Intimacy: A Behavioral Interpretation

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This paper proposes that intimacy is a process that emerges from a sequence of events in which behavior vulnerable to interpersonal punishment is reinforced by the response of another person. These intimate events result in an increase in the probability of behavior vulnerable to interpersonal punishment in the presence of the reinforcing partner. The process results in intimate partnership formation and reports of feeling intimate. In addition to positing an operant process integrating the various components of intimacy, the theory also posits that the punishment of interpersonally vulnerable behavior is an integral aspect of intimate partnership formation and that intimate partnerships can develop that reinforce behavior that may be destructive both to the individual and to others.

Key words: intimacy, behavioral interpretation, couples interaction, couples research

Intimacy is a word that inspires thoughts of closeness, warmth, and shared affection. Each of us has experienced intimacy in our lives, but despite our familiarity with intimacy, behavioral scientists find it a difficult phenomenon to study. Though often regarded as mystical, ethereal, or intensely private and, therefore, hidden from view, intimacy has not been ignored by psychology. Many attempts have been made to construct definitions of intimacy (Hatfield, 1988; Prager, 1995; Reis & Shaver, 1988; Sternberg, 1988). Unfortunately, such definitions have generally been either confusingly fuzzy or unsatisfactorily narrow. Behavioral scientists have, for the most part, avoided studying intimacy because it has been regarded as a hypothetical construct rather than a behavioral phenomenon. However, recent advances in behavior therapies specifically designed to address difficulties with intimacy for both individuals (Cordova & Kohlenberg, 1994; Kohlenberg & Tsai, 1991, 1995) and couples (Christensen & Jacobson, 1991; Christensen, Jacobson, & Babcock, 1995; Cordova & Jacobson, 1993, 1997; Cordova, Jacobson, & Christensen, 1998; Jacobson, 1992; Jacobson & Christensen, 1996; Jacobson, Christensen, Prince, Cordova, & Eldridge, 2000) have provided us with a fresh opportunity to focus on the phenomenon through a uniquely behavioral lens.

The purpose of this paper is to present a conceptualization of intimacy as a behavioral phenomenon. We begin by following a Wittgenstein-inspired functional analysis (Dougher, 1994; Skinner, 1957; Wittgenstein, 1953) of the semantics of the term *intimacy* in our culture. Such an analysis assumes that a term's meaning lies in those events that occasion its usage and, furthermore, that those events share some common features that can be measured. The purpose of this analysis is to uncover the principal referents for the term *intimacy*. The result is a conceptualization of intimacy as a process that develops from an observable sequence of events in which behavior vulnerable to being punished by another person is not punished but is reinforced. Using behavioral principles, we construct a theory of intimacy that is based on the functioning of this sequence of events over time. The goal is to provide a conceptualization of intimacy that is precise enough to study yet comprehensive enough to cover the various referents of intimacy.

A FUNCTIONAL ANALYSIS OF THE SEMANTICS OF INTIMACY

As Wittgenstein (1953) states, "for a large class of cases—though not for all—in which we employ the word 'meaning' it can be defined thus: the meaning of a word is its use in the language" (part 1, section 43). In behavioral terms, it is assumed that those stimulus contexts that evoke "intimacy" as a verbal response are the functional "meaning" of that response. All of these stimuli form a class that influences the associated verbalization, and the verbalization also becomes a member of this class. It is also assumed that the term *intimacy* refers to a real behavioral phenomenon and not only to a verbally derived hypothetical construct. In other words, it is assumed that intimacy refers to events that can be observed, predicted, and influenced.

Examples of Intimacy

Undoubtedly, the most common event described when asked to give a good example of intimacy is the sharing of private thoughts and feelings or self-disclosure (e.g., Prager, 1995). Often self-disclosure involves sharing unpleasant feelings such as sadness or hurt, or thoughts such as fears, worries, anxieties, embarrassments, failures, disappointments, and confusions. In fact, there appears to be something uniquely intimate about sharing personal pain (Cusinato & L'Abate, 1994). In addition, it is also considered intimate to share feelings of love, caring, attraction, and closeness, as well as hopes, joys, accomplishments, and pride. Sharing positive experiences is often considered as intimate as sharing negative experiences. Sharing cherished memories and sharing secrets, as well as simply being with another person in an atmosphere of comfort and ease, are also considered intimate. In addition, intimacy refers not just to the act of self-disclosure but also to the interaction in which self-disclosure is validated and reciprocated.

