Bowlby's Secure Base Theory and the Social/ Personality Psychology of Attachment Styles: Work(s) in Progress

A Commentary on Shaver & Mikulincer's *Attachment-related Psychodynamics*

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John Bowlby's goal in developing modern attachment theory was to preserve what he considered some of Freud's most valuable insights about human development and close relationships. First among these were insights into the importance of early experience and the notion that infant-mother and adult-adult relationships are similar in kind. Focussing on prospective and observational methods, Bowlby replaced Freud's drive reduction model of relationship motivation with one that emphasized the role relationships play in support of exploration and competence. He also introduced concepts from control systems theory to highlight and account for the complex monitoring of internal states, relationship experience, and context that shapes proximity seeking, communication across a distance, and exploration away from attachment figures. And where Freud had explained the effects of early experience in terms of psychodynamic structures, Bowlby introduced the concept of mental models. These cognitive constructs are thought to reflect ordinary experience as well as trauma, to tend toward stability, and to remain open to new information.

Over 30 years of developmental research and important innovations in child, adult, and marital therapy attest to the value of Bowlby's insights. Yet, in many respects, attachment theory remains work in progress. We have described it as a theory of infant and adult relationships and a great deal in between that is left to the imagination (Waters et al., 1991). And even so, the theory is much more completely articulated for infancy than for adulthood.

In addition to his interest in attachment-specific processes, Bowlby sought to preserve psychodynamic insights into defensive processes by translating them into the language of modern cognitive psychology. Although these are not attachment-specific processes, they are certainly in play in close relationships and Bowlby felt they were important to basic theory and clinical applications. But because the cognitive psychology of Bowlby's day was not yet up to the task, this too remained a work in progress (John Bowlby, personal communication, August, 1977).

Although social and personality psychologists have a long-standing interest in close relationships (e.g. Duck et al., 1988), their interest in attachment theory is relatively recent. Nonetheless, in a short time they have generated enthusiasm that can only help expand and preserve Bowlby's legacy. In addition, they are introducing methods and perspectives

that enrich attachment research. Social and personality psychologists are challenging us to fill in postulates of adult attachment theory and detail their links to specific research hypotheses. This will hasten completion of Bowlby's plan for an integrated and integrative theory of human attachment across the life span.

The Virtues Of Experimental Analysis

Phil Shaver and Mario Mikulincer have written an interesting and useful summary of their recent work on adult attachment representations. First, they emphasize and illustrate the value of experimental analysis in attachment study. Developmental psychologists, of course, have a long tradition of innovative and highly successful experimental research on topics ranging from perception and cognition to personality and social behavior. The methodology is not unfamiliar. Indeed, the Strange Situation originated as a within subjects design for examining normative effects of context on secure base behavior. Nonetheless, experimental analysis has been under-utilized in developmental attachment research. In part, this reflects Bowlby and Ainsworth's emphasis on ethological observational methods. It also reflects the limits to infants' ability to participate in experimenter designed protocols. It may also be relevant that early critics of attachment theory were behaviorists and social learning theorists strongly disposed to operational definitions and highly critical of the entire individual differences paradigm. Attachment researchers found their perspectives on behavior and early relationships simplistic and their attitudes toward individual differences and early experience dogmatic. Not surprisingly (perhaps especially to a behaviorist) they developed something of an aversion to things experimental.

This was unfortunate because nothing in the experimental method requires simplistic operational definitions of independent and dependent variables. Nor is experimental analysis incompatible with interest individual differences or early experience. Indeed, as Cronbach (1957) long ago pointed out,

> "The well-known virtue of the experimental method is that it brings situational variables under tight control . . . . The correlation method, for its part, can study what man has not learned to control or can never hope to control . . . . A true federation of the disciplines is required.

> Kept independent, they can give only wrong answers or no answers at all regarding certain important problems. "

Shaver and Mikulincer's work illustrates this point very well. Hopefully their example will help developmentalists with aversions to experimental analysis overcome this unfortunate effect of early experience.

Empirical Analysis Of Attachment

Representations

Shaver and Mikulincer also make an important contribution by emphasizing that attachment representations can be accessible to empirical analysis. Bowlby realized that it was not enough merely to provide better verbal definitions of psychoanalytic insights about relationships and early experience. They would remain in the mainstream of scientific study only if they could be made empirically accessible. One of Mary Ainsworth's greatest strengths was her ability to capture the subtleties of dyadic interaction in well defined observational measures that took into account both content and context.

