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Steps toward the ripening of relationship science

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Abstract
Recent decades have seen remarkable growth in research and theorizing about relationships. E. Berscheid (1999) invigorated this growth by proclaiming "The Greening of Relationship Science," the emergence of a multidisciplinary science of interpersonal relationships with enormous potential to advance knowledge about human behavior and to provide an empirically informed framework for improving the human condition. Here I discuss several steps necessary to move the field from a green science toward a more mature, ripened one, including the need to be action oriented but in a theory-building way, to become more cumulative and collective, and to develop an integrated network of theories, constructs, and their observable manifestations. Perceived partner responsiveness is one possible central organizing theme for the diverse phenomena relationship scientists study.

I dedicate this article to those visionary scholars who laid the groundwork for including personal relationships as essential subject matter for the behavioral sciences. I wish to thank several individuals who commented on one or more drafts of this manuscript: the members of the Rochester Relationships Lab (Peter Caprariello, Cheryl Carmichael, Mike Maniaci, Shannon Smith, and Fen-Fang Tsai), Rebecca Adams, Art Aron, John Holmes, Mario Mikulincer, and Sue Sprecher. Their comments have been invaluable in helping me clarify my positions, though they should be held blameless for the ambiguities and contradictions that remain. I am especially grateful to Ellen Berscheid for the inspiration of her steadfast insistence, despite considerable obstacles, that relationships were simply too important for understanding human behavior to be ignored, for providing the metaphor and ideas that led to this paper, and for her personal encouragement of my life's work.

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> Science is built up of facts, as a house is built of stones; but an accumulation of facts is no more a science than a heap of stones is a house. Poincaré (1958, p. 141)

These are heady days for relationship scientists. In the pantheon of sciences, relationship scholars no longer need to feel like visitors. Whereas once the study of relationships was limited to a small segment of fields like sociology and psychology, relationships now occupy the interest of many researchers in a diverse array of specialties. Human communication is a specialty area with its own programs and journals. The work of psychologists who study relationships is increasingly central to clinical, developmental, personality, and social psychology. Economists and political scientists take seriously the idea that relationships, and in particular their impact on such major life events as marriage, parenting, and divorce, have something important to contribute to our understanding of microeconomics and political systems. Family studies programs are a staple in many universities. Medicine is progressively more aware of the need to consider interpersonal circumstances, both for understanding the causes and sequelae of disease and for designing interventions and treatment plans, in which families play an ever more central role. Major subsections of the law concern relationships, especially family relationships. Human evolutionary biology gives increasing importance to the study of how, and to what consequence, people interact with relationship partners. Even behavioral neuroscience, with its emphasis on localizing and describing the brain structures responsible for human behavior, has found interest in such core relationship phenomena as love, empathy, attachment, facial recognition, acceptance and rejection, prejudice, and emotions.

It has not always been this way, of course. Not long ago, relationships were considered an improper topic for science, perhaps partly because the subject matter did not seem to lend itself to unraveling by the scientific method but probably more so because relationship phenomena did not seem all that important. For example, in 1958, Harry Harlow, by then an eminent developmental psychologist, said in his Presidential Address to the American Psychological Association:

> Our assigned mission as psychologists is to analyze all facets of human and animal behavior into their component variables. So far as love or affection is concerned, psychologists have failed in this mission. The little we know about love does not transcend simple observation, and the little we write about it has been written better by poets and novelists. But of greater concern is the fact that psychologists tend to give progressively less attention to a motive which pervades our entire lives. Psychologists … not only show no interest in the origin and development of love or affection, but they seem to be unaware of its very existence. (Harlow, 1958, p. 573)

The same could have been said about most other relationship phenomena. To be sure, relationships had already appeared on the radar screen in a few disciplines, such as sociology and anthropology, but this work was at a rudimentary stage.

Less than 50 years later, and notwithstanding the many gaps and omissions that remain, the interests and awareness of our various home disciplines have changed. This article appears in volume 14 of *Personal Relationships*. The *Journal of Social and Personal Relationships*, the sister journal of *Personal Relationships*, is in its 24th year. Moreover, and perhaps more tellingly, relationship science is no longer ghettoized to the pages of specialty journals. It can be found in dozens of scholarly journals spanning diverse disciplines, and the research reported therein is steadily working its way into classrooms, practice, and the culture at large. To be sure, this surge of scholarly activity is spread out and often disparate. Relationship science often seems to be composed of "a loose collection of researchers and practitioners interested in various particular types of relationships," but there is also something more: "at a more basic level … [we are] involved in the highly cooperative activity of identifying the phenomena and laws that cut across these various kinds of relationships" (both quotes, Kelley, 1986, p. 7).

The level of activity led Ellen Berscheid, in an address delivered in 1998, to announce "The Greening of Relationship Science." By this she meant that a multidisciplinary science of interpersonal relationships had begun to emerge, a science with the

> … potential to unite … social, behavioral and biological scientists, … to narrow the gap between psychological researchers and practitioners, and to extend our knowledge of human behavior to people's daily lives and natural surroundings, [relationship science] also has the potential to inform many issues of national concern. (Berscheid, 1999, p. 265)

Berscheid's proclamation was intended to signal something more than a loose association among scholars who read each other's work and attended occasional multidisciplinary meetings. Rather, it represented what she saw as the development of a new way of thinking about interpersonal relationships and their significance in human lives. This new discipline, she anticipated, would be a "cohesive force" in fostering integrated cross-disciplinary theorizing and research, as well as in formulating theoretical approaches and methods better geared toward interpersonal, as opposed to intrapersonal, analyses. Berscheid's metaphorical use of the noun *greening* made plain her belief that this new synthesis was just beginning to materialize—that it represented a promissory note—much as the first green buds of spring augur, with careful cultivation, a blossoming into summer.

One of my goals in writing this article is to discuss a few key issues relevant to progress from "greening" to "ripening," moving our discipline from early spring to midsummer. Although we can and should take justifiable pride in having reached this point—it is hard to imagine a scholar in any of the human sciences who is unaware of relationship science—we ought not to lose sight of the difficult challenge ahead. To some readers, describing the path forward may seem unnecessary and perhaps presumptive. After all, science is a self-correcting enterprise, in the sense that whatever is needed to advance knowledge may be expected to arise from unconstrained, open-minded pursuit of ever new and better ideas. Nevertheless, and perhaps especially because relationship science is still more multidisciplinary than it is interdisciplinary, much less a distinct discipline in its own right, there is value to be gained from self-conscious reflection on the direction of the field. In other words, we might facilitate the field's evolution by considering explicitly what sort of theorizing and research is most likely to contribute to real progress in relationship science.

Steps Toward the Ripening of Relationship Science

Here I briefly highlight three general considerations that I believe will be important in helping relationship science become a mature and influential discipline. Although other factors may also matter, these three seem particularly noteworthy in my personal observations about current directions in the field.

Becoming more action oriented but in a theory-building way

In an important article, Bradbury (2002) argued that a problem-centered approach to relationships research would increase the discipline's integrity and viability. Bradbury's position was that because relationships are a vast and complex topic, and given the early stage of our theorizing, unfettered research activity runs the risk of yielding a "disjointed, superficial body of information" (2002, p. 594). Thus, he argued that an applied, action-oriented approach would force the field to focus on several factors likely to "strengthen and elevate the science of personal relationships" (2002, p. 594). These factors include more representative samples, better description, emphasis on causality, replication, and clearer criteria for evaluating the effectiveness of research.

