study of relationships as a coherent field of inquiry began with the first and second editions of Berscheid and Walster's (1969, 1978) *Interpersonal Attraction* monograph. (Elaine Hatfield published as Elaine Walster from 1966 to 1978. Throughout this article, we refer to published articles with the name under which they can be found in print or digital archives.) In those slender volumes, they identified four central principles of attraction—we are attracted to others who (a) are similar to us, (b) are familiar to us, (c) like us ("reciprocity"), and (d) are physically attractive. These principles still organize much of the literature today. These principles have received renewed attention alongside the recent resurgence of research on

attraction (see Finkel & Baumeister, 2010, for an account of this trend), and this renewed attention has yielded some surprising findings that qualify the basic principles.

Why surprising? Scholars are rediscovering the importance of studying attraction in live, often face-to-face interaction (rather than attraction to targets whom the individual only "meets" through static information presented on paper or via computer), and it turns out that attraction to targets in face-to-face interaction can be quite different from attraction to targets in artificial "profiles" (Eastwick, Finkel, & Eagly, 2011; Eastwick, Luchies, Finkel, & Hunt, in press; Reis, Maniaci, Caprariello, Eastwick, & Finkel, 2011a). Perhaps most surprising is that *similarity* is, despite widespread claims to the contrary, a weak predictor of attraction and an even weaker predictor of relationship satisfaction and stability (Montoya & Horton, 2008). That is, although perceived similarity—the subjective perception that one is similar to one's partner—strongly predicts attraction, in live, face-to-face interaction, actual similarity has far less impact than has been traditionally assumed (e.g., Tidwell, Eastwick, & Finkel, in press).

Familiarity, too, has witnessed a resurgence of scholarly attention, in part triggered by an article suggesting that familiarity might undermine rather than promote attraction (Norton, Frost, & Ariely, 2007). In most of the studies in that article, participants were assigned randomly to learn a larger or a smaller number of trait descriptors for a hypothetical target person about whom participants had no additional information and whom they would never meet. In contrast to the established literature suggesting that familiarity promotes attraction, Norton et al. (2007) reported that participants were more attracted to the targets about whom they had learned less rather than more—that familiarity breeds contempt. In a direct response, Reis et al. (2011a) suggested that this trait-descriptor paradigm provides a poor proxy for how attraction dynamics work in everyday life, demonstrating that, in live interaction, familiarity promotes attraction, as Berscheid and Hatfield suggested long ago. The search for

circumstances under which familiarity promotes liking versus contempt is an ongoing effort involving sharp differences of perspective (for an elaborated debate, see Norton, Frost, & Ariely, 2011; Reis, Maniaci, Caprariello, Eastwick, & Finkel, 2011b).

Although less controversial, recent research on *reciprocity of liking* has yielded important new insights into the circumstances under which another person's liking toward us predicts an increase in our liking toward him or her. The roots of these new insights date back several decades to the distinction between generalized and dyadic reciprocity (Kenny & Nasby, 1980). Generalized reciprocity taps the extent to which one person's liking for others on average correlates with those others' liking for that person, whereas dyadic reciprocity taps the extent to which one person's unique liking for a specific target (i.e., beyond that person's tendency to like targets in general) predicts that target's unique liking for the person. Research on platonic dyadic interactions between strangers has shown that both of these reciprocity correlations are positive (Kenny, 1994)—generally liking others predicts generally being liked by those others, and uniquely liking someone predicts being uniquely liked by that person—but research investigating these effects in a romantic context revealed a different conclusion (Eastwick, Finkel, Mochon, & Ariely, 2007). Among speed-daters, the dyadic effect remained positive, but the generalized effect flipped to negative: Indiscriminant romantic liking predicts *less* romantic liking in return, perhaps in part because it smacks of desperation. These findings echo early research by Hatfield and colleagues (Walster, Walster, Piliavin, & Schmidt, 1973), in which it was found that men tend to be especially attracted to women who are easy for them to get but hard for other men to get (i.e., women who are attracted to this particular man more than to other men). This effect appears to be equally true of women's attraction to men (Eastwick et al., 2007).