It was also critical to Bowlby's strategy that mental representations of early secure base experience be made accessible to empirical analysis. Unfortunately, there have been very few attempts to define and decide between alternative architectures for attachment representations. Are they literally models? (There are many varieties.) Could they be instead temporal-causal scripts? Merely lists of expectations? What are the implications for their accessibility to awareness or their impact on behavior?

Lacking clear definition, it is difficult to formulate empirical tests that would strongly support or disconfirm specific ideas about the concept. Instead, as Robert Hinde (1988) noted soon after the working models construct became current in the attachment literature,

> "It is difficult to avoid the conclusion that properties are added to the working model (concept) as new phenomena require explanation, and that at least some of the new properties are isomorphic with the phenomena they are purported to explain (p. 379)"

The methods Shaver and Mikulincer have introduced from cognitive psychology and social cognition research, perhaps especially the priming meth-

odology, can be helpful here. They clearly reduce problems of response bias and experimenter effects that plague self report and behavioral experimentation. They hold out the promise of clarifying and perhaps saving this important construct. They may also afford access to information that is beyond the reach of traditional observational methods.

Emotion Regulation In Adult Relationships

Shaver's & Mikulincer's emphasis on emotion regulation is also timely and important. Bowlby recognized that emotion plays an important organizing role in secure base relationships. In addition, he emphasized the role of cognitive activity in regulating attachment-related affective states. Nonetheless, developmentalists have provided relatively little research linking attachment security to emotion regulation or to defensive processes (see Lay et al., 1995 for one example).

Social and personality psychologists have a long tradition of experimental research on stress, cognition, and emotion regulation (e.g., Lazarus, 1991). This experience and skill can make important contributions to attachment research. It offers the prospect important descriptive insights into the vicissitudes of affect in close relationships. It also brings to the fore a variety of issues about links between cognition and emotion regulation that are not salient in infant research. In doing so, it can provide empirical guidance for the development of a more complete theory of adult attachment.

COMMENTS

Weigh Not The Tools But The Harvest

Shaver and Mikulincer pointedly contrast the sophistication of social psychologist's methods with what they see as a lack of rigor in developmental and clinical research. In our view, it is not necessary (or useful) to deplore traditional methods in order to justify or enjoy the benefits of new ones. All that is necessary is to show that the new methods expand our ability to formulate and test specific hypotheses that lie at the core of attachment theory.

John Bowlby's use of observational and prospective methods was widely applauded as sophisticated and an important methodological innovation. In addition, his emphasis on the organization of behavior in secure base behavior is central to his theory. Indeed, one of his sharpest disagreements with psychoanalysts arose from his highlighting the im-

portance of real experience, as opposed to intrapsychic events, in early relationships. Within this framework, mental representations are primarily important as inputs to the systems that organize and regulate secure base related behavior, expectations, and emotions. The theory is about people's relationships, not merely their belief systems.

As mentioned above, a better sense of the architecture of attachment representations could clarify many important issues in attachment theory. Hopefully, methods adapted from cognitive psychology (e.g., semantic and affective priming) will prove useful [2]. However, we can't agree that such methods are inherently more "sophisticated" than traditional ethological methods or that adopting them guarantees success. Indeed, they are not so much sophisticated as they are objective and tied to technology. Objective measurement has advantages and limitations. The history of the behaviorist tradition amply illustrates the limitations of objective measurement at the expense of understanding behavior. Moreover, moves toward ever more mechanized measurement have often been decried as symptomatic of psychology's "physics envy", its desire to be taken seriously as a science. Bowlby would have had none of this.

Sophistication in attachment research depends not on the technology of measurement but on the tie between theory, hypotheses, research design, and appropriate measurement. In our view, sophistication lies in research that can strongly challenge or lend support to specific postulates of attachment theory and can preclude alternative interpretations; not in particular modes of measurement. Not every study using the Strange Situation, the Attachment Q-set, the AAI, or the many self report measures is, in this sense, equally sophisticated. Inevitably, the same will prove true of research using priming, reaction times, and other methods adopted from social, personality, and cognitive psychology.