I have no disagreement with Bradbury about the need for, or value of, action-oriented research. Although contemporary marital interventions tend to be effective, their benefits are limited in time and generality (Christensen & Heavey, 1999; Christensen, Doss, & Atkins, 2005), likely one factor (among many) contributing to the National Institute of Mental Health's decision to remove marital improvement from its funding priorities. Relationship scientists have the responsibility to develop, evaluate, and disseminate theories and protocols that will improve the clinical work of practitioners everywhere (Holmes & Boon, 1990; Reis, 2002). I also do not disagree with Bradbury about the likely salutary effects of emphasizing the several factors listed above. (In passing, however, it might be noted that the overwhelming majority of action-oriented studies concern romantic, usually married, couples. A true relationship science approach to change would give equivalent attention to processes of change in other important dyad types, such as siblings, friends, coworkers, and leaders and their subordinates. With the exception of parent-child relationships, interventions systematically targeting other types of relationships are for the most part nonexistent.) Nevertheless, in so doing, it is imperative that we not lose sight of the basic science of relationships.

In an influential book about science and technological innovation, Stokes (1997) distinguished between applied research that was part of the quest for fundamental understanding, which he termed "use-inspired basic science," and applied research that had little aim other than the creation of a product that did something. Use-inspired basic science advances knowledge at the same time as it creates opportunities for testing that knowledge through application. Application and theory provide reciprocal feedback, so that each is well situated within the other. For example, Pasteur's search for a treatment for anthrax and cholera was motivated by his desire to better understand the process of disease and led to far-reaching implications for understanding basic microbiology. On the other hand, Edison sought only to invent a lightbulb that worked; he had little interest in illuminating the principles by which electrical energy became light energy. Both kinds of research are valuable, of course, but applied research that seeks outcome without concerted attention to questions about underlying mechanism, context, and moderators is not only unlikely to advance understanding of the fundamental principles that guide relationships, it also seems unlikely to yield interventions generalizable to the highly varied circumstances of real-world relationship distress.

Karney and Bradbury (2005) provide an excellent example of why the Pasteur approach may be better suited to relationship science than the Edison approach. Most contemporary marital and premarital interventions are based on approaches developed for use with relatively affluent populations, commonly, communication skills and conflict resolution training. Their analysis suggests, however, that these methods may be largely irrelevant in low-income populations, in which demands external to marital interaction, such as poverty, unemployment, drugs, and infidelity, are more pressing and family and neighborhood support is low (Cutrona, Wallace & Wesner 2006). Thus, a rather different approach to intervention would be indicated.

Another example of the Pasteur-Edison distinction is suggested by the work of Helgeson and colleagues on support-group interventions for cancer patients, which shows that support groups are sometimes helpful, sometimes ineffectual, and sometimes harmful (see Helgeson & Cohen, 1996, and Helgeson, Cohen, Schulz, & Yasko, 2001, for reviews). Group-based supportive interventions for various afflictions have been plentiful in the past two decades—Helgeson and Gottlieb (2000) call them "ubiquitous"—spawned by a vast literature showing that perceived social support is associated with emotional and physical well-being. Most of these groups have been guided by intuitive principles about how to create feelings of support among persons previously unknown to each other who share little more than an illness or an unfortunate life circumstance. Some of these interventions were effective, others not so, but very few were designed to test theories or competing hypotheses about what makes such groups effective with what type of individuals under what sort of circumstances (the key distinction between the Pasteurian and Edisonian approaches). Helgeson and Gottlieb discuss several problems that may contribute to the failure of support-group interventions; for example, they may interfere with existing social relations, they may foster negative social comparisons, they may be too short lived, or the group members may be unable to cope with the distress that is expressed. A theory-focused program of interventions, that is, interventions designed to pinpoint mechanisms responsible for effects and to uncover important moderators, is more likely to have informative outcomes for theory and to provide superior resources for the development of new and more effective applications.

Let us become more action oriented, then, but let us be sure to do so in a Pasteurian manner, informed by, and contributing to, the advancement of basic theory and empirical knowledge about relationships. I offer suggestions about how to enact a more theory-oriented approach to applied research in my comments on Bradbury's (2002) call for action-oriented research (Reis, 2002).

Becoming more cumulative and collective

The main criterion for receiving tenure in the departments in which relationship scientists typically live is well known: develop a new theory, construct, or phenomenon; show how it helps predict and understand behavior; and then pursue that line of research relentlessly. Although this model has stood the field in reasonably good stead for developing individual scientists, it has inhibited our ability to participate in the kind of cumulative team efforts that science administrators uniformly assert will be the modus operandi of 21st century science. Cumulative and collective science takes many forms, but common to all of them is a departure from the "me and my own research program" approach in favor of larger, longer, and more collaboratively integrated activity.

One element of cumulative science of particular interest to relationship scholars is longitudinal research. Relationships are intrinsically longitudinal: they have beginnings, middles, ends, and aftermaths; they may differ, often substantially so, depending on their current stage; and what happens at one time is almost always influenced by what has happened earlier. Although the number of longitudinal studies of marriage is impressive (see Bradbury, 1998, for an overview), there are few long-term longitudinal studies of other types of relationships. Moreover, among these, what might be called very long-term longitudinal studies that include relationships (e.g., the Terman "gifted-children" sample, which spanned a lifetime, Sears, 1977; the Minnesota Longitudinal Study of Parents and Children [Sroufe, 2005], which began in infancy and is currently moving into middle adulthood; and the National Survey of Midlife Development in the United States [Brim, Ryff, & Kessler, 2004]) tend to be rare and tend to ask fairly general questions about relational circumstances. Few would doubt that very long-term longitudinal studies can help answer important questions about relationships: To what extent is the long-term success of relationships predicated on early experience? How does experience in one adult relationship affect later adult relationships? To what extent does relationship experience contribute to the individual's long-term health and well-being? Yet, we as a discipline have not taken steps to develop the necessary infrastructure for such efforts.

Other ways in which relationship science might embrace more cumulative and collective tactics include participation in the ever growing (and for some funding sources, mandated) register of data-sharing archives (in which existing data sets become part of a data bank freely available to all scholars; Johnson & Sabourin, 2001), lessening the priority on first authorship in tenure and promotion decisions, de-emphasizing the proclivity of researchers to posit their own mini theories with unique labels (which impedes accumulation and integration, as discussed more fully in the next section; cf, Kruglanski, 2001), and according greater recognition to replication.[1] Most of us agree about the value of these endeavors, of course, although real progress is at best a glimmer on the horizon.

Furthermore, relationship science has been slow to join the trend toward "big science," large-scale interdisciplinary projects with big budgets, large staffs, and dedicated infrastructure, including specialized technology

1. Gary King's Web site is an excellent resource in this regard: http://gking.harvard.edu/replication.shtml

(Galison & Hevly, 1992). Such projects are increasingly the norm in many disciplines, for example, the Human Genome Project, NSF's Long-Term Ecological Research Centers, the Next-Generation Cybertools Project at Chicago and Cornell, the National Longitudinal Study of Adolescent Health, or Michigan's long-standing Inter-University Consortium for Political and Social Research. To some extent, the move toward "big science" is encouraged by the increasing methodological and technical complexity of research tools, which require greater expertise and time commitments than solitary scholars can provide, and therefore impel collaboration. Certainly, relationship science has already benefited from collaboration with scholars expert in these methodological and statistical advances, and certainly much more is possible (Reis, Collins, & Berscheid, 2000).

Relationship science is in many ways ideally suited for a big-science approach. Consider what might be learned about marital success and deterioration by targeting a very large, diverse, and genuinely representative national sample of premarital couples; studying them and their social networks in depth with observational, biological, interview, and self-report measures; and following them at regular intervals to the end of life. Of course, many of these couples would not stay together, so that we would also be studying development across different types of relationships. Instead of controlling away background variables such as age, ethnicity, and religion, these factors might be examined directly as moderator variables. Or consider what might be learned from a cross-national project spanning dozens of countries and cultures simultaneously investigating the nature and impact of different models of courtship, friendship, siblinghood, and parenting (e.g., Schmitt's, 2005, study of mating preferences in 48 nations).