Nonverbal behaviors are also given as common examples of intimacy. Sex is the most frequent example, but other examples include hand holding, hugging, grooming, approaching for solace, and crying on someone's shoulder. Another common image used to describe intimacy is that of a parent gently interacting with a child.

Intimacy is also used to describe a specific type of feeling. This feeling is described with terms such as *warmth, closeness,* and *loving.* In sum, *intimacy* refers to individual behavior (e.g., self-disclosure), to interactions between partners, to types of relationships, and to specific feelings. The challenge for any conceptualization of intimacy is to posit an explanatory process that integrates these various components of intimacy.

Commonalities That Define Intimate Events

Behavior vulnerable to interpersonal punishment. What do expressions of sadness, love, and hurt have in common with making love or with a parent gently interacting with an infant? As we examine the list, it becomes apparent that each of these acts involves some expression of interpersonal vulnerability. What do we mean by the term *interpersonally vulnerable? Interpersonal* means an interaction between persons. Although the interpersonal context referenced by *intimacy* is modally dyadic, it need not be defined as such. There are contexts in which groups of more than two people can be intimate (e.g., family settings, group therapy). The obvious, although usually unspecified, meaning of *vulnerable* in this context is "open to censure or punishment by another person." To make ourselves vulnerable in an interpersonal context means to engage in behavior that experience has taught us risks punishment by someone else. Thus, anything one might do that has in the past been associated with an aversive response by others constitutes interpersonal vulnerability.

Behavior can be functionally punished through processes other than direct operant conditioning (Ferster & Skinner, 1957). Individuals can learn which behaviors result in punishment by observing others being punished for those behaviors (e.g., Masia & Chase, 1997). Individuals can also learn to associate behavior with punishment through verbal processes such as rule governance (Hayes, 1989) and relational frames (Barnes & Roche, 1997; Hayes, 1996). In lay terms, one can learn what types of behavior will result in punishment by either (a) engaging in that behavior and being punished, (b) observing someone else being punished for engaging in that behavior, (c) being told that the behavior will be punished, or (d) experiencing punishment for a related behavior.

In sum, an expression of vulnerability involves engaging in behavior that has been associated with response-contingent punishment by another person in other social contexts. We will refer to such behavior as *behavior vulnerable to interpersonal punishment*. Thus, the first feature common to the referents for the term *intimacy* is engagement in behavior vulnerable to interpersonal punishment.

Note that this analysis implies that vulnerability is a product of the associated frequency of punishment as well as the associated severity of punishment. Behavior with a history of infrequent punishment by others is less vulnerable than behavior with a history of frequent punishment by others. In addition, behavior associated with severe punishment is more vulnerable than behavior associated with mild punishment. Thus, level of vulnerability occurs on a continuum from rarely or mildly punished behavior to frequently or severely punished behavior. When we state that vulnerability appears to refer to engaging in behavior that has been associated with response-contingent punishment, we are referring to some area on the continuum that can be considered "relatively highly vulnerable." Determining what constitutes "relatively high" requires idiographic study. Further, it may be that a predictable course up this continuum is a necessary aspect of the developing intimacy process, given that previous studies have found that premature self-disclosure can result in rejection (e.g., Mikulincer & Nachshon, 1991).

A reinforcing response. Behavior vulnerable to interpersonal punishment is not the only feature common to the exemplars of intimacy and does not, by itself, define an intimate event or integrate the components of intimacy. The referents for the term *intimacy* also have in common that the expression of vulnerability is not punished but is reinforced by the other person's response. All of the examples of intimacy refer either directly, indirectly, or historically to expressions of vulnerability that are reinforced. If expressions of sadness, fear, or embarrassment are belittled and do not occur again, then we do not have a good example of intimacy.

In sum, the principal referent for the term *intimacy* is a sequence of events in which behavior vulnerable to interpersonal punishment is reinforced by the response of another person. The function of the term *intimacy* therefore is to refer to this sequence of events and its sequelae. The term *intimate event* will be used to refer specifically to this class of events.

Note that it is not necessary for the person toward whom the vulnerable behavior is directed to actually respond in a way that positively reinforces that vulnerable act; the only requirement is that he or she not punish the response. The absence of punishment when punishment has occurred in the past can serve as negative reinforcement. Intimate events often involve both negative and positive reinforcement, a combination that can be particularly powerful.

It should also be noted that initially vulnerable behavior becomes less vulnerable over time in relation to the person reinforcing that behavior. The behavior remains vulnerable, however, to

the degree that it continues to have a relatively high probability of response-contingent punishment in other social contexts.