Shaver and Mikulincer also emphasize that social psychologists bring with them all the sophistication of the experimental method. They imply that this, and the rigor of social psychologists' measurement methods, addresses or reduces concerns about discriminant validity (employing measures or procedures to rule out alternative interpretations). Indeed, true experiments with random assignment to experimental treatments are easier to interpret than correlational designs. But the possibility of alterna-

tive interpretations exists even in experiments, as the frequent use of covariates and multiple study reports in every sciences attests.

The interpretation of experimental attachment research is complicated by the fact that subjects cannot be randomly assigned to specific attachment patterns or styles. Attachment status is a distinction they bring with them to the study and even the best planned designs are at best a quasi-experiments (Cook & Campbell, 1979). Whether analyzed using correlations or ANOVA, studies of attachment patterns and styles are inherently correlational. A t-test or an ANOVA contrasting secure and insecure subjects is in every respect merely a correlation between attachment status and the dependent variables, with all the attendant concerns about alternative interpretations and discriminant validity.

We can't assume that independent or dependent variables can bear whatever interpretation we like just because they are more or less objectively scored or cast into a particular type of data analysis. And casting research into the format of group comparisons rather than correlations does not reduce problems related to discriminant validity. Fortunately, many of these difficulties can be informatively and economically addressed by adding relevant discriminant validity measures and conditions to research designs. As Shaver and Mikulincer point out, discriminant validity has not gone unattended in research on adult attachment. But in our view, the attention has often been inconsistent and not focused enough to pose serious challenges to favored interpretations. Just as we don't want to prematurely narrow the definition of attachment constructs, we don't want them wandering into conceptual space better (or already) covered by other constructs.

Discriminant validity in attachment research would be a much easier to deal with if we could always say, "This measure should correlate with X, or Y, or Z exactly zero", or "To be valid this measure should correlate 1.0 with such and such criterion". Unfortunately, this is rarely the case. Most often, the reality is, "This measure can (perhaps should) correlate with X, or Y, or Z more than zero, but *not too much*." For example, a measure of attachment security should perhaps correlate more than zero with marital satisfaction or trait anxiety, but surely not right up to the limits of their reliability. Heavy-handedly partialing out marital satisfaction or trait

anxiety during test construction or casually entering them as covariates in every data analysis would likely remove valid variance and reduce important effects. (Presumably, this is what Shaver and Mikulincer refer to as the problem of "prematurely restricting" the interpretation of attachment constructs.) But not regularly and thoughtfully including them in assessment protocols is equally a problem. Ultimately, neither research designs, particular modes of assessment, nor specific postulates of attachment theory can specify how much would be too much. There are no technical solutions to the problem of discriminant validity. It is a matter of theory and data interacting through the course of programmatic research and researchers not overly cathecting particular methods, results, or interpretations.

The Logic Of Bowlby's Theory

As mentioned above, one of Bowlby's primary goals in developing modern attachment theory was to preserve important psychoanalytic insights about the importance of early experience. The logic of his analysis has important implications for how developmentalists study attachment.

Very early on, Bowlby recognized that Freud's grand theory was vulnerable to criticism. It was based too much on the case study method and its key concepts were largely inaccessible to empirical analysis. Bowlby also recognized that change in science is often revolutionary rather than evolutionary. That is, there was considerable likelihood that Freud's theory and insights would be rejected wholesale rather than selectively revised. One of his most important insights was that some of Freud's key ideas about the importance of early experience are logically independent of psychoanalytic drive theory. Accordingly, they could be preserved if he could develop an alternative theory of motivation.

To accomplish this, Bowlby proposed a radical reconceptualization of the nature of the child's tie to its mother. Freud saw infants as needy, clingy, and dependent, seeking mother as a source of drive reduction. In contrast, Bowlby saw infants as competent, curious, and fully engaged with the environment. To explain the stimulus seeking and apparently purposefulness of the infant's behavior, which Ainsworth later described as the secure base phenomenon, Bowlby turned to control systems theory. And to explain the existence of a secure base con-

trol system, he cited evidence that evolution can endow a species with biases in learning abilities. In turn, these biases interact with organization in the caregiving and physical environment to establish neural control system that monitor a wide range of internal and external information and organize behavior into apparently purposeful patterns.