Another benefit of a more collective approach would allow relationship scientists to take greater advantage of the rapid conceptual advances and new technologies in human biology. From genomics to brain-imaging to disease-monitoring tools, the development of new technologies has revolutionized paradigms for conceptualizing and investigating human behavior. One need only compare a 10-year-old textbook on emotion with one from the present era to see how profound this reorientation can be. Unquestionably, these methods have much to offer relationship science, just as relationship science has much to offer to scholars looking to better understand the substantive problems under scrutiny. Perhaps because the technical complexity of many of these methods requires special training, substantial time commitments, and large budgets for staff and equipment, their integration into relationship science has been slow. (Ironically, at present, there is more relationship research in neuroscientific journals than there is neuroscientific research in relationship journals.) Disciplines that have already incorporated these methods reveal a more interdisciplinary, team-oriented approach to research. By adopting a more collective orientation, the knowledge base of relationship science could be expanded to build stronger intellectual bridges with the biological bases of interpersonal relating.

Bertenthal (2002) noted that although behavioral and social scientists typically endorse this research strategy at an abstract level, most are reluctant to commit wholeheartedly to such projects and to develop training models for preparing graduate students for a career in big science. (UCLA's NSF-funded Interdisciplinary Relationship Science Training Program, led by Anne Peplau, Shelly Gable, Sandra Graham, and Alan Fiske, illustrates what such training might look like.) Taylor (2004) describes these changes, pointing out that although they may be challenging, the search for new scientific syntheses adds excitement to our enterprise. If Berscheid (1999) was able to envision the greening of relationship science in the appearance of relationship phenomena across all the human sciences, then the ripening of relationship science will be perceptible in the cross-participation of relationship scientists and scholars from those other disciplines in collaborative training and research.

The importance of, and need for, central organizing principles

To my mind, the progress of relationship science has been impeded by the absence of clear consensus about the core phenomena of the field: What are the fundamental problems that we intend to solve? What do we know about the natural history and social ecology of these core problems? Which relationship problems have what known consequences? What common knowledge do we possess about these phenomena? Which major theories would most scholars agree represent dominant approaches to the core phenomena of relationship science? We often have difficulty weaving together theories and findings from different research programs into a cohesive account (an ironic difficulty, considering Berscheid's remarks, quoted above). Consider this typical scenario when competing theories address a given phenomenon, obtaining variable results. Sooner or later, a conclusion something like the following is offered: "Although these studies appear to address the same phenomenon, in reality they address different aspects of related phenomena. Thus the results are not directly comparable and future research is needed to determine how they fit together."

This example is reminiscent of the Buddhist parable of the Blind Men and the Elephant. In that parable, each blind man touches a different part of the elephant and thereby deduces something different about the nature of the beast. One feels the tusk, inferring that elephants are hard and sharp-ended, like a blade. Another touches the soft, flexible ear, concluding that elephants are supple, resembling felt. A third imagines massive strength from grasping the pillar-like structure of the leg. The perspective of each person touching the elephant is valid, as far as it goes, but collectively they will comprehend what an elephant is only when the various elements have been integrated. Integrated, not listed. In relationship research, we often celebrate the diversity of our perspectives, as is appropriate and desirable, but we fail to take the crucial next step of synthesizing these multiple and diverse elements into a portrait of the fully functional beast. In my judgment, a ripened interdisciplinary relationship science would devote less attention to how its core phenomena appear different from different perspectives and more attention to the collective vision that emerges from synthesized understandings of the unitary whole.

Relationship science has no shortage of distinct and imaginative ideas, or of theoretical variety, conceptual nuance, moderator variables, and specialized methods, assessment tools, and empirical protocols. This state of affairs is fortunate. Relationships are complex phenomena, and our theoretical models ought to be increasingly complex and specialized (Hinde, 1997). Nevertheless, single-minded attention to conceptual and operational distinctions may obscure the central organizing principles that underlie the many and often seemingly dissimilar manifestations of relationship processes in real-world interactions and relationships. If we do not attend to these central principles, our findings run the risk of becoming scattered and arcane, a tendency Bowlby described as "knowing more and more about less and less" (1988, p. 41).

There are more established sciences on whose experience we might reflect. For example, ever since James Clark Maxwell, in the mid-19th century, amalgamated electric and magnetic forces into a single set of equations, physicists have sought a "grand theory of everything," a unified theory linking quantum mechanics, particle physics, and cosmology to explain the workings of everything in the universe. As Oerter (2006) wrote, in his fascinating description of the Standard Model, "The Standard Model describes the 'circuitry' of the universe. We can't understand everything in the universe using the Standard Model … but we can't really understand anything at the most fundamental level without the Standard Model" (2006, p. 8).

The existence of the Standard Model does not imply that physicists do not have unanswered questions and continuing controversies about the elements of the theory; research and knowledge in physics are surely evermore specialized. Rather, as Oerter analogizes, whereas these endeavors are designed to flesh out the features and ornaments of a Christmas tree, the theory *is* the tree itself. By knowing what the tree is and what it does, scholars comprehend where the individual elements fit. Within the biological sciences, evolutionary theory provides a similar example. Although the details and mechanisms of evolutionary theory are evolving (as the recent emergence of evolutionary developmental biology compellingly demonstrates), the basics of evolutionary theory provide a set of central organizing principles around which the field's cutting-edge research and theorizing are understood.

Or consider a field somewhat closer to our own, gerontology. Beginning in the late 1950s, Matilda White Riley advocated and worked tirelessly toward a conceptual model of aging that integrated perspectives from sociology (the discipline in which she trained), psychology, biology, epidemiology, economics, and anthropology. As Dannefer, Uhlenberg, Foner, and Abeles (2005) describe

> Under Riley's leadership, a multidisciplinary vision for research on aging that integrated the aging of individuals into social structures was developed and implemented. The resulting research program emphasized the influence of social structures on the lives of individuals and the lives of individuals on social structures. This vision extended to the biological sciences, for Riley recognized the need for a biopsychosocial understanding. (pp. S302–S303)

Riley's vision was not just to house these perspectives under a single roof but rather to integrate them into a set of enduring principles for understanding the effects of aging. Moreover, as suggested earlier, Riley strongly believed that focus on what I am calling central organizing principles required collective, cumulative research, and that it would foster "scientifically grounded support for efforts in policy, practice, and popular culture" (Dannefer et al., 2005, p. S296). Although gerontology has not achieved the level of theoretical integration that theoretical physics or evolutionary biology has, it offers a model of what progress might look like.

Relationship science at this point has few obvious candidates for a "grand theory of relationships."[2] Given our relative youth, this may not be surprising or even troubling. Nevertheless, blossoming to a more ripened stage will necessitate that we at least begin looking, if not for such a theory itself, for some of its precursors. And that will require attending to what I am calling central organizing principles.[3] Central organizing principles are not equivalent to a "grand theory," but rather may be defined as highlighting key elements for such a theory. An emphasis on central organizing principles would have at least four general characteristics:

1. Commonalities among differentiated constructs would be highlighted, thereby identifying connections among constructs while at the same time pointing out gaps. When an idea appears and reappears in different theories and research programs, that indicates that something fundamental is being called forth.
2. Researchers would put less weight on establishing the uniqueness of a contribution and more weight on clearly defining constructs and findings, and showing how they fit parsimoniously and coherently with existing constructs and findings. Explicitly establishing incremental validity of new work would have increasing importance. With such an approach, researchers would be aware even before beginning a study how their work speaks to broader theoretical models. If nothing else, this would facilitate generalization from one research program to another.
3. Applications would be grounded in a clear set of expectations about what is likely to be effective with whom and in what context. Unintended side effects would be less likely. It has been suggested by some that the lack of a coherent, generally accepted conceptual model of relationships underlying

2. My personal opinion is that interdependence theory (Kelley et al. 2003) may offer one such possibility, but my purpose here is not to initiate an opinion poll.