Recent research has also yielded a bevy of new insights regarding the fourth principle: that people tend to be attracted to *physically attractive* others, a potent effect compellingly demonstrated by Hatfield almost 50 years ago (Walster, Aronson, Abrahams, & Rottmann, 1966). Berscheid and Hatfield made physical attractiveness a legitimate topic for scientific inquiry, overcoming what many saw as the "undemocraticness" (Aronson, 1969) of this variable. For example, considerable work has focused on the determinants of physical attractiveness, with a consensus emerging that prototypicality ("averageness") and symmetry in bodies and faces matter, along with other signs (e.g., hip to waist ratios in women) that, in evolutionary history, suggested health and fertility (e.g., Langlois & Roggman, 1990; Singh, 1993). In addition to identifying what physical beauty is, that work has fostered important links with evolutionary theorizing about attraction and relationship initiation and maintenance (Maner & Kenrick, 2010). Beyond this work, researchers have followed up on Berscheid and Walster's (1974a) suggestion that physical attractiveness matters in a variety of ways that go well beyond the romantic marketplace, for example, to children's peer friendships (see Langlois, Kalakanis, Rubenstein, Larson, Hallam, and Smoot, 2000, for a review) or to adult's lifetime earnings (Scholz & Sicinski, 2011).

One surprising finding is that, despite years of theorizing and findings to the contrary, men and women appear to value physical attractiveness in a potential romantic partner about equally (Eastwick & Finkel, 2008a). That is, although research paradigms that assess the impact of physical attractiveness on judgments about hypothetical targets or strangers consistently show that men prioritize physical attractiveness in a mate more than women do, this sex difference disappears once people have met the target face-to-face, whether that face-to-face meeting involved several minutes or decades of marriage (see meta-analytic review by Eastwick et al., in press). These findings echo earlier findings from diary research showing

that the social lives in general of both men and women benefit from being attractive (Reis, Nezlek, & Wheeler, 1980). In addition, although the relative strength of explicit preferences (e.g., as assessed with self-reports) for physical attractiveness in a mate are unrelated to people's attraction to flesh-and-blood partners who vary in their physical attractiveness (Eastwick & Finkel, 2008a; Eastwick et al., 2011), implicit preferences (e.g., as assessed with a reaction-time task that taps gut-level preferences) correlate positively with their attraction to these partners (Eastwick, Eagly, Finkel, & Johnson, 2011).

Toward theoretical integration of the attraction literature

In addition to these four basic principles of attraction, many other influences on attraction have been investigated over the years. Taken collectively, much of this work has been atheoretical, and even those studies grounded in theory have employed a sufficiently disparate range of perspectives to render theoretical (as opposed to topical) integration difficult (Finkel & Baumeister, 2010). Recently, however, Finkel and Eastwick (in press) have proposed that most attraction research can be understood from one (or more) of three metatheoretical perspectives. First, *domain-general reward perspectives* (e.g., Berscheid & Walster, 1969; Byrne & Clore, 1970; Lott & Lott, 1974) emphasize fundamental needs, such as for hedonic pleasure and social belonging, that can be satisfied through both social and nonsocial means, including through romantic relationships. Second, *domain-specific evolutionary perspectives* (e.g., Buss, 1989; Buss & Schmitt, 1993) emphasize specific needs that have been linked to survival and reproductive success in humans' ancestral past, and that can only be met through specific means (e.g., by having sex with a reproductively viable partner). Third, *attachment perspectives* (Bowlby, 1969), which are pervasive in the study of attraction, suggest that people seek to approach attachment figures in times of distress to establish a sense of felt security. Although it takes about 2 years for a full-fledged attachment

bond to form between adult romantic partners (Fraley & Davis, 1997), it seems that proto-attachment processes such as the desire for the formation of a bond can begin almost immediately after meeting a potential partner (Berg & Clark, 1986; Birnbaum & Reis, 2012; Eastwick & Finkel, 2008b). Finkel and Eastwick's model provides an update on the model advanced by Berscheid and Walster (1969, 1978), which suggested that attraction depends on the "rewards others provide." We see great promise in future investigations that integrate these three theoretical perspectives or pit them against one another.

Interpersonal Attraction: Conclusion

Berscheid and Hatfield were two of the most influential figures in establishing interpersonal attraction research in the 1960s and 1970s. By the launch of APS in 1988, however, they, along with most scholars in the field, had shifted much of their attention to research on close adult relationships beyond the stage of initial attraction (Berscheid, 1985; Clark & Reis, 1988; Graziano & Bruce, 2008). We now turn to the various ways in which Berscheid and Hatfield pioneered the study of what happens after initial attraction.