This secure base control system provided both infants and adults with the capacity to use one or a few primary figures as a secure base from which to explore and, as necessary, as a haven of safety in retreat. With the emergence of representational skills, every individual constructs mental representations of their own secure base experience. Such representations conserve the lessons of past experience and yet remain open to revision in light of significant new experience.[1]

Freud hypothesized that infant-mother and adult-adult relationships are similar in kind (both are based on drive reduction) and that early experiences establish a prototype which shapes later relationships. Within the framework of Bowlby's secure base theory, both infant-caregiver and adult-adult bonds are viewed instead as secure base relationships organized over context and time by an attachment behavior control system. Because early experience can influence beliefs and expectations that are important components of this control system, they can have important effects on later relationships.

Within this framework, the key constructs and insights of Bowlby's attachment theory are inextricably tied to a developmental analysis. For Shaver and Mikulincer, this developmental orientation is not essential. It may be possible to formulate separate theories of attachment in infancy and adulthood. Indeed the data may demand it. But it would not be the theory Bowlby envisioned. For attachment theorists, researchers, and therapists, this would be a genuine paradigm shift. What would be the key insights, constructs, and postulates of such a theory? In what theoretical framework would they be grounded, if not in the logic of secure base theory outlined above?

Of course, the options are not simply to accept or reject the secure base concept and prototype hypotheses as cornerstones of adult attachment theory. They should remain open also to redefinition and improvement (Lakatos, 1970; Mayo, 1996; Meehl, 1959/1973, pp. 98-99). Both theoretical and em-

pirical work is needed to determine whether they convey genuine insights and, if so, how best to frame them. The best formulation will certainly differ from Freud's drive reduction theory and may well differ from Bowlby's reading of classical ethology and control systems theory. But we should begin with the logic Bowlby developed and be explicit about revisions and elaborations of new insights and postulates.

It is not enough to comb Bowlby's (or any other attachment theorist's) writings for intriguing comments about adult attachment. What is needed is a tightly argued theoretical formulation and justification similar to the one Bowlby provided in his discussion of infant-mother attachment. In addition to ideas tightly integrated into his secure base theory, Bowlby certainly expressed many ideas based on his clinical experience, psychoanalysis, and, yes, common sense. The same can be said of other attachment theorists.

The fact that Bowlby believed something does not make it properly part of his attachment theory. It seems very likely to us that the logic of Bowlby's theory needs to be substantially elaborated to cover adult relationships as well as it does infancy. This will require an interaction between theory and data and will not happen over night. If a carefully argued life span perspective is possible, it will be a great aid to research and applications. If best efforts suggest a paradigm change, so be it. Given the turmoil Bowlby created among psychoanalysts, he could hardly object.

Two Cultures of Attachment Assessment

We once suggested that "both the Strange Situation and the Adult Attachment Interview could dry up and blow away without great repercussions for the validity of Bowlby-Ainsworth attachment theory. We would simply find other methods. But demonstrating that secure base behavior is not characteristic of human's closest infant and adult relationships would end the whole enterprise. Bowlby would be wrong. We would need a new theory" (Waters, 1997). The same could be said of any attachment measure. Attachment theory is a perspective on the secure base functions of close relationships. It shouldn't be built too much around the operating characteristics of specific measures.

Nonetheless, we need a common language for discussing theory and research that draw on differ-

ent assessment traditions. As Shaver and Mikulincer point out, developmental/clinical and social/personality psychologists have established two rather distinct cultures of adult attachment assessment. Although both frame theory and research in terms of Bowlby's attachment theory, they describe individual differences differently, ask somewhat different questions, and publish in different journals. Inevitably, there will be misunderstandings across cultures. Such misunderstandings can tem-

porarily impede progress. In most cases, these are easily resolved.

One such misunderstanding is the impression, expressed in Shaver and Mikulincer's paper but perhaps shared by other social psychologists, that researchers who use the Adult Attachment Interview (AAI) are of one mind about the mechanisms in play and the kinds of interpretations to be placed on adult attachment classifications. Specifically, they suggest that most of the intuitions here are rooted in

Table 1: Attachment Patterns (AAI) and Attachment Styles (ECR):
Correlates in Secure Base and Self Report Data