3. I use this somewhat cumbersome term rather than a more formal theoretical or epistemological analysis in the hope of being broader, less presumptive, and more phenomenon centered.

real-world applications is one reason why relationship research tends to fare poorly at funding agencies and under public scrutiny.

4. This focus would inevitably induce the field to pursue a rich descriptive database about relationships. The perils of "theorizing before the facts are in," as Sherlock Holmes put it, are evident, leading to wasted effort. Darwin spent years observing and cataloging zebra mussels and finches before promulgating evolutionary theory (Bowlby, 1990). Although descriptive taxonomies are common in the physical and biological sciences, no such catalog exists for the study of human relationships, despite its probable utility (Hinde, 1997). Although taxonomies without theory tend to be intellectually unsatisfying, they are an important precursor to the development of valid theories.

My conception of central organizing principles draws upon Cronbach and Meehl's (1955) idea of a "nomological network." A nomological network refers to a theoretical framework for the interrelationship of constructs to be measured in a given study, articulating both their shared effects (i.e., which variables measure the same thing) and differential effects (i.e., which constructs assess something new). To Cronbach and Meehl, construct validity required both the smallest number of nomologicals—theoretical principles linking observed variables to one another—and showing how variables account for something that prior observations had not established (what is sometimes called incremental validity; Sechrest, 1963).

In concluding this section, let me be clear. I do not suggest that relationship science needs a singular theory, nor that the field should abandon specialization and ever more detailed conceptual and empirical nuance, a trend that is doubtlessly essential in all science. Nevertheless, to ripen relationship science, the field will need a clearer vision of its core ideas, the principles that make them cohere, and an organizational framework for understanding how the many empirical pieces interconnect. A ripened relationship science will look more like a spider web of theories and findings and less like a laundry list of topics, studies, and findings.

Perceived Partner Responsiveness as a Central Organizing Principle for Relationship Science

In this section, I provide an extended example of the prior section's third point. I do not comment directly on the relevance of this material to the first two points, although attention to central organizing principles has important implications for action-oriented research and for developing a collective and cumulative approach to research. One sign of what I have called central organizing principles is the recurrent appearance of similar concepts and themes across different research areas and programs. The more often scholars investigating different phenomena converge on related themes, the more likely it is that common processes may underlie the varied manifestations. To illustrate this idea, I will focus on one promising candidate for a central organizing principle, perceived partner responsiveness. (There are, of course, other possibilities, e.g., the degree and nature of interdependence and influence inherent in the concept of closeness [cf. Kelley et al., 1983] and the hospitability-hostility dimension of sentiment. I hope it is evident that winning or losing the case for one or another particular principle matters less than the process of seeking suitable constructs and beginning to organize our theoretical, empirical, and descriptive data bases around them.)

Perceived partner responsiveness refers to the belief that relationship partners are cognizant of, sensitive to, and behaviorally supportive of the self (Reis, Clark, & Holmes, 2004). Figure 1 displays several contemporary relationship phenomena that to some extent involve perceived partner responsiveness. By no means is the list exhaustive. It spans disciplines and levels of analysis. It includes personality dispositions (e.g., attachment security, rejection sensitivity), partner-specific attributions (e.g., trust), attributes of communication

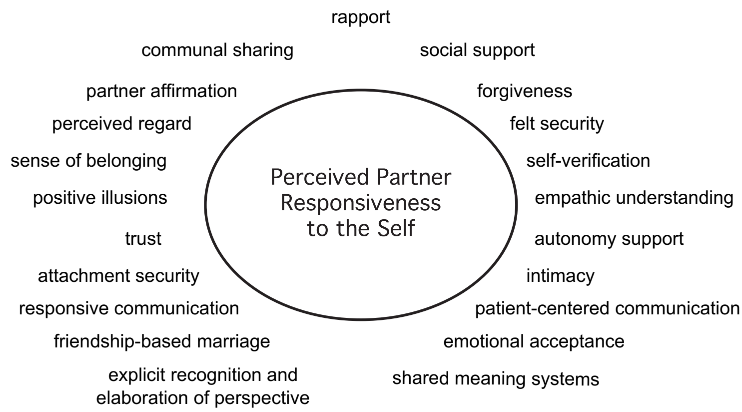

Figure 1. Specific constructs related to the central organizing principle of perceived partner responsiveness.

and interaction process (e.g., explicit recognition and elaboration of perspective, empathic understanding, rapport, communal sharing), self-regulatory processes (e.g., self-verification, partner affirmation), and meta-cognitions (e.g., felt security, sense of belonging). It features some phenomena that are the subject of an extensive, multifaceted literature (e.g., intimacy) and others that are relatively limited (e.g., shared meaning systems). Although space does not allow description of each term, my premise implies that this may not be needed: To varying degrees, all represent popular concepts in the literature with which most readers of this journal will be at least somewhat familiar. In this way, perceived partner responsiveness illustrates how a central organizing principle appears and reappears throughout the literature. To be sure, I do not suggest that these processes are identical or even substantially similar. Although they differ among themselves, often in conceptually important respects, they are not as disparate and unrelated as it must sometimes seem to readers of our journals and textbooks. The need to understand the nature of their linkage, both conceptually and in the ebb and flow of interaction, is the point I wish to highlight.

My interest in perceived partner responsiveness grew out of the intimacy model (Reis & Shaver, 1988) that Phil Shaver and I developed in part as an antidote to models that equated intimacy with self-disclosure. We thought, as subsequent research has shown (e.g., Burleson, 2003; Laurenceau, Barrett, & Pietromonaco, 1998; Laurenceau, Barrett, & Rovine, 2005; see Reis, 2006, for a review), that although self-disclosure often triggers intimate interaction, in itself self-disclosure is insufficient to instill a sense of intimacy between two people. At least two important considerations guided this reasoning. First, research has shown that self-disclosure may backfire, such as when it is situationally inappropriate, unwanted by the target, or used exploitatively (Derlega, Metts, Petronio, & Margulis, 1993). Second, we believed then, as has become more commonplace now, that interpersonal processes such as intimacy should be conceptualized as dyadic and interdependent, as Kelley et al. (1983) explain, the manner in which person A influences person B, who then influences person A, and so on. This pattern of mutual influence, and not just the act of self-disclosure, seemed intrinsically germane to generating the relevant interpersonal sentiments, which led us to theorize that the partner's response was critical to the process: A listener's supportive response would facilitate the development of intimacy, whereas a disinterested or disparaging response would hinder it. Shaver and I described this pattern of interaction as producing three qualities: a sense of felt understanding (believing that partners are aware of core features of the self), validation (feeling that partners see value and meaning in the self's attributes and aspirations), and caring (recognizing that partners support one's important needs).