Finally, it should be noted that any instance of reinforcement also involves punishment. An event resulting in an increase in the probability of one behavior necessarily results in a decrease in the probability of other behaviors in that context. Reinforcing vulnerable behavior necessarily leads to a decrease in the probability of other types of behavior that have occurred in the past in other social contexts. Thus, intimate events are *not* characterized by the absence of punishment. In fact, nonintimate behaviors are punished during an intimate event.

The Suppression of Vulnerability and the Intimacy Ratio

Behavior vulnerable to interpersonal punishment can, of course, continue to be punished. Such events are the opposite of intimate events because they maintain vulnerability. Vulnerable behavior that is punished continues to occur infrequently. It is important to highlight the suppression of vulnerability because all developing intimate relationships unavoidably experience both the reinforcement of interpersonal vulnerability and the punishment of interpersonal vulnerability.

The process set in motion by intimate events results in both the continuing reinforcement of interpersonally vulnerable behavior and, paradoxically, the unavoidable punishment of such behavior. Intimate events create a snowball effect, leading to more frequent displays of ever-broadening classes of interpersonally vulnerable behavior. The paradoxical result is that as vulnerable behavior continues to increase in both frequency and variety, it becomes inevitable that some of that vulnerable behavior will be punished either contingently or noncontingently. Unconditional positive regard is rare. One individual will eventually say or do something that the other person simply does not reinforce. What might be called boundary issues are discovered within any developing relationship. Those boundaries are eventually crossed, and that crossing is contingently punished. The more one engages in vulnerable behavior, the more likely it is that some of that behavior will eventually be punished. Therefore, all intimate partnerships necessarily consist of a mixture of reinforcement and punishment of interpersonal vulnerability.

Essentially, this constitutes a process of discrimination training (Skinner, 1953). Partners over time engage more frequently in those expressions of vulnerability that are safe in the relationship than in those that are not. They learn that their intimate partners are more receptive in certain contexts and less receptive in others. For example, discrimination training might result in public displays of affection being reinforced on vacation in Paris but not at home in Peoria. As each subsequent event occurs, it is added to the couple's history. It is this developing history that determines whether the relationship is referred to as more or less intimate. The resulting cumulative history can be expressed at any point as the accumulated ratio of reinforcement to punishment of interpersonally vulnerable behavior.

Such a ratio is similar to the ratio of positive to negative behavior found by Gottman (1994) to predict marital stability. Although the ratio proposed here is somewhat different from Gottman's, in that we are referring to a narrower range of behaviors, his data demonstrate that such ratios can be observed and calculated and that they may be predictive of relationship stability and satisfaction.

It is neither necessary nor possible for an intimate partnership to be composed of intimate events exclusively. Punishment of interpersonal vulnerability is integral to all intimate partnerships, but if punishment becomes as probable or more probable than reinforcement of vulnerable behavior, then

the probability of partnership dissolution should increase predictably. In other words, we posit that it is the *ratio* of reinforcement to suppression of interpersonal vulnerability that determines the quality and stability of the intimate partnership. Note that the reliance on a ratio also allows that the reinforcement of interpersonal vulnerability need not necessarily occur at a constantly high rate for intimate partnerships to develop and be maintained, only that the probability of reinforcement must sufficiently exceed that of punishment.

Stimulus Control and Intimate Partnership Formation

The intimate event describes a process that, given the opportunity, necessarily develops from isolated interactions into an accumulating set of interactions (i.e., a relationship). In other words, it can be argued that intimate partnerships are the necessary products of accumulating intimate events. Consider the following scenario in which an intimate event occurs between two people for the first time. Rachel and Bobby are talking over coffee. Both have recently been hired by the same company and are new to town. We will assume that each is experiencing some degree of social deprivation and that they are attractive to each other (setting conditions). Earlier in the day, Bobby was unexpectedly called upon to present some information in front of a group of visiting business managers. He was ill-prepared and nervous, and the presentation went poorly. Bobby is obviously troubled, and Rachel asks what is bothering him. Although reluctant, with some gentle prompting from Rachel, he recounts the story. Rachel responds compassionately. She assures Bobby that the circumstances are more to blame than he is and encourages him to discuss similar presentations that went well in the past.