The Scientific Study of Romantic Love

Romantic love pervades history (and prehistory), in every culture in which it has been examined, and with parallel behavioral manifestations in a wide variety of other animals. It is a source of intense joy and intense safety and contentment, as well as of depression and suicide. Romantic love shapes fundamental decisions in our lives and almost certainly played a major role in the evolution of our species. And yet, until Berscheid and Hatfield came along, there was almost no scientific work on this topic. (For reviews of the extensive scientific literature that now exists on romantic love, see Berscheid, 2010; Fehr, in press; Hatfield & Rapson, 2008; Reis & Aron, 2008; Tomlinson & Aron, in press.) In this section we consider the scientific study of love, focusing first on Berscheid and Hatfield's contributions,

particularly the important distinction between passionate and companionate love, and then review subsequent developments in the light of their work.

Berscheid and Hatfield's Pioneering Foundation

Until the 1970s, scholarly work on romantic love was mostly philosophical or literary speculation; what little systematic research had been done primarily consisted of incidental findings by sociologists who were studying courtship, marriage, and the family (e.g., Westermarck, 1921). Then, thanks to Berscheid and Hatfield, things changed. The first edition of their *Interpersonal Attraction* book (Berscheid & Walster, 1969) included a brief section on the topic, and the second edition (Berscheid & Walster, 1978), as well as a 1974 book chapter (Walster & Berscheid, 1974b) and a new book (Walster & Walster, 1978), included somewhat longer treatments in which they introduced the crucial distinction between passionate and companionate love[3].

The most influential developments, however, occurred in the mid-to-late 1980s: Hatfield (1988) wrote an important chapter that began to lay out details of a theoretical model; a very influential study found that compared to earlier generations, young Americans now overwhelmingly saw love as a crucial criterion for marriage (Simpson, Campbell, & Berscheid, 1986); and a psychometrically sound measure of passionate love (described below) was developed. Also, new theories and taxonomies of types of love appeared (e.g., Aron & Aron, 1986; Hazan & Shaver, 1987; Hendrick & Hendrick, 1986; Sternberg, 1986), as did a key systematic analysis of how laypersons understood and identified love (e.g., Fehr, 1988).

Two central developments with continuing broad impact are attributable to Berscheid and Hatfield. The first, already noted, was a basic distinction between passionate and companionate love that has dramatically enhanced the clarity with which romantic love is studied and understood. They (Berscheid & Walster, 1978) defined the former as "a state of

intense longing for union with another" (p. 9), the latter as "the affection we feel for those with whom our lives are deeply entwined" (p. 9). This distinction maps well onto a related distinction people make between those with whom they are "in love" and a wider group of people whom they "love" (Meyers & Berscheid, 1997).

The other central development was demonstrating that passionate love could be measured and providing a scale to do so. The Passionate Love Scale (PLS; Hatfield & Sprecher, 1986) is a 30-item Likert Scale (with widely used short forms). Example items include "I would rather be with ___ than with anyone else" and "I melt when looking deeply into ____'s eyes." The PLS has been used in diverse studies, including studies that distinguish passionate love from other kinds of love (e.g., Sprecher & Regan, 1998) and studies that address key theoretical issues about its role in human pair-bonding (e.g., Hatfield & Rapson, 1987). Other studies using this scale have shown that young children experience levels of passionate love as frequently and strongly as adults, which suggests that sexual desire is not a necessary ingredient for intense romantic attraction (Hatfield, Schmitz, Cornelius, & Rapson, 1988). The PLS also has been validated in fMRI studies—among people newly in love looking at photographs of their beloved, PLS scores correlate strongly with activation in brain regions associated with intense reward (e.g., Aron et al. 2005).

Recent Advances in Romantic Love Research

Berscheid and Hatfield's early work laid the foundation for what has become a large and still accelerating literature on romantic love, including investigations of cross-cultural and individual differences; new or significantly refined theoretical approaches and taxonomies, particularly attachment and evolutionary theories; animal models; sexual orientation; the experience of "falling in love;" trajectories of passionate and companionate love over time; the nature and impact of rejection, unrequited love, and extra-dyadic love; and identification

of bio-markers of romantic love. Moreover, by distinguishing companionate love from romantic love (which includes passionate components), Berscheid and Hatfield provided a starting point for what has become a thriving and diverse area of research on responsiveness to a partner's needs and welfare (see Clark & Mills, 2012; Reis & Clark, 2013, for reviews). In this subsection, we illustrate these developments by focusing on four themes that have witnessed particularly significant advances: Neuroimaging of passionate love; the trajectory of passionate and companionate love over time; the role of attachment processes in shaping love experiences and behavior; and research on responsiveness to needs.