As this work evolved, for several reasons, it became clear that a broader construct was needed, two of which apply here. The first, emphasizing the importance of the perceiver's own interpretations, arose from the fundamental ambiguity of knowing what interaction partners are thinking, particularly about ourselves. People do not have direct access to their partners' thoughts and feelings, of course, making this task inferential and subjective. Most researchers agree that people are influenced by their partners' behavior toward them, but there is less consensus about whether the critical variable is the partner's actual, objective behavior or the perceiver's idiosyncratic perception of that behavior, what is sometimes called *social construction* or *motivated construal*. This distinction has been investigated extensively in studies of social support, which I use illustratively. A significant number of studies demonstrate that perceived support availability predicts well-being, adjustment, and the sense of felt security better than do objective indicators of actual transactions or partner intentions (e.g., Cohen, 1992; Collins & Feeney, 2000; Gable, Reis, & Downey, 2003; Sarason, Sarason, & Gurung, 2001). In other words, feeling supported is more important than being supported. Part of the reason for this stems from the role of perceptual bias. Compelling evidence demonstrates that relationship insecurity may lead people to defensively overlook or dismiss their partners' expression of warmth and acceptance (e.g., Murray, Holmes, & Collins, 2006; Murray, Holmes, & Griffin, 2000).

This reasoning does not deny a correspondingly meaningful role for interaction reality (Reis et al., 2004). Many studies show that objectively verified reports of actual support and acceptance also influence perceptions of social support. For example, perceptions of support and nonsupport can be traced to documented reality in interpersonal exchanges (e.g., Collins & Feeney, 2000; Cutrona, Hessling, & Suhr, 1997; Simpson, Rholes, & Nelligan, 1992). Observational studies of marital interaction have made a similar point, to the extent that objective exchanges are often substantially consistent with self-reported affects and attitudes (Gottman, 1998). Acknowledging the significance of actual support transactions, however, perceptions may be more proximal to relationship outcomes, in the sense that actual support creates the perception of support. Identifying a partner's genuine indications of positivity and support can be difficult, of course, given the "noise" inherent in everyday social interaction (Bernieri, Gillis, Davis, & Grahe, 1996). Nevertheless, most people are "tolerably" accurate at knowing how others feel about them (Kenny, 1994), and there is evidence that these perceptions play a mediating role in benefiting from partner positivity. For example, Reis and Carmichael (2002, 2005) examined the impact of spouses' regard for each other on marital well-being. Replicating results reported first by Murray, Holmes, and Griffin. (1996a, 1996b), we found that husbands' positivity predicted wives' well-being, and wives' positivity predicted husbands' well-being. As Figure 2 shows, these effects were mediated by each spouse's perception of how positively the other regarded oneself. In other words, one spouse's actual positive regard contributed to the other's relationship happiness only to the extent that the other spouse felt positively regarded. These arguments led us to emphasize *perceived* partner responsiveness.

A second factor signifying the need for a broader definition of responsiveness concerns just to what the partner is being responsive. Not all aspects of the self matter to the same extent. Knowing that a partner admires one's passion for sushi is probably less consequential than knowing that a partner esteems one's commitment to raising children with a strong social conscience. Perceived partner responsiveness pertains to the central defining features of the self—in other words, the needs, goals, values, traits, abilities, attributes, and affects that best describe who one is and what is important to the self. Just how this core self ought to be characterized is a matter of considerable research and theory (see Sedikides and Strube, in press, for an overview). For present purposes, it matters less just what the self is and more that partners be perceived to be aware of and supportively responsive to that core self.

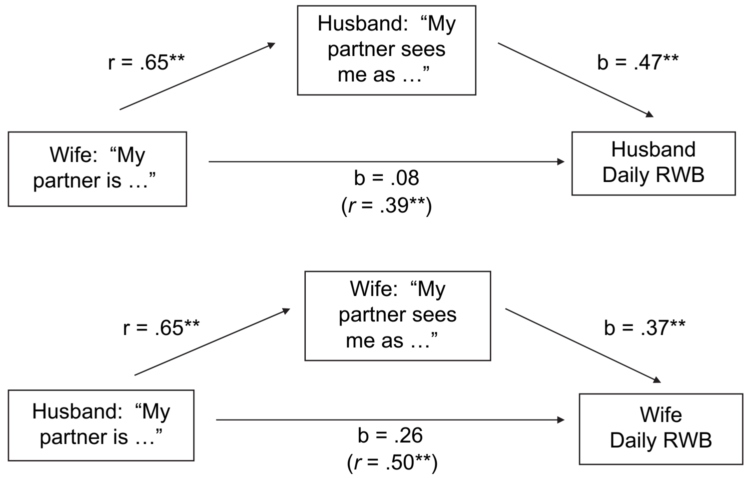

Figure 2. Mediational model of the role of perceived regard, showing that the benefits of a partner's positive illusions are mediated by perceived regard.

My aim in this section is not to propose a formal theory of perceived partner responsiveness. Rather, consistent with the aim of discussing steps that will contribute to the ripening of relationship science, I wish to show how this general concept may characterize or underlie many important constructs in relationship science (as depicted in Figure 1). It will be useful to begin this section by briefly summarizing the above, as a general description of what perceived partner responsiveness entails:

1. the belief that relationship partners understand and appreciate what is important to the self
2. the experience during social interaction that relationship partners are aware of, and responsive to, core attributes of the self
3. a sense of feeling cared for, that is, if and when needs arise, partners will take active and supportive steps to help the self address those needs
4. feelings of warmth and connection with partners, even when they are not present.

In the remainder of this article, I illustrate how perceived partner responsiveness may serve as a central organizing principle for multiple and diverse phenomena in relationship science by selectively describing research on three popular and general themes. Other topical areas might have been selected, and within each theme, other studies might have been discussed. I discuss these particular themes, and some of my own research relevant to them, because they demonstrate the broad relevance of perceived partner responsiveness across relationship science. These three themes are personal well-being correlates, perceived partner responsiveness to needs, and self-regulation in relationships.

Personal well-being correlates of perceived partner responsiveness

Investigations of the correlation between personal well-being and relationship success represent something of a cottage industry. Many and strong associations have been documented, spanning outcomes as diverse as mortality, morbidity, happiness, emotional distress, psychological development, and economic success. Similar diversity is evident in the range of relationship measures studied. Presently, my focus is on those constructs that relate most closely to perceived partner responsiveness.

Consider the traits and trait-like attributes included in Figure 1. Attachment security, or in other words a set of mental representations indicating that the self is worthy of love and support and that significant others can be trusted to provide such support if needed, is correlated with many indicators of emotional well-being, for example, better coping in stressful circumstances, less frequent and intense levels of depression, loneliness, anxiety, better anger regulation, higher levels of life satisfaction, more positive moods both in general and during social interaction, and fewer sleep problems (e.g., Carmichael & Reis, 2005; Dozier, Stovall, & Albus, 1999; Shaver, Collins, & Clark, 1996). Holmes and Cameron's (2005) sophisticated conceptual analysis interprets such attachment effects in terms of anticipated responsiveness. They also propose that anticipated responsiveness is closely related to perceived regard (the belief that partners think highly of oneself). Perceived partner regard, when generalized, is conceptualized by Leary and Baumeister (2000) as the primary determinant of self-esteem. Founded on an innate "need to belong," in their sociometer theory, self-esteem represents an ongoing assessment of success and failure in making oneself belonging worthy. (For example, academic competence raises self-esteem because academically competent people are more valued as group members and relationship partners.) Extensive evidence documents the correlation between self-esteem and diverse indicators of personal well-being (Baumeister, 1998).

Our lab has been working on a questionnaire measure of partner-specific perceived responsiveness. This measure is predicated on the three components of understanding, validation, and caring, as mentioned above. Sample items are "My partner is aware of what I am thinking and feeling," "My partner values my abilities and opinions," and "My partner expresses liking and encouragement for me." The measure focuses on positive responsiveness in contrast to both negative responsiveness and nonresponsivness, both of which convey nonunderstanding, invalidation, and a lack of caring, albeit with very different levels of associated negative affect. In several studies, this measure has yielded significant correlations with attachment security, self-esteem, and emotional well-being. Birnbaum and Reis (2006) used a version of this measure to investigate sexual working models in two large samples of adult women in the United States and Israel. Perceived partner responsiveness was associated with more positive affects, and more relationship boosting and less shameful beliefs about sex.