In this example, Bobby engaged in behavior vulnerable to interpersonal punishment by talking about some-thing about which he was embarrassed. Rachel's response to that behavior was nonpunitive and supportive. She did not add to his embarrassment, tease him for his failure, or flinch at his embarrassed self-disclosure. Furthermore, her response actually provided a more palatable explanation for Bobby's experience. If Rachel's response reinforced Bobby's behaving vulnerably with her, he will subsequently become more likely to share such embarrassments with her (and similar others) in the future. In other words, such increases in probability are not indiscriminate. They occur primarily within contexts that are functionally or structurally similar to those within which the behavior was reinforced. In addition, it is likely that that increase in probability will generalize to other behaviors within the same functional class. As a result, Bobby may become more willing to share other vulnerabilities with Rachel that he is generally reluctant to share with others. Thus, Rachel begins to gain *stimulus control* (Jenkins, 1965; Morse & Skinner, 1958) over whole classes of Bobby's vulnerable behavior as a result of an intimate event. This gain in stimulus control over behavior vulnerable to interpersonal punishment will be referred to as the process of *intimate partnership formation*. An intimate partner, therefore, is the person within a dyad whose presence gains stimulus control over the other person's vulnerable behavior. This definition identifies one individual in relation to the other by the function he or she serves in the relationship.

Our argument is that our culture begins to refer to such a developing intimate partnership as an "intimate relationship" only after a sufficient history of intimate events has accumulated. A single intimate event may set the behavioral process in motion, but there are many factors that might interfere with that process, including opportunity, time, distance, and perhaps diffusion of stimulus control across a group. Thus, a single intimate event

does not make an intimate partnership. We are conceptualizing intimacy as a dynamic process, not a static event. We do not define an intimate partnership based on a single event but instead on an accumulation of events over time. In short, a partnership is a process.

Note that the process of intimate partner formation is fundamentally unidirectional and becomes bidirectional only if both partners engage in and reinforce each others' vulnerable behavior. Because intimate partner formation is not necessarily bidirectional, it is important to distinguish who within the relationship functions as the intimate partner of the other and whether the relationship is primarily unidirectional or bidirectional.

Stimulus control also played an important role in setting the stage for Bobby's first expression of vulnerability in Rachel's presence. Although vulnerable behavior by definition has a history of being punished, such behavior has also been reinforced in other contexts. Generalization results in less-than-perfect stimulus control of interpersonally vulnerable behavior. Thus, vulnerable behaviors become more probable in situations that are either structurally or functionally similar to those in which that behavior has been reinforced and, conversely, become less probable in situations that are structurally or functionally similar to those in which they have been punished. Thus, in the example, the situation with Rachel was similar to those contexts in which Bobby's vulnerable behavior had been reinforced in the past, resulting in an increased likelihood of Bobby behaving vulnerably in Rachel's presence. In addition, subsequent settings sufficiently similar (structurally or functionally) to the situation with Rachel should also increase the probability of Bobby's interpersonally vulnerable behavior.

Because intimate events involve two or more people's behavior, stimulus control is also involved in explaining the reinforcement of vulnerable behavior. Expressions of vulnerability, in conjunction with other specific aspects of the situation within which they occur, gain stimulus control over those classes of behavior that are likely to reinforce such expressions. There are specific situations within which responding in a way that reinforces interpersonal vulnerability is itself likely to be reinforced. These appear to be those situations in which either the behavior is reinforced by the manifestations of a developing relationship with the other or the behavior is reinforced by alleviation of the other's suffering.

It should be noted that stimulus control can generalize based on either structural similarity or functional similarity. In some cases, physical resemblance is sufficient for stimulus control to generalize across two situations. However, physical resemblance is not necessary, as research on functional classes (e.g., McIlvane & Dube, 1990) and equivalence classes (e.g., Lane, Clow, Innis, & Critchfield, 1998) has demonstrated that human behavior can also come under the control of classes of stimuli that are defined by their functional similarity rather than their structural similarity. Thus, in our example, the stimulus control gained by Rachel over Bobby's expressions of vulnerability may generalize to those that are physically similar to Rachel *and* to those that are in a similar functional class (e.g., co-workers, drinking buddies, single mothers).

Intimate Safety

In addition to describing a specific type of interaction and the resulting relationship, our theory of intimacy also applies to descriptions of feelings. The intimacy process posited here allows the integration of this remaining component of intimacy, because a cumulated history of both reinforcement and punishment of interpersonally vulnerable behavior necessarily produces specific and reportable feelings. Before proceeding, however, we will clarify what we mean by *feelings* in this context. Skinner (1974) notes that the

stimuli arising within the organism play an important role in behavior and that we make contact with such stimuli through our sensory nervous systems. He notes that self-consciousness of private experience is a product of verbal communities that arrange contingencies such that a person comes to observe and report these private events. Finally, he notes that although such reporting can never attain the precision associated with the reporting of public events, the reporting of private events is useful because, to paraphrase, they are the collateral products of environmental causes, about which both the individual and others can make useful inferences (1974, p. 242). It is in this sense that we refer here to the feelings that are the collateral products of an individual's history of reinforcement and punishment of vulnerable behavior.