Secure Base Related Variables	Method	AAI Interview	Experiences in Close Relationships Self-Report Questionnaire		
		Coherence	Avoidance	Anxiety	Security[1]
AAI Coherence (n=71)[2]	Interview	--	-.08	.01	-.04
CRI Coherence (n=71)[2]	Interview	.45***	-.14	-.25*	.20
Attachment Security in Infancy (n=50)[3]	Lab. Obs.	.45***[7]	-.02	.06	.03
Using Secure Base Support (n=48)[4]	Lab. Obs.	.46***	-.02	-.07	.02
Providing Secure Base Support (n=48)[4]	Lab. Obs.	.45***	-.08	-.21	.15
Knowledge of Secure Base Script (n=54)[5]	Narrative production	.58***	-.14	-.25+	.27+
Maternal SB Sup (n=60)[6]	Naturalistic. Obs	.54***	.02	.08	-.06
Relationship Relevant Self-Report (n=71)[2]					
Marital Satisfaction (DAS)	Self report	.28*	-.56***	-.62***	.67***
Marital Discord	Self report	.12	.43***	.54***	-.47***
Sternberg Passion	Self report	-.06	-.62***	-.38***	.55***
Sternberg Intimacy	Self report	.24*	-.66***	-.63***	.70***
Sternberg Commitment	Self report	.12	-.67***	-.39***	.58***
Beck Depression	Self report	-.17	.32***	.36***	-.36**

* = p<.05   **= p<.01   ***=p<.001

1 Continuous score on security vs. insecurity is based on discriminant function weights developed for this analysis by Kelly Brennan. The data set is the same as used to develop the Avoidance and Anxiety scales. The analysis developed weights to optimally distinguish subjects scoring secure on both Avoidance and Anxiety scales from those scoring insecure on either or both scales. The resulting weights provide a method of scoring the Experiences in Close Relationships questionnaire that parallels the Coherence score and the Secure vs. Insecure distinction on the AAI.

2. Computed for this comment from data collected during the Stony Brook Couples Project, a longitudinal study of adult attachment representations from engagement into the fifth year of marriage. Subjects included in the analysis were lower to upper middle class adult women in their fifth year of marriage.

3. Subjects were observed in the Ainsworth Strange Situation at age one year and then assessed using the AAI at age 21 years (Waters et al., 2000) and the Experiences in Close Relationships scales at 22 years of age (J. Steele. Unpublished data, Dept. Psychology SUNY, Stony Brook, NY 11794-2500).

4. Computed for this comment from data collected during the Stony Brook Couples Project, a longitudinal study of adult attachment representations from engagement into the fifth year of marriage. Subjects included in the analysis were lower to upper middle class adult women in their fifth year of marriage.

5. Data from H. Waters & L. Rodrigues-Doolabh (2001). Paper presented at the meeting of the Society for Research in Child Development. Minneapolis. April.

6. Data from Elliott, Waters, & Gao (2001). Paper presented at the meeting of the Society for Research in Child Development. Minneapolis. April.

7. Bi-serial correlation between subject's own Strange Situation (secure vs. insecure) at age one year and AAI (secure vs. insecure) at 21 years; sample includes men.

psychodynamic theory and that preference for the AAI reflects a prejudice against self report measures - a belief that they cannot access psychodynamic processes.

In fact there is considerable diversity among those who use the AAI. This ranges from the point of view just described, to agnosticism as to exactly why the AAI has the correlates it does. There are also cognitively oriented theorists who view the AAI as a window onto script-like structures that serve as retrieval cues and organizing frameworks for transcript coherence. These researchers pay little attention to psychodynamics, individual AAI scales, individual differences within secure and insecure groups.

We have consistently included a wide range of attachment style measures and other relationship-relevant self reports in our assessment protocols. We do so in order to help researchers from other traditions locate our results in familiar measurement space. When attachment style measures first appeared, we were open to the possibility of replacing the AAI which, for all it interesting correlates, is a very difficult and expensive instrument. But we found few correlations between the AAI and self report attachment style measures and none substantial enough to suggest that the measures were interchangeable or even parallel.[3] Moreover, as illustrated in Table 1, the AAI and attachment style measures produced very different patterns of correlates.[4]

In brief, AAI security vs. insecurity and transcript coherence were consistently correlated with secure base related measures obtained from interviews, laboratory and naturalistic observations, and structured narrative production tasks scored for use of a secure base script. These included (1) security and coherence on our Current Relationship Inventory, an AAI-like interview focussing on one's primary adult partner rather than parents, (2) one's own attachment security in the Strange Situation 20 years earlier, (3) ability to serve and to use one's spouse as a secure base during videotaped discussions of issues in the marriage, (4) knowledge of and access to script-like representations of secure base relationships, assessed in a prompt-word narrative production task, and (5) mother's ability to serve as a secure base for their preschool-aged children as the played and roamed through a large (approx. 100 m. x 120 m.) indoor playground.