Neuroimaging passionate love. fMRI studies of passionate love (for recent reviews, see Acevedo & Aron, in press; Cacioppo, Bianchi-Demicheli, Hatfield, & Rapson, 2012) complement standard questionnaire and behavioral methods because, among other virtues, they are minimally affected by subjective understandings and response biases, by language and cultural values, and by varying interpretations of what love entails . Most studies have followed a paradigm of scanning individuals currently experiencing intense love, comparing the pattern of neural activation when viewing photos of their partner versus photos of various familiar controls. In these studies, a consistent observation is strong activation in brain regions associated with intense rewards such as the ventral tegmental area and parts of the caudate (these include the same regions that respond to cocaine). Other noteworthy studies include further support for distinguishing romantic love from sexual desire by showing that they engage different brain regions (e.g., Aron et al., 2005); documentation of basic similarities of the passionate love experience across diverse cultural contexts (e.g., Chinese and North American; Xu et al., 2011), and among same and opposite-sex romantic partners (Zeki & Romaya, 2010); and identification of mechanisms by which passionate love decreases

experienced pain and reduces cravings for addictive substances (Xu et al., 2012; Younger, Aron, Parke, Chatterjee, & Mackey, 2010).

The time course of passionate love in relationships. Early researchers widely assumed that passionate love declines once romantic couples become committed to each other, a decline for which, if things go well, growing levels of companionate love compensate. Indeed, it is well-established that passionate love typically declines over time (e.g., O'Leary, Acevedo, Aron, Huddy, & Mashek, 2012). However, cross-sectional and longitudinal studies now indicate that both companionate and passionate love may be present from the start of a romantic relationship and that companionate love may also decline over time (e.g., Hatfield, Pillemer, O'Brien, & Le, 2008). Furthermore, for some couples passionate love may endure even in very long-term relationships. For example, in one recent nationally representative U.S. survey (O'Leary et al., 2012), 40% of those married over 10 years reported being "very intensely in love" with their partner. Moreover, an fMRI study of long-term married individuals (Mean length = 21.4 years), selected because they claimed to be experiencing very strong passionate love, showed neural responses when looking at photographs of their beloved in key reward areas essentially identical to those found in studies of newly in-love college students (Acevedo et al., 2012). Finally, studies of individuals in long-term relationships suggest that the nature of passionate love does evolve: Whereas long term passionate love includes some of the same core elements (intense engagement, centrality to life, and sexual liveliness), it includes less of the obsessive and anxiety elements found in persons newly in love (e.g., Graham, 2011). Indeed, after excluding obsessive love items, about 13% of a U.S. community sample of married individuals (Mean length = 8.4 years) gave the highest possible response on every single PLS item, even after excluding respondents who were above the sample mean on social desirability (Acevedo & Aron, 2009).

Attachment and love. Berscheid (1985) presciently observed that attachment processes, studied extensively in infant-parent relationships (e.g., Ainsworth, Blehar, Waters, & Wall, 1978) and theorized to function "from the cradle to the grave" (Bowlby, 1979, p. 129), had been little applied to adult pair-bonds. Only 2 years later, Hazan and Shaver (1987) showed that a few simple questions based on attachment theory accounted for large amounts of variance in reported experiences of adult romantic love. Their paper, as well as another paper that introduced the Adult Attachment Interview (Main, Kaplan, & Cassidy, 1985), instigated an explosion of research exploring attachment processes in adulthood, particularly adult romantic relationships. Key principles of attachment theory have led to substantial advances in our understanding of relationship processes, both normatively (e.g., people seek support from attachment figures when under threat and are more likely to explore new opportunities when they feel securely connected to those figures) and in terms of stable individual differences (e.g., one's degree of attachment security or type of insecurity is systematically associated with an extraordinary range of affective and relationship phenomena). Importantly, in adulthood, attachment figures are often (though not exclusively) romantic relationship partners, thereby linking attachment functions to processes associated with passionate and companionate love. For a review of this extensive literature, see Mikulincer and Shaver (2007).

The nature of companionate love. Whereas the legacy of Berscheid and Hatfield's ideas about passionate love has led to specific theories and a well-defined body of empirical findings, the legacy of their interest in companionate love is more multifaceted, and perhaps as a result, has been blended with other theoretical approaches. Prominent among these is research on the antecedents, nature, and consequences of responsiveness to a relationship partner's well-being (see Clark & Lemay, 2010, or Reis, Clark, & Holmes, 2004, for reviews).