As intimate partnerships develop over time, and if the ratio is strongly weighted toward the reinforcement of interpersonally vulnerable behavior, the affective experience that develops can be described as feelings of safety and comfort. We call this collateral affective product *intimate safety*. Intimate safety is that feeling of "comfort in being vulnerable" that results from a history rich in intimate events. Note that the actual day-to-day frequency of intimate events may vary over the course of a relationship, but as long as the cumulative history favors reinforcement over punishment of vulnerable behavior, a reportable feeling of intimate safety should characterize the relationship. Thus, the feeling of safety generated by a sufficiently long history rich in intimate events is the affective product referenced by the term *intimacy*. On the other hand, histories with higher percentages of punishment of vulnerability may result in feelings of ambivalence or discomfort with behaving vulnerably or an aversion to and avoidance of vulnerability.

It should be noted that the level of intimate safety is free to vary for each person in the partnership, thus allowing partnerships in which the development of intimate safety is unbalanced (i.e., one partner reinforces more vulnerable behavior than the other). In addition, although a person's degree of comfort with being vulnerable may be a product of more than one relationship, it is assumed to be a self-reportable aspect of any current partnership. Although intimate safety need not necessarily be verbally available, it is likely that most people should be able to validly report, via questionnaire, how characteristic of their relationship is a sense of safety.

BENEFITS OF THE PROPOSED CONCEPTUALIZATION

Outlined below are some of the benefits of the proposed conceptualization of intimacy. First, this conceptualization anchors the term *intimacy* to specific events that can be observed and experienced. This facilitates the study of intimacy as a behavioral event rather than a hypothetical construct.

Second, by reconceptualizing intimacy as a behavioral process, the reification inherent in more abstract definitions is avoided. In contrast to other conceptualizations, we have gone beyond simply describing the components of intimacy in general terms and have instead proposed a behavioral process that constitutes and constructs the phenomena we refer to as intimacy. This conceptualization is constructed from an explanatory system that is independent of the phenomenon of intimacy, and therefore avoids the circularity of those conceptualizations that describe an aspect of intimacy and then reify that description. It is important to note that this explanatory system involves only concepts and principles that have been derived and supported experimentally, albeit with simpler behaviors that were amenable to experimental validation.

Third, this conceptualization provides a functional definition and does not rely on the formal characteristics of an event. It allows events to vary in

their form but maintain similar functions. This provides the definition with a certain breadth despite its specificity. As long as interpersonally vulnerable behavior is reinforced, the definition of an intimate event has been met. Thus, reciprocal self-disclosure and unidirectional confession and absolution can both be regarded as functionally intimate.

Fourth, and of most importance, this conceptualization ties the various meanings of intimacy together as products of operant processes. Intimate interactions, feelings of intimacy, and intimate relationships are not simply subcategories of intimacy. From the perspective of the current conceptualization, intimate events set a behavioral process in motion that leads to developing intimate partnerships characterized by accumulating ratios of reinforcement to punishment of interpersonal vulnerability and resulting in self-reportable feelings of safety or discomfort.

Finally, a behavioral conceptualization of intimacy identifies the "darker" side of intimacy. First it recognizes that the process by which intimate partnerships develop makes the emotional pain associated with the punishment of vulnerable behavior an unavoidable and integral aspect of intimacy. One cannot remain actively engaged in a developing intimate partnership without accepting vulnerability and a higher probability of suppressive events than occurs outside of intimate partnerships. Vulnerability is a necessary component of intimacy, and the frequency of vulnerable behavior will be highest (and therefore most susceptible to punishment) within intimate partnerships. Many other conceptualizations describe intimacy in wholly positive terms and specifically exclude the negative products of the process (e.g., Prager, 1995). Such exclusions, we argue, remove from consideration an aspect of the process that is vital to our understanding of intimacy development. Second, the current conceptualization allows that intimate partnerships can develop that reinforce behavior that

may be destructive both to the individual and to others. For example, intimate partnerships may develop around drug usage or other types of criminal behavior. This conceptualization implies that some types of destructive behavior may be maintained through the same processes that develop and maintain other more socially accepted forms of intimacy.