There were few significant correlations of AAI security or coherence with self-report measures.

In contrast, the correlates of Anxiety, Avoidance, and Security scored from the self report Experiences in Close Relationships scale were almost entirely with other self report measures[5,6] In several instances, they approached the limits imposed by the reliabilities of the scales. Such results do not support conclusions that one measure is better than another. Instead, they indicate that the AAI and self report measures behave very differently and that the differences should be carefully reflected in theoretical discussions and research reports. Recognizing differences between the AAI and self report attachment style measures does not preclude their helping evaluate and extend the logic of Bowlby's secure base attachment theory. But the work should focus on detailing the theory and keeping it accessible to empirical analysis. Shaver and Mikulincer's suggestion that, despite behaving very differently, the AAI and attachment style scales measure <u>psychodynamically</u> <u>similar</u> constructs does not provide much guidance for theory building or empirical analysis.

Our continued use of the AAI is based entirely on the kind of results illustrated in Table 1 and on the central role that the secure base construct plays in our work. Even within our laboratory we are not of one mind about psychodynamics and assessment and we are generally positively disposed toward traditional psychometric methods.

In the short run, greater recognition of the perspectives and the diversity of opinion within the AAI and attachment style traditions should foster productive interactions across traditions. In the long run, the existence of two cultures within adult attachment study shouldn't be a great problem. Presumably the most coherent elements from each will become clear and either converge or take different trajectories. This should be expected whenever there is fair access to journals and an active marketplace for ideas.

Is Attachment Status Or Style A Trait?

Experience in a close relationship can shape beliefs and expectations about a particular partner and also about partners in general. Both relationship specific and generalized beliefs and expectations are central to Bowlby's attachment theory. Unfortunately, attachment theorists rarely maintain this

distinction in discussing their work and lapse easily into broad trait-like characterizations of subjects as secure, anxious/preoccupied, or dismissing/ avoidant. Secure subjects are often described as having greater skills, more coherent or more accessible memories, etc. But neither the AAI nor self-report measures clearly distinguishes between relationship specific security and more generalized beliefs. It would be very useful for attachment measures to better distinguish partner-specific and generalized beliefs and expectations.

The use of trait language to describe and discuss particular attachment patterns or styles is also complicated by the fact that many (most?) adolescents and adults maintain a number of close relationships that serve secure base functions in different contexts. Moreover, people are very often secure with some important figures in their lives and less so with others. They also change attachment status or style over time (Davila, Karney, & Bradbury, 1999; Treboux, Crowell, & Waters, 2002). How do we reconcile the description of individuals as more coherent or having better memories for attachment related events with the fact that they have diverse and changing beliefs and expectations about partners in current and future relationships? Do their skills and memories of childhood wax and wane with their scores on attachment assessments? Or are the effects due to a subset of the subjects? If so, which subjects and what are the implications for interpreting research results? Can we design experimental conditions that differentially assess relationship specific and generalized attachment beliefs and expectations? The distinction (and links) between relationship specific and generalized attachment representations need to be carefully maintained in ordinary discourse within and across laboratories and addressed with greater care in both theory and research.

Traits are summaries not causes. In this context, it is worth mentioning one of the most common pitfalls in trait psychology, the tendency to confuse summaries with causes. Simply put, traits are summaries of regularities in someone's behavior. Yet psychologists often notice such regularities, assign at a trait label, and then use the label to explain the behavior it summarized (Wiggins, 1997). Clearly, making up a label provides no new information thus no explanatory power.

We should avoid administering items such as "I need to be close to my partner", inferring from a subject's self observations that (s)he is "anxiously attached", and then suggesting that this explains the need to be close to partners. The need to be close (self reported from self observation) is why we labeled the person high on anxiety in the first place. It can't explain behavior from the domain that the person observed in making the self description. They are one in the same.