For example, combining companionate love with ideas derived from interdependence theory has advanced understanding of the factors that promote commitment and trust, and of the impact of commitment and trust on responsiveness and caregiving (e.g., Murray & Holmes, 2011; Rusbult, Arriaga, & Agnew, 2012). By combining companionate love with ideas from attachment theory, research has identified the conditions and individual differences that help or hinder people in forming and maintaining secure, trusting relationships (Mikulincer & Shaver, 2007). By combining companionate love with ideas about social exchange, new theories have been proposed to explain how norms of mutual caregiving affect close relationships (Clark & Mills, 2012), and to characterize the development of intimacy (Reis & Patrick, 1996). And from social cognition research, we have learned more about the role of social-cognitive processes in the development, maintenance, and deterioration of close relationships (Clark & Lemay, 2010; Fletcher & Kerr, 2010). Because all of these ultimately refer to relationships in which companionate love ("the affection we feel for those with whom our lives are deeply entwined") is central, this work elaborates one side of the distinction first identified by Berscheid and Hatfield.

Romantic Love Conclusion

Romantic love has in the past 25 years become a topic of intensive scientific study, leading to a deeper understanding of its nature, associated mechanisms, limiting and facilitating conditions, and even its neural underpinnings. That Berscheid and Hatfield persisted, in the face of prodigious political pressure instigated by then-U.S. Senator William Proxmire's infamous bestowal of a "Golden Fleece" award for their research on love[4] testifies to the courage behind their convictions: to study that which is important about human behavior and experience. This vibrant area of research has benefitted not only from their

contributions to theory and method, but also from their formative examples of how a deeply personal experience like love can be studied scientifically.

Emotion: How Relational Context Shapes Affect

Emotions have long been of interest to psychologists, who have debated what an emotion is; studied how individuals express emotions on their faces, in their voices, and in their bodily movements; and investigated how individuals regulate emotions. Psychologists have searched for the visceral and neural correlates of subjective feelings of emotion and have asked how emotions influence individuals' thinking, judgments, and behavior. Strikingly, though, until recently, emotion theorists have largely ignored relational context—who is present, and who affects or is affected by one's behavior. People other than the individual experiencing an emotion were not seen as intrinsic to the emotional state being experienced, except as external stimuli (much as, for example, a piece of rotten food might evoke disgust). Indeed, other people figured into discussions of emotion mainly as components of emotion-eliciting situations or, as Darwin (1872) proposed, as possible targets of an emotion.

Berscheid and Hatfield made pioneering contributions to understanding emotion by suggesting that relational context shapes the very nature of emotions, and further that relationship processes may be the most influential antecedent of experiencing emotions. They became emotion theorists, perhaps inadvertently, in the service of their efforts to understand attraction and love, then later in the course of their efforts to understand relationships more generally. Their transition to emotion scholarship corresponds to increasing recognition by some emotion scholars of the intrinsically social nature of emotion.

One influential contribution came in the early 1970s, as their work on attraction was broadening to include the concept of love. At that time, the prevailing zeitgeist was to view attraction as an attitude, consistent with the field's post-World War II interest in attitudes and

attitude change. As with attitude objects like ice cream and gun control, one's attitude toward another person included affective, cognitive and behavioral components. Attraction toward a particular person, like other attitudes, remained relatively stable across time, ready to be accessed when the attitude object (in this case the person) was encountered. Berscheid and Hatfield pointed out that the attitude construct did not well capture the intense affective states that usually accompany strong attraction toward other persons, nor did it acknowledge that attraction sometimes could not be verbalized even though it was obvious nonverbally, nor did it capture people's rapidly changing views of close relational partners (see Berscheid, 1985; Berscheid & Walster, 1978; Walster & Walster, 1978, for summaries). How could an attitude explain why a child loves his parents one moment when they indulge his whims, yet hates them the next when they deny him a pleasure?

Berscheid and Hatfield proposed that we view attraction instead as an emotion. Initially relying on Schachter and Singer's (1962) model of emotion, they proposed that romantic attraction might comprise feelings of arousal (due to sexual arousal, nervousness around an attractive person, or whatever) that were attributed to another person, assuming that the other person was an appropriate target (Berscheid & Walster, 1974b). This idea led to extensive studies of attribution and misattribution of arousal as a basis of romantic attraction (e.g., Dutton & Aron, 1974; Jacobs, Berscheid, & Walster, 1971). Some of these studies challenged the proposed mechanism behind the effect (e.g., Kenrick & Cialdini, 1977), while others provided evidence that not only may arousal be attributed (and misattributed) to feelings of love but also to repulsion (as Berscheid and Hatfield had originally proposed). Although the precise terms of the Schachter and Singer (1962) model of emotion have not generally withstood the test of time, the contribution of arousal to feelings of attraction and

repulsion endures (for a meta-analytic review, see Foster, Witcher, Campbell, and Green, 1998), and can be seen, for example, in some new theories of emotion (Barrett, 2012).