IMPLICATIONS FOR RESEARCH

What implications does the conceptualization of intimacy developed in this paper have for the study of intimacy as a behavioral phenomenon? First, it implies the necessity of additional measures. In other words, means of observing and measuring intimate events, the punishment of interpersonally vulnerable behavior, and intimate safety need to be developed and validated to assist in the prediction and influence of intimacy. The current conceptualization easily lends itself to the development of observational coding systems for measuring the occurrence of intimate events and the punishment of vulnerability in partners' interactions. Such coding systems should be useful in the study of intimacy in marriage, in friendships, and in therapy. The current conceptualization of intimate safety also lends itself to the development of brief self-report instruments for use in circumstances that make observational coding impractical. A number of research questions stem from the current conceptualization.

The first set of questions concerns reliable prediction of the occurrence of intimate events. In other words, what individual and environmental conditions influence whether interpersonally vulnerable behaviors will occur? What individual and environmental conditions influence whether or not vulnerable behavior will be reinforced or punished? Such questions may be addressed at the very beginning of a partnership as well as after a stable partnership has been established. For ex-

ample, the current conceptualization suggests that individuals will begin relationships with different rates of engaging in vulnerable behavior or responding to vulnerable behavior depending on their history. Similar to conceptualizations of attachment (e.g., Bartholomew, 1990), individuals with histories in which vulnerable behavior had a high probability of punishment should (a) initiate intimate events less frequently than others, (b) reinforce the vulnerable behavior of others less effectively, and (c) establish lower levels of intimate safety in their relationships. These predictions can be tested using both observational and self-report measures. The current conceptualization also suggests that the probability that vulnerable behavior will be punished should increase with the number of people who observe it. Thus, one would predict that vulnerable behavior will occur more probably in dyads and small groups than in larger groups. The theory also predicts that the most effective discriminative stimuli would be those historically associated with the highest rates of reinforcement. Thus one would predict that both those who have established themselves as discriminative stimuli through a history of intimate events (intimate partners) and those with limited opportunities to punish (e.g., people who are seen only once or only in limited circumstances such as strangers on a plane or psychotherapists) may occasion vulnerable behavior more readily than others (e.g., co-workers, supervisors). Finally, histories of punishment establishing interpersonally vulnerable behavior likely differ between genders, suggesting that certain behaviors should be more vulnerable for men (e.g., expressions of sadness) and certain other behaviors should be more vulnerable for women (e.g., expressions of anger). In sum, research predicting the occurrence of intimate events should address differences in individual histories regarding the reinforcement and punishment of vulnerable behavior, including the effects of gender and culture on those histo-

ries. In addition, such research should also address the influence of individuals' current environments, addressing specifically the probability of punishment or reinforcement of vulnerable behavior across settings.

A second set of questions concerns prediction of the course of intimate partnerships over time. In other words, once an intimate partnership has been established, what influences predict its further development and maintenance versus its deterioration? Are these processes distinct from those that predict relationship satisfaction or stability? For example, the current conceptualization suggests that engaging in vulnerable behavior is essential to the establishment and maintenance of intimate partnerships and that communicating emotions may be a common type of vulnerable behavior. Further, the current conceptualization suggests that because punishment of vulnerable behavior is inevitable, tolerance of such events without retaliating should be essential to the maintenance of intimate partnerships. Such tolerance likely involves effectively monitoring one's private experience and responding appropriately rather than impulsively. Both of these suppositions lead to the prediction that facility in identifying and communicating emotions should be influential in the establishment and maintenance of intimate partnerships. Further, the current conceptualization predicts that couples who have established ratios high in reinforcement of vulnerable behavior and low in punishment of vulnerable behavior should report higher levels of intimate safety and higher levels of relationship satisfaction and should demonstrate higher relationship stability.

In addition, we hypothesize that intimate partner formation begins with displays of behavior that are relatively less vulnerable and proceeds to include increasingly vulnerable behavior and increasingly frequent vulnerable behavior as that behavior continues to be met with high rates of reinforcement. Partners may describe the initial dra-

matic increase in intimate events as emotionally intense and passionate. In other words, our formulation predicts a sharp increase in intimate events when the opportunity is available, and this initially steep slope may be emotionally exhilarating. Over time, as the individual discriminates effectively between conditions with high and low probabilities of punishment within the particular partnership, he or she will begin to report greater feelings of safety and comfort and fewer of the original feelings of exhilaration. According to our conceptualization, this occurs because the person learns that he or she is safe doing many things with the intimate partner that would not be safe with most others. As an intimate partnership rich in intimate events matures, several previously vulnerable behaviors become substantially less vulnerable within that partnership. For example, sharing embarrassing failures early in a relationship may be very risky, but over time if one experiences little punishment for such disclosures, such behavior may become commonplace within that relationship, even if it remains rare outside that relationship. More comically, we also tend to scratch, burp, slurp, and slouch more in our intimate partnerships than outside them. These are behaviors that are generally suppressed by the culture. Behaviors that are unsafe outside the relationship become safe within the relationship. Are these, then, still intimate events? Our contention is that they are, particularly when the behavior in question remains highly vulnerable to punishment outside the intimate partnership. The progression of intimate partnerships follows a course in which a host of behaviors that are usually suppressed by others increase in frequency and are maintained at that increased frequency over time.