Regularities in behavior (including coherences among responses on self report measures) are not as common as we imagine. When we find them, they should delight us and peak our interest. But they are not explanations. They are new phenomena which themselves require explanation. Why do the items on attachment self report measures cohere as they do? Plausible explanations for the internal consistency of such items range from early experience, social learning, temperament, general adjustment, non-specific structure of the semantic space, and social desirability. Careless use of the language and logic of trait attributions was a major source of the trait-situation controversy that paralyzed and discredited the individual differences paradigm during the 1970's. Unfortunately, casual use of trait language is common in theory and research with both the AAI and attachment self report measures. Good stewardship of Bowlby's and Ainsworth's legacy requires that we acknowledge a lesson learned.

Attachment and Affect Regulation

In Freud's view, the function of close relationships was drive reduction. Bowlby explicitly rejected this perspective. As noted above, Freud saw infants as needy, clingy, and dependent, seeking the mother as a source of drive reduction. In contrast, Bowlby saw them as competent and fully engaged with the environment. Within this perspective, proximity and contact with the mother play several roles.

Most often, access to the mother underpins a sense of security that allows the infant to engage and tolerate stimulation in the environment. When the infant is frightened or overwhelmed, the mother serves as a haven of safety; not to reduce arousal to zero but to bring it within a range consistent with further exploration and play.

But attachment is not solely or even primarily an emergency system. Confidence in the caregiver's (or partner's) availability and responsiveness also play an important role in the ability to explore without becoming anxious or distressed (Waters et al.,

1991). This is what Bowlby meant when he referred to attachment's influence on appraisal processes.

This perspective puts cognition before emotion in a wide range of secure base contexts. Attachment status and style do not regulate emotion. What would be the mechanism? Instead, they are shorthand for sets of attachment-related beliefs and expectations that can be confirmed or violated, or become associated with emotion laden experiences. Although Shaver and Mikulincer's research on attachment and emotion regulation focuses on attachment styles, the methods and designs could easily and productively be adapted to study links between specific attachment-related beliefs or expectations and emotion.

Bowlby made a number of interesting observations about affect regulation in close relationships, and about the role of cognitive/defensive processes in regulating negative affect. Nonetheless, his analysis of secure base relationships does not include a detailed theory of emotion regulation. Indeed, it is not clear that it should. Many of the stress and coping process observable in close relationships are merely examples of general processes also in play in other social and non-social contexts. Clearly, there is a difference between an attachment theory that explains emotion regulation and a general theory of emotion regulation applied to the close relationships context.

The mechanisms in play in Shaver and Mikulincer's models and studies of attachment and emotion regulation seem similarly relevant to stress and coping outside the attachment domain. It is very important for attachment theorists to decide whether it is more useful to think of attachment as a mechanism of emotion regulation or as one of the contexts in which more general emotion regulation processes operate.

CONCLUSION

Social and personality psychologists have a great deal to offer to attachment theory and research. They offer a long history of relationship study, new methods, and new theoretical perspectives. Their interest challenges developmentalists working within the secure base framework to be more explicit about what we consider the key postulates of attachment theory. John Bowlby and Mary Ainsworth left a valuable legacies for all psychologists interested in close relationships. Good stewardship entails opening channels of communications across disciplines, identifying and preserving Bowlby's and Ainsworth's best insights, and feeling free to revise and explore out from this

valuable work in progress.

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FOOTNOTES

1. Priming methods clearly access information and expectations that are inaccessible to awareness and verbal report. Such material, sometimes referred to as the cognitive unconscious, is though to be inaccessible because it is acquired associatively and lacks distinct retrieval cues. This has been referred to as the cognitive unconscious. Many theorists consider this distinct from a psychodynamic unconscious in which material is held inaccessible by repression (e.g., Epstein, 1994; Kihlstrom, 1990; Shevrin, 1992).

2. Note that nothing here places patterns of individual differences (attachment classifications or attachment styles) at the core of Bowlby's theory. Indeed, it is difficult to think of an empirical finding regarding such patterns (especially regarding patterns of insecure attachment) that could substantially challenge any of the key postulates of secure base theory. Given the central role attachment patterns and styles play in attachment research, this may seem surprising. But it is entirely consistent with the fact that Bowlby had developed the logic of his entire three volume treatment of attachment theory before the concept of attachment patterns was introduced (John Bowlby, personal communication, August, 1977