The impact of this empirical work notwithstanding, the more basic contribution to understanding the nature of emotion should not be missed. Attraction as emotion is consistent with a constructivist view of emotion; that is, that emotion combines internal experiences, including bodily experiences, evolved neural alarms, and cognitive appraisals of current circumstances. Berscheid and Hatfield, among others, kept this view of emotions alive (e.g., Berscheid, 1983; Hatfield, Cacioppo, & Rapson, 1994) when the field was moving instead toward a "basic and discrete" view of emotion (i.e., the idea that each emotion represents a physiologically unique and functionally autonomous suite of features; Ekman, 1992; Izard, 2007), and their perspective currently enjoys renewed popularity even as the debate continues (e.g., Barrett, 2012; Lindquist, Wager, Kober, Bliss-Moreau, & Barrett, 2012). Berscheid and Hatfield's interpretation of attraction and love as emotions also forced emotion researchers to grapple with the question of whether love was better conceptualized as a specific emotion or as a motivational state that can foster diverse emotions, a debate not yet resolved (Aron et al. 2005; Shaver, Morgan, & Wu, 1996). Importantly, their work was the first to suggest that relational context is a crucial component in the construction of emotion. For example, the distress caused by another person's harm to the self is experienced as hurt when people desire intimate relationships (and motivation to repair the harm is high), but as anger when people have abandoned hope for a communal relationship (and motivation to repair the relationship is low; Lemay, Overall, & Clark, 2012).

In another contribution to understanding emotion, beginning in the early 1980s, Berscheid, like many emotion theorists, was interested in pinpointing the antecedents of emotional experience. Yet unlike other emotion theorists, she pointed to the structure of

relationships as an antecedent condition to experiencing emotions (Berscheid, 1983). The more interdependent two people were—meaning the more frequently, strongly, and diversely they influence each other's thoughts, feelings and behaviors—the greater the emotion-provoking potential of that relationship. Interdependence, which fosters frequent, habitual patterns of interaction and thus is a fertile source of expectations, provides each partner with the power to interrupt (in positive or negative ways) the other's well-practiced flow of thoughts, feelings, and behavior, thereby producing arousal and emotion (Berscheid & Ammazzalorso, 2001). This model helps explain why the degree of interdependence predicts the likelihood and intensity of emotional distress following relationship break-ups better than levels of satisfaction do (Simpson, 1987). In setting forth this model, Berscheid was the first to highlight the antecedents of emotion in an expressly relationship context.

The emotion-in-relationships model has inspired researchers to develop other models of how the nature of interdependence can shape emotional lives. For example, interdependence characterized by mutual felt responsibility for each other's welfare is associated with greater emotional expression (Clark, Fitness, & Brissette, 2001) and with more positive reactions to expressed emotion (Clark & Taraban, 1991). Also, emotional experience and perception is influenced by power asymmetries. Anger and pride are expected and seen as more acceptable in people with high rather than low power; sadness, guilt and appreciation are expected and seen as more acceptable in people with low rather than high power (Tiedens, Ellsworth, & Mesquita, 2000).

Emotion: Conclusion

Whereas in 1988 emotion was largely considered a phenomenon that could be understood by studying individuals in isolation, that view has begun to change, reflecting seeds sown by Berscheid and Hatfield. Along with later work in the same vein, they provided

timely and insightful ideas and research that kept constructivist views of emotion alive and also paved the way for new approaches to the study of the antecedents of emotion. The generativity inherent in their position—that relationships shape emotions and that emotions are critical to relationships—is clear.

Equity Theory and the Allocation of Benefits in Relationships

What rule or rules govern how people distribute benefits among themselves? Following the publication of George Homans's (1950) *The Human Group*, which laid out the basic principles of social exchange theory, this question came to be studied by scholars across the social and behavioral sciences. Early on, Berscheid and Hatfield suggested that people are inherently selfish and primarily concerned with their own outcomes, but, to survive in society and to facilitate smooth interactions with others, people in dyadic relationships, including intimate relationships, implicitly adopt an equity norm (Walster, Berscheid, & Walster, 1971; Walster, Walster & Berscheid, 1978). They clarified the definition of equity, first identified by Adams (1963), in mathematical terms, and then laid out a clear set of propositions about how the equity norm influences thoughts, feelings, and social behavior.