In sum, research predicting the developmental progress of intimate relationships should address the likelihood that individuals will engage in vulnerable behavior, will respond appropriately to vulnerable behavior, and will tolerate the occasional punishment of vulnerable behavior. In addition, such research should examine the ratio of reinforcement to punishment of vulnerable behavior that is characteristic of individual partnerships and the progress of intimate safety as partnerships mature.

A third set of questions concerns the facilitation of the intimacy process in therapy. For example, the current conceptualization predicts that therapeutic interventions that emphasize interpersonally vulnerable behavior should result in higher levels of reported intimacy. The current conceptualization predicts that facilitating intimate events within the session should be particularly effective for individuals who experience difficulty establishing and maintaining intimate relationships. In addition, the current conceptualization would predict that couple therapies that promote intimate events in the session (e.g., integrative couple therapy; Jacobson et al., 2000) should be effective at increasing self-reported intimacy. In sum, research that examines the influence of intimacy processes should address the effective facilitation of intimate events within the therapy session.

SUMMARY AND CONCLUSION

The purpose of this paper has been to present a new theory of intimacy. Previous conceptualizations of intimacy have failed to specify an underlying process that integrates the various components of intimacy and that posits an explanation of why intimacy is composed of certain elements and not others and why intimate interactions develop into intimate relationships that sometimes remain stable and sometimes disintegrate. The present conceptualization posits just such a process based on empirically demonstrated principles of behavior, and it addresses existing conceptual deficits. Beginning with a functional analysis of the term *intimacy*, we construct a conceptualization of intimacy as a process that de-

velops from the reinforcement of interpersonally vulnerable behavior (intimate events). We argue that intimate events necessarily result in increases in the probability of classes of vulnerable behavior under the stimulus control of a developing intimate partnership (intimate partnership formation). We further argue that the development of intimate partnerships necessarily involves both the reinforcement of vulnerable behavior and the punishment of vulnerable behavior and that the intimate partnership process can be represented by the resulting accumulated ratio. Finally, we argue that histories of intimate versus suppressive events result lawfully in higher or lower levels of intimate safety as a self-reportable private event. In sum, we have attempted to distill the principal referents for the term *intimacy* and begin to explicate the process by which intimate events develop into intimate partnerships that may either remain stable or deteriorate. Our goal has been to provide a conceptualization of intimacy that is capable of stimulating and supporting a program of research on intimacy.

REFERENCES

Barnes, D., & Roche. B. (1997). Relational frame theory and the experimental analysis of human sexual arousal: Some interpretive implications. In K. Dillenburger & M. O'Reilly (Eds.). *Advances in behaviour analysis* (pp. 183–204). Dublin. Ireland: Appelbergs Bohtryckeri.

Bartholomew, K. (1990). Avoidance of intimacy: An attachment perspective. *Journal of Social and Personal Relationships, 7,* 147–178.

Christensen. A., & Jacobson, N. S. (1991). *Integrative behavioral couple therapy.* Unpublished treatment manual.

Christensen. A.. Jacobson, N. S., & Babcock. J. C. (1995). Integrative behavioral couple therapy. In N. S. Jacobson & A. S. Gurman (Eds.), *Clinical handbook of couple therapy* (pp. 31–64). New York: Guilford Press.

Cordova, J. V., & Jacobson. N. S. (1993). Couple distress. In D. H. Barlow (Ed.), *Clinical handbook of psychological disorders: A step-by-step treatment manual* (pp. 481–512). New York: Guilford Press.

Cordova, J. V., & Jacobson. N. S. (1997). Acceptance in couple therapy and its implications for the treatment of depression. In R. J. Sternberg & M. Hojjat (Eds.). *Satisfaction in close relationships* (pp. 307–334). New York: Guilford Press.

Cordova, J. V., Jacobson, N. S., & Christensen. A. (1998). Acceptance versus change interventions in behavioral couple therapy: Impact on couples' in-session communication. *Journal of Marriage & Family Therapy, 24,* 437–455.