It is sometimes suggested that the benefits of constructs such as perceived partner responsiveness are limited to close, affect-based relationships. Existing evidence, however, suggests that these benefits also apply in other types of relationships. For example, a growing literature indicates that patient-centered health care is associated with higher quality treatments, improved patient outcomes, and lower health care costs (e.g., Epstein, Alper, & Quill, 2004; Kaplan, Greenfield, & Ware, 1989; Williams et al., 2004). Patient centeredness refers to several features of the doctor-patient relationship, including feeling treated as a person more than as a patient, patients' experiencing shared responsibility for decisions and treatments, and an empathic, caring relationship with the provider (Mead & Bower, 2004). We used a version of the perceived partner responsiveness questionnaire in a survey of 819 individuals in the United States, Canada, and the United Kingdom (Reis et al., 2004). These three countries have diverse health care delivery systems, particularly in regard to the relationship between patients and primary care physicians. Nevertheless, in each country, patients' perceptions of their physicians' responsiveness was associated with better subjective health status, even after controlling for general satisfaction with medical care received, years as a patient of that physician, age, gender, and marital status.

A different way of examining the role of perceived partner responsiveness in personal well-being is suggested by life span development theories. Nearly all such theories posit basic needs whose fulfillment defines successful growth and adjustment, and relationship-related needs are almost without exception prominent in such models (e.g., Erikson, 1950; Ryff, 1989). For example, Deci and Ryan (1991) posited relatedness, a sense of closeness and connection with others, as one of three nutriments essential for human growth, integrity, and well-being (the other two are autonomy and competence). From the perspective of relationship science, it might be asked what sort of social interactions facilitate the experience of relatedness. Reis, Sheldon, Gable, Roscoe, and Ryan (2000) conducted a diary study in which participants described their social activities every day for 2 weeks while also reporting their overall satisfaction of relatedness needs on each day. Although several types of socializing were associated with daily increases in relatedness (e.g., meaningful talk, doing pleasant or fun things, hanging out with others, avoiding self-consciousness), by far the most influential predictor was feeling understood and appreciated by one's partner during social interaction. (Interestingly, two types of interactions—activities or concrete tasks and quarrels, arguments, and conflicts—were unrelated to daily variations in relatedness. Although the latter are often conceptualized as destructive, they may foster responsiveness as well as impair it.) A noteworthy methodological point is that these findings come from within-person analyses. In many studies, it is difficult to distinguish selection effects (what sort of person participates in what sort of interaction) from interaction effects (what effects do particular types of interaction have, independent of person differences). Although both are important, the latter seem particularly relevant to relationship science.

This sampling of research is admittedly self-centered and selective. Nevertheless, it illustrates my more general points: That there may be a common principle underlying the well-documented association between subjective relationship status and personal well-being; that perceived partner responsiveness may be a useful way of conceptualizing that common principle; and that relationship science may move forward by identifying these common principles as well as their more specific manifestations.

Perceived partner responsiveness to needs

The self is a multifaceted and broad construct (Sedikides & Strube, in press) interwoven diversely and complexly with close relationships (Carmichael, Tsai, Smith, Caprariello, & Reis, in press). It might be asked, then, to what aspects of the self do we expect our partners to be responsive? Among many relevant dimensions, one that has received considerable attention is responsiveness to needs. People have needs, of course – some needs are probably innate parts of human biological and psychological architecture (e.g., food, shelter, belongingness), whereas others derive from circumstances (e.g., assistance, comfort). One of the defining features of close relationships is the expectation that partners will monitor and respond appropriately to these needs. For present purposes, it is instructive to consider how this principle is central to several lines of relationship research.

Clark and her colleagues define communal relationships in terms of the expectation that partners will help each other address important personal needs (Clark, Fitness, & Brissette, 2001; Clark & Mills, 1993; Mills & Clark, 1982, 1994). In communal relationships, awareness of and concern about a partner's difficulties provide the primary motive for feelings of responsibility and helpful behavior, whereas the help or caring expressed to casual friends or strangers would reflect other motives. This distinction implies that expectations about responsiveness to needs, in both the giver and recipient roles, vary as a function of the communal strength of relationships (Clark & Mills). For example, we expect both to give and to get more help from spouses and best friends than from neighbors and acquaintances. These expectations play an important role in evaluating our experiences. As with most social judgments, perceived responsiveness is appraised by comparing outcomes with expectations. Thus, and somewhat ironically, the same behavior enacted by a casual acquaintance may be perceived as more responsive than when enacted by a close friend. Similarly, the failure to provide a comforting shoulder might be perceived as unresponsive in a spouse but unremarkable in a neighbor (Reis et al., 2004).

Expectations about responsiveness to needs derive from at least two sources: normative definitions of social roles (e.g., most people expect parents and spouses to be highly responsive to needs) and prior experience. Attachment theory posits that early experience with caregivers forms the basis of expectations about the perceived availability and willingness of close relationship partners to be responsive to personal needs (Shaver & Mikulincer, 2002). Secure individuals trust partners to be available and caring when needed; on the other hand, insecure persons have less confidence in their partners' dependability and support. As mentioned earlier, this may undermine their ability to obtain helpful support in close relationships. For example, insecure individuals tend to perceive their partners' caregiving efforts as less responsive and helpful than independent observers do, which may then lead them to feel less supported and more conflicted about the relationship (Campbell, Simpson, Boldry, & Kashy, 2005; Collins & Feeney, 2004; Simpson et al., 1992, Simpson, Rholes, & Phillips, 1996).

Attachment anxiety and avoidance also may interfere with people's ability to provide responsive caregiving to their partners (e.g., Collins & Feeney, 2000; Feeney & Collins, 2001, 2003). To be sure, insecure persons (especially the anxious-ambivalent type) sometimes provide equivalent or even greater levels of caregiving than secure persons do. However, their helping activities reflect relatively more egoistic and self-enhancing motives (e.g., to reduce their own personal anxiety about another's plight, to create indebtedness, or to foster a public image of helpfulness and caring), whereas helping by secure persons tends to reflect a more other-focused, altruistic orientation (e.g., compassionate concern about lessening the other's distress) (e.g., Feeney & Collins, 2003; Gillath et al., 2005; Mikulincer, Shaver, Gillath, & Nitzberg, 2005). Over time, it seems likely that egoistically oriented caregiving would be recognized by partners as less than responsive to their own actual needs. This prediction follows directly from developmental research, which characterizes responsive parenting as care that sensitively and accurately assesses the needs of the child, and that simultaneously provides a secure base while encouraging autonomy striving (e.g., Dix, 1991; Stern, 2002). It also follows from research showing that excessive caregiving may denote the helper's unmet emotional needs (Mayseless, Bartholomew, Henderson, & Trinke, 2004). Both failing to provide needed support and providing high levels of noncontingent care (i.e., when and how the caregiver wishes to help, as opposed to when and what the child needs) may contribute to perceived partner *un*responsiveness.