Not coincidently, cognitive dissonance theory (Festinger, 1957) was then of central interest to both Hatfield's graduate mentor (Leon Festinger) and Berscheid's graduate mentor (Elliot Aronson, who himself had been a Festinger student). Whereas that theory focused on the mind of a single individual, Berscheid and Hatfield were fundamentally interested in the dynamics of interpersonal attraction and of dyadic interactions in relationships. Thus, their formulation of equity theory blended ideas from cognitive dissonance theory with extant theories of distributive justice and, most importantly, principles derived from their earlier empirical work describing psychological processes that reside not just in one person's head but in the tie between two people (Walster et al., 1978).

Their theoretical model proposed that equity exists in an interaction or relationship when the ratio of Person A's outcomes relative to Person A's inputs is equal to the ratio of Person B's outcomes relative to Person B's inputs. Inequity, they theorized, leads to distress, both physical and mental, and a drive to reduce it, regardless of whether one is "underbenefited" or "overbenefited" (although subsequent work has shown that the latter is often less distressing than the former; e.g., Van Yperen & Buunk, 1990). Work grounded in equity theory yielded valuable findings about how people select partners (the well-known *matching hypothesis* in physical attractiveness; Berscheid, Dion, Walster & Walster, 1971), about the motive to provide benefits to a partner and its emotional consequences (Berscheid & Walster, 1967), and about the process of restitution when inequity exists (Berscheid, Boye, & Walster, 1968). All of these remain active topics today (e.g., Bakker, Petrou, & Tsaousis, 2012; Guerrero, LaVelley, & Farinali, 2008; Taylor, Fiore, Mendelsohn, & Cheshire, 2011).

Early work on equity spurred other researchers to conduct experimental work, both in relationship science and in the area of social justice research, a subdiscipline that emerged in large part from interest in equity theory. A particular contribution has been the impetus to further consider the rules that guide the distribution of benefits in relationships and, furthermore, in groups and even cultures, in work conducted by social, developmental, and organizational psychologists, behavioral and neuroeconomists, political theorists, and anthropologists (e.g., Clark & Mills, 1979; Hook & Cook, 1979; Fiske, 1992; Reiff, 2009; Tyler, 2012). Recent interest in morality represents one outgrowth of this work (e.g., Walzer, 2013).

Contemporary theorists agree that more than one distributive justice rule exists—others include equality and responding to needs—and have proposed that people selectively apply these distinct norms as a function of circumstances and relationships, or to serve distinct

social purposes (e.g., Bugental, 2000; Clark & Mills 1979, 2012; Fiske, 1992). Much of this work maintains Berscheid and Hatfield's emphasis on investigating not just the distribution of benefits in relationships and other groups but also the consequences of these distributions for ongoing social connections.

Equity Theory: Conclusion

Current research has moved beyond the specific dictates of equity theory to a broader consideration of distributive justice norms and their impact on social functioning. By persuading researchers to move beyond the decidedly individualistic form of earlier work, and thereby fostering a connection to Thibaut and Kelley's interdependence theory (1959; Kelley & Thibaut, 1978), Berscheid and Hatfield set the stage for better understanding of the interdependent manner in which people influence each other's outcomes.

Conclusion

Much has been accomplished in relationship science since 1988, and much of what has been accomplished has been built on the foundation established by Ellen Berscheid and Elaine Hatfield. Even beyond their specific theories and research, they taught the field about the importance of studying relationships, about how to do so, and about the need to construct relationally focused theories. Our debt to these pioneering scholars is incalculable.

The field has, fittingly, moved on from the specific findings and theoretical propositions that they originally offered, and it may be useful to ask about the big picture: What overarching advances during the past quarter-century can be seen as a result of Berscheid and Hatfield's contributions? We see two, one easily described, the other somewhat more complex.

The easy one is that relationships matter to people's well-being, and that they should therefore be an important focus within psychological science. The empirical evidence behind

this assertion is abundant and clear: From birth to death, relationships provide the backbone for much human activity, and the ability to navigate these relationships fruitfully is a primary determinant of successful adaptation to the challenges and threats that life presents. As Berscheid herself put it, "No attempt to understand human behavior, in the individual case or in the collective, will be wholly successful until we understand the close relationships that form the foundation and theme of human behavior" (Berscheid & Peplau, 1983, p. 19).

The second, more complex contribution involves recognition of relationship's central role in the underlying processes that shape the large majority of human behavior and experience. By this phrase we assert that many forms of human behavior and experience, including some of the most important foci of psychological science, are directly influenced by interaction with close others: whom one is with, and who affects or is affected by one's behavior. In both phylogenetic and ontological development, much of the neural architecture and behavioral mechanisms that influence our lives has emerged in a relational context – that is, to enable humans to live, work, survive, and reproduce with others. By implication, then, the impact of relationship partners should be integrated into theorizing about the fundamental nature and contextual determinants of human behavior and experience. The failure to do so represents a crucial theoretical gap. What Berscheid and Hatfield's legacy urges us to do, in a larger sense, is to fill this gap.