Cordova, J. V., & Kohlenberg, R. J. (1994). Acceptance and the therapeutic relationship. In S. C. Hayes, N. S. Jacobson. V. M. Follette, & M. J. Dougher (Eds.), *Acceptance and change: Content and context in psychotherapy* (pp. 125–140). Reno, NV: Context Press.

Cusinato, M., & L'Abate. L. (1994). A spiral model of intimacy. In S. M. Johnson & L. S. Greenberg (Eds.), *The heart of the matter: Perspectives on emotion in marital therapy* (pp. 108–123). New York: Brunner/Mazel.

Dougher, M. J. (1994). The act of acceptance. In S. C. Hayes, N. S. Jacobson. V. M. Follette, & M. J. Dougher (Eds.), *Acceptance and change: Content and context in psychotherapy* (pp. 37–45). Reno, NV: Context Press.

Ferster, C. B., & Skinner. B. F. (1957). *Schedules of reinforcement.* Appleton-Century-Crofts.

Gottman, J. M. (1994). *What predicts divorce: The relationship between marital processes and marital outcomes.* Hillsdale. NJ: Erlbaum.

Hatfield, E. (1988). Passionate and compassionate love. In R. J. Sternberg & M. L. Barnes (Eds.), *The psychology of love* (pp. 191–217). New Haven, CT: Yale University Press.

Hayes, S. (1989). *Rule-governed behavior: Cognition. contingencies, and instructional control.* New York: Plenum Press.

Hayes. S. (1996). Developing a theory of derived stimulus relations. *Journal of the Experimental Analysis of Behavior, 65,* 309–311.

Jacobson, N. S. (1992). Behavioral couple therapy: A new beginning. *Behavior Therapy, 23,* 493–506.

Jacobson, N. S., & Christensen. A. (1996). *Integrative couple therapy: Promoting acceptance and change.* New York: Norton.

Jacobson, N. S., Christensen, A., Prince, S. E., Cordova, J. V., & Eldridge, K. (2000). Integrative behavioral couple therapy: An acceptance-based, promising new treatment for marital discord. *Journal of Consulting and Clinical Psychology, 68,* 351–355.

Jenkins, H. M. (1965). Measurement of stimulus control during discriminative operant conditioning. *Psychological Bulletin, 64,* 365–376.

Kohlenberg, R. J., & Tsai. M. (1991). *Functional analytic psychotherapy: Creating intense and curative therapeutic relationships.* New York: Plenum Press.

Kohlenberg, R. J., & Tsai. M. (1995). Functional analytic psychotherapy: A behavioral approach to intensive treatment. In W. T. O'Donohue & L. Krasner (Eds.), *Theories of*

behavior therapy: Exploring behavior change (pp. 637–658). Washington, DC: American Psychological Association.

Lane, S. D., Clow, J. K., Innis, A., & Critchfield, T. S. (1998). Generalization of cross-modal stimulus equivalence classes: Operant processes as components in human category formation. Journal of the Experimental Analysis of Behavior, 70, 267–279.

Masia, C. L., & Chase, P. N. (1997). Vicarious learning revisited: A contemporary behavior analytic interpretation. Journal of Behavior Therapy & Experimental Psychiatry, 28, 41–51.

McIlvane, W. J., & Dube, W. V. (1990). Do stimulus classes exist before they are tested? The Analysis of Verbal Behavior, 8, 13–17.

Mikulincer, M., & Nachshon, O. (1991). Attachment styles and patterns of self-disclosure. Journal of Personality and Social Psychology, 6, 321–331.

Morse, W. H., & Skinner, B. F. (1958). Some factors involved in the stimulus control of operant behavior. Journal of the Experimental Analysis of Behavior, 1, 103–107.

Prager, K. (1995). The psychology of intimacy. New York: Guilford Press.

Reis, H. T., & Shaver, P. (1988). Intimacy as interpersonal process. In S. Duck (Ed.), Handbook of personal relationships: Theory, relationships, and intervention (pp. 367–389). Chichester, UK: Wiley.

Skinner, B. F. (1953). Science and human behavior. Toronto: MacMillan.

Skinner, B. F. (1957). Verbal behavior. Englewood Cliffs, NJ: Prentice Hall.

Skinner, B. F. (1974). About behaviorism. New York: Vintage.

Sternberg, R. J. (1988). Triangulating love. In R. J. Sternberg & M. L. Barnes (Eds.), The psychology of love (pp. 119–138). New Haven, CT: Yale University Press.

Wittgenstein, L. (1953). Philosophical investigations. New York: Macmillan.