Perceived responsiveness to needs is central to social support. Although extensive evidence indicates that the perceived availability of support is associated with relational, emotional, and physical health (e.g., Cohen, 2004; Dunkel-Schetter & Bennett, 1990; Stroebe & Stroebe, 1996), the effects of actual receipt of support is more unreliable, with many studies showing no effects or even negative effects (e.g., Bolger, Zuckerman, & Kessler, 2000; Sarason et al., 2001). These negative effects have been attributed to several factors, one of which is relevant here: That the support transaction may make salient to the recipient that he or she has been unable to cope independently with a significant problem (Bolger et al., 2000). Yet, perhaps paradoxically, awareness of being helped may be necessary for perceived partner responsiveness. After all, perceived partner responsiveness by definition includes recognition that a partner understands and supportively reacts to one's needs and goals. Partners are, therefore, less likely to be seen as responsive if recipients are unaware of their intent to alleviate the recipient's distress. Of course, responsive intent may or may not be sufficient to resolve the problem, but if this reasoning is correct, competently delivered support, when perceived, should have beneficial relationship effects regardless of its problem-solving effectiveness (see Burleson, 2003, for discussion of social support competence). For example, sharing one's apprehensions with a partner about tomorrow's job talk may not make the talk any less worrisome, but it can foster appreciation of the partner's support of the self.

We have conducted several analyses of this question using what we call a quasi-signal-detection paradigm. This paradigm simultaneously uses reports from both partners to classify daily supportive activities as *hits* (supportive behaviors enacted and perceived), *misses* (supportive behaviors enacted but not perceived), *false alarms* (behaviors not enacted but nonetheless perceived), and *non-events*. In both studies (Gable et al. 2003; Reis & Carmichael, 2006), we collected daily diary reports of supportive interactions for several weeks in adult married or cohabiting samples. Findings in both studies revealed that for supportive behaviors, hits and false alarms predicted increases in relationship well-being from the previous day. These effects were not systematically related to mood, probably because supportive interactions often take place in the context of stressful or otherwise unpleasant events. Often, these interactions may not solve the underlying problem, even at the same time as they have relational benefits, as mentioned above. Similar results were reported by Gleason, Iida, Bolger, and Shrout (2003, 2005), who found that visible support tended to increase relationship intimacy, even if it did not improve mood. These findings suggest that the perception of partner responsiveness to needs is central to the relational benefits of enacted social support. Over the long term, hits in actual support transactions should foster the perception of support availability.

Finally, perceived responsiveness to needs may also help clarify why people are generally more willing to express emotions to close than to distant others. Clark et al. (2001) explain that

> Emotional expression carries information about needs. Sad people have generally lost something. They may need help in regaining it or in coping with the loss. Angry people feel unjustly treated. They may need help in ascertaining whether their feelings are justified or help in figuring out a way to rectify the situation. (p. 255).

Clark et al. (2001) further theorize that emotional expressions make the self vulnerable to the other. To the extent that one trusts the other to be responsive and concerned with protecting one's welfare, one may feel comfortable revealing emotions. On the other hand, expressing emotions to interaction partners perceived to have little or no concern for one's needs should engender a more cautious approach. In a pair of studies, we (Clark, Reis, Tsai, & Brissette, 2004) first asked people to categorize 12 different relationship partners in terms of expected mutual responsiveness to needs. We then asked them to imagine their willingness to express a series of emotions to that person, both if the emotion had been caused by that person and if it had been caused by something or someone else. In all cases, the greater the expected need responsiveness, the greater was the willingness to express emotions. Interestingly, this pattern was stronger for negative than for positive emotions (although still highly significant for both). Vulnerability and perceived support may be more closely linked to responsiveness than the desire to share happiness. Clark et al. (2001) describe a series of experiments further documenting the close connection between emotional openness and a partner's perceived responsibility for one's welfare.

In sum, this research highlights a common theme running through research on social support, attachment caregiving, communal relating, and emotional expression in relationships, the importance of perceiving that partners will be responsive to one's needs. In each case, perceived responsiveness is associated with relationship-enhancing behaviors (e.g., giving appropriate and effective support, being emotional open), whereas perceived unresponsiveness is associated with relationship-impairing behaviors. In all likelihood, the causal arrows in these associations are bidirectional: perceived responsiveness both follows from and fosters relationship well-being. Recognizing the common principle that underlies these somewhat disparate effects facilitates identification of correspondences and connections across these seemingly disparate research topics, a spider's web of constructs, as it were. In turn, this recognition illustrates the value of stepping back from domain-limited studies to deduce larger themes running through and across relationship research.

Perceived partner responsiveness and self-regulation

One of the major functions of the self is its executive role: to determine and guide goal-directed activities. Although research typically considers self-regulation from the perspective of the individual, life is lived in the "causally potent context of relationships" (Berscheid, 1999, p. 265), and few factors are as potent in influencing self-regulation as the behavior of relationship partners (Reis, Berscheid, & Collins, 2000). Partners influence the goals we set, the strategies we choose to pursue them, the likelihood of success or failure in goal attainment, and the affects that are generated. The capacity of the self to regulate its goal-directed activities is intrinsically linked to the ways in which partners contribute, and are perceived to contribute, to these processes. Another way of saying this is that self-regulation is inextricably linked to the processes of relationship initiation, development, maintenance, and deterioration.

Among the various taxonomies of self-regulatory motives that have been proposed, the fourfold scheme offered by Sedikides and Strube (1997) is representative: self-enhancement (people strive to feel good about themselves), self-verification (people seek consistency between their self-assessments and feedback from others), self-assessment (people try to obtain accurate assessments of their attributes), and self-improvement (people attempt to cultivate positive attributes). Here I add a fifth motive to their list, a motive to feel secure and accepted in social relationships because of its special relevance to close relationships.

Perceived partner responsiveness contributes to the enactment of all five motives. At first glance, this suggestion may seem simplistic or overly reductionistic, inasmuch as these motives are often portrayed as conflicting, mutually exclusive, and theoretically distinct. However, Sedikides and Strube (1997) offer a more integrative account: That these motives are part of a dynamic, complementary system, in which each motive serves a somewhat different pragmatic purpose, contributing together to the individual's attempt to act adaptively in the world. Thus, it is not a question of which motive is most correct or important, but rather "under what circumstances is each motive active," "for which persons do which motives predominate" (Sedikides & Strube), and "how do these motives complement one another in fostering coherent self-knowledge and behavior directed at fulfilling basic goals?" Recognition of the manner in which perceived partner responsiveness contributes to each self-regulatory motive may help elucidate this dynamic interplay.

First, consider self-enhancement. All other things being equal, people pursue events and information with positive self-evaluative implications and avoid events and information with negative connotations. Self-enhancement is typically demonstrated by self-serving judgmental biases, and numerous studies have demonstrated this tendency in relationships. For example, people tend to believe that their romantic relationships are superior to other's relationships (Van Lange & Rusbult, 1995). Self-serving judgmental biases are likely to contribute to judgments about a partner's responsiveness. Furthermore, and more interestingly, positive illusions, the tendency to perceive partners more positively than partners see themselves or mutual friends do (Murray et al., 1996a, 1996b), and other forms of idealization tend to foster constructive, positive behaviors, which actually do improve relationship outcomes for both self and partner. Thus, two mechanisms may be operative here, both derivative of self-enhancement motives: the first a tendency to perceive partners in a positive light, and the second a tendency to treat partners in a manner that displays responsiveness and benefits both. That the display of responsiveness is part of this process is consistent with the findings discussed earlier, and shown in Figure 2, that a spouse's positive regard contributes to the recognition of being valued, which in turn is linked to relationship satisfaction and self-evaluation (Holmes & Cameron, 2005; Murray & Holmes, 1999). In short, self-enhancement motives may facilitate perceived partner responsiveness for both the self and one's partner.