We see a need for greater recognition by psychological scientists of the importance of relationship factors in the numerous research areas that have typically ignored relationships. That is, although psychological science has had substantial influence on theories and research about relationships, the reverse cannot be said to be true. Relationship research appears regularly in journals, textbooks, and conferences, as noted earlier; however, that work typically is set apart from other topics, rather than being integrated more systematically, let

alone considered as potentially foundational, across the spectrum of psychological science. The net effect is that, absent some of the developments reviewed above, the central findings and theories of relationship research have had relatively little effect on research and theory in other areas of psychological science. Yet the prospects for incorporating relationship contexts into many other specific areas of psychological science and application would seem to be evident (Reis, Collins, & Berscheid, 2000). Here are some of the connections we see:

- Development: From the moment of birth, human development is shaped by interactions with caregivers (and later, other adults and peers). These early interactions exert profound influences on neural, psychological, and social development, with lifelong implications for virtually every human trait and ability.
- Language and Cognition: Because coordination with others is fundamental to nearly all goals and activities of social animals, numerous cognitive processes have evolved with a particular adaptation toward thinking about and communicating with others (Donald, 1991). In the evolutionary past, where we lived in small communities and extended families, nearly all of these others were likely to be relationship partners (Brewer & Caporael, 1990).
- Emotion: Emotions are frequently triggered by relationship partners and emotional experience (e.g., emotional expression) depends on with whom one is interacting. Moreover, the nature of the relationship between interacting persons influences emotional interaction (e.g., how emotions are expressed, perceived, and shared, nonverbal synchrony) (Clark, Fitness, & Brissette, 2001).
- Social interaction: Social behavior typically varies, often profoundly so, across different interaction partners. A pat on the rump, for example, would be experienced differently coming from one's romantic partner, sibling, boss, teammate, or a stranger on a bus.

With different partners, the same individuals often react to the same situation in different ways, reflecting the varying nature of dyadic interdependence, as well as their history and interaction goals (Kelley, Holmes, Kerr, Reis, Rusbult, & Van Lange, 2003).

- Social Neuroscience: Because the tasks involved in sociality and relating contribute in a significant way to survival and reproduction, many psychobiological processes have evolved to regulate these tasks. As the emerging field of social and affective neuroscience shows, many important neural mechanisms evolved to help accomplish these tasks (Cacioppo, Berntson, Sheridan, & McClintock, 2000).
- Health: Mental and physical health interventions based on psychological science are often designed for individuals, despite the fact that implementation often depends on relational, typically family, considerations. For example, dietary changes depend on family involvement in meal planning and preparation (e.g., Miller & Brown, 2005). Additionally, the patient-provider relationship can influence a patient's motivation to accept and adhere to treatment plans (e.g., DiNicola & DiMatteo, 1984).

To be sure, this situation is changing. There is every reason to expect that theories, concepts, and empirical findings about relationships will continue to evolve, both as an area unto itself and in its ties to other phenomena and processes in the behavioral sciences. Because close relationships are a common (perhaps the most common) context for behavior among social animals, fuller understanding of their impact is an essential component of any comprehensive theory of human behavior. More deeply integrating the science of relationships into the science of behavior will be a suitable way of capitalizing on the foundation that Berscheid and Hatfield built.

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Footnotes

[1] Throughout this article, for consistency we use alphabetical order when referring to Berscheid and Hatfield by name.

[2] One exception to this generalization was the study of small group processes in social and organizational psychology, although here too the focus was on groups of unacquainted strangers, rather than groups of individuals who had ongoing relationships with one another.

[3] In a noteworthy exception, Rubin (1970) offered an initial approach to assessing romantic love, in contrast to liking, by cleverly assessing mutual eye gazing among in-love dating couples.

[4] In 1975, United States Senator William Proxmire bestowed the first of his infamous Golden Fleece awards for wasteful spending of taxpayers' money on Berscheid and Walster for their pioneering studies of romantic love. Proxmire's self-serving proclamation garnered widespread publicity, both pro and con, one consequence of which was to all but eliminate federal funding in the United States for research on love and related phenomena, thereby substantially hindering scientific progress in these areas. It might also be said that Proxmire's example set the stage for contemporary political attacks on politically unpopular research. See Benson, 2006, for a more detailed account.