Because a stable view of self provides a sense of predictability in social life, self-verification research emphasizes the value of feedback from others that is consistent with existing self-conceptions. In the case of persons with negative self-views, this means engaging in behavior that preferentially elicits negative evaluations (e.g., Giesler, Josephs, &

Swann, 1996; Swann, 1990). Swann, De La Ronde, and Hixon (1994) found that married couples, but not dating couples, were more satisfied when partners verified each other's self-view, even if negative. Swann et al. speculate that as relationships become more intimate, the need to be seen positively diminishes, while the need to be seen authentically grows (consistent with the idea that shared mental representations of self and other are essential to harmonious functioning as an interdependent dyad). Believing that a partner is aware of one's true self, or more precisely, of how one sees oneself, is central to the concept of perceived responsiveness. Rather than emphasizing agreement, however, the understanding component of perceived responsiveness suggests that people desire close others to be *cognizant* of their self-conceptions. Thus, in seeking understanding, people may not desire agreement so much as the empathic awareness that is necessary for partners to be responsive to each other's needs (Ickes & Simpson, 1997).

Self-assessment in the context of close relationships likewise depends on perceived understanding. After all, if the partner from whom feedback is obtained is perceived to possess erroneous understanding of the self, regardless of whether those errors are flattering or critical, that feedback is likely to be less credible and is more likely to be discounted.[4] Reis (2006) reported a pair of experiments demonstrating that positive feedback tends to be dismissed if its source is perceived to misunderstand the self. Similarly, Schimel, Arndt, Pyszczynski, and Greenberg (2001) showed that being liked for qualities of the intrinsic self yielded lesser defensiveness than more extrinsic types of feedback (e.g., being praised for accomplishments). Kumashiro and Sedikides (2005) showed that participants experimentally primed with the name of a responsive, close friend were more open to obtaining potentially informative feedback about their poor performance on an important intellectual task than were participants primed with the names of distant or negative relationship partners. Emotional openness, which increases when partners are expected to be concerned with one's welfare, as discussed earlier, likely would also facilitate self-assessment motives.

The fourth self-regulatory motive, self-improvement, differs from self-enhancement in that it encompasses a desire to change for the better, rather than to see things in a positive light. Close relationship partners are often part of this growth process, by promoting, encouraging, and generally facilitating movement toward valued goals and ideals. Self-improvement complements existing research in that responsiveness is usually studied in relation to problem solving (i.e., social support) or conflict resolution. Personal aspirations represent the appetitive side of the self (e.g., Markus and Nurius, 1986, included aspirations as part of the *possible self*), a side underemphasized in relationship research (Reis & Gable, 2003). A good example of self-improvement is the *Michelangelo Phenomenon* (Drigotas, Rusbult, Wieselquist, & Whitton, 1999), a process in which partners elicit from each other behavior that supports movement toward ideals. This sculpting process involves perceptual and behavioral affirmation: perceiving that partners recognize one's goals and believing that they are actively engaged in helping one attain them. Another example of self-improvement is *capitalization*, a means of savoring positive experiences by recounting them with others. Gable, Reis, Impett, and Asher (2004) showed that personal and relational well-being is associated with perceived enthusiastic responses from partners, rather than disinterest or disparagement. In subsequent experiments, Reis and colleagues have shown that enthusiastic responses[5] from interaction partners foster personal appreciation of the events in question (Reis, Carmichael, & Rodrigues, 2003; Reis & Smith,

4. Just how much deviation from an exact self-understanding counts as noncredible depends not only on the feedback provided but also on the self's "latitude of acceptance" (Sherif & Hovland, 1961), creating an interesting tension between tendencies to accept feedback and tendencies toward stability of self-evaluation.

5. It is interesting to note that in common language, this kind of enthusiasm is often called "responsiveness."

2004). Because personal good fortune is often associated with the fulfillment of valued goals, positive responses to capitalization attempts signal appreciation for, and responsiveness to, the self.

The final motive to be discussed here, the motive to attain a sense of felt security, is closely related to the studies of social support and need responsiveness discussed earlier. Feeling secure in one's relationship with close others is a key mechanism involved in the regulation of attachment-related behaviors in humans (Sroufe & Fleeson, 1986). When attachment figures are perceived to be responsive to – that is, aware of, sensitive to, and appropriately supportive of – needs, secure attachment is most likely (Shaver & Mikulincer, 2002). Feeling secure is an important mechanism for successfully managing the risk that committed close relationships inherently entail, and perceiving that partners will be supportive and responsive to the self provides reassurance that the other can be trusted (Murray et al., 2006). On the other hand, the perception of nonresponsiveness, regardless of whether it originates from a partner's behavior or the self's motivated construals, undermines the sense of felt security and is likely to spawn defensive strategies for protecting the self from exploitation or harm (Downey, Freitas, Michaelis, & Khouri, 1998; Murray, Holmes, Bellavia, Griffin, & Dolderman, 2002).

Because these five self-regulatory motives differ from one another in important ways, the particular mechanisms involving perceived partner responsiveness are likely to differ in their details. It would of course be unwise to gloss over these details as theory and research develop. Nevertheless, it would also be unwise to fail to notice the common elements that highlight important connections among processes and thereby suggest organizing concepts and principles. Sedikides and Strube (1997) theorize that different motives "are dynamically interrelated; they do not usually operate independently. Instead, the motives typically serve complementary purposes … and understanding this dynamic interplay will be one of the most important tasks for future research" (p. 225). The same point might be made about the role of perceived partner responsiveness. Perceived partner responsiveness underlies successful self-regulation in relationship contexts, whereas perceived partner unresponsiveness typically undermines self-regulation. Identifying common elements across different strategies, as well as discovering differences in their instantiation, will foster development of a comprehensive theory of how relationships contribute to self-regulation.

Conclusion

Perceived partner responsiveness may or may not be a useful candidate for one of the central organizing principles that will help advance relationship science to a more ripened stage. If it is, I suggest that it will help address the three general concerns discussed in the first section of this paper. That is, it will generate action-oriented research that is integrated with theoretical innovation, foster collective energies, and help organize diverse phenomena and theories into a nomological net around which many concepts and findings might be integrated. Of course, other constructs may turn out to be more constructive, in providing better explanations of relationship processes and phenomena, in allowing fuller accounting of what our studies observe, and in fostering more compelling generalizations, richer insights, and better ideas for new research and applications. Regardless of which particular principles turn out to be best, I suggest that this enterprise of ensuring not only that we see the forest and the trees, but also that we strive to understand how trees make a forest, will be an essential step in the ripening of relationship science.

As relationship science moves past the greening stage, we might be said to be blossoming into adolescence. Like all adolescents, the field is active, vibrant, and full of possibilities; also like adolescents, it is sprawling, at times unruly, and perhaps more mysterious than we might wish. Maturing from adolescence to adulthood will require something more from those who enter our discipline. It will not be sufficient to declare the importance of relationships to the human condition without demonstrating why, how, and to what effect. Instead, we will need to capitalize on our early successes to build the conceptual, empirical, and methodological infrastructure of a mature science. To be sure, this will be challenging. The intrinsic complexities of investigating complex, multiperson, multiply determined dynamic processes are familiar to all relationship scientists. But with challenge comes opportunity, and relationship science has no shortage of opportunities for making significant contributions to knowledge and well-being.

Across our various home disciplines and institutions, there is a discernible appreciation of relationships as an increasingly vital factor in most of the social, behavioral, and health sciences. Just how we capitalize on that recognition is the central task of the field's intellectual development. We have a worthy foundation of substantial theories and empirical facts to provide promising seed corn for better theories and more accurate facts. Just as importantly, recent methodological, technological, and statistical advances, advances occurring at a rate that by all appearances promises to accelerate, offer unprecedented opportunities for relationship scientists to ask ever more complex and sophisticated questions, and to obtain verified insights unimaginable in previous eras. As relationship science engages its task of ripening, there is much on our side and much to be done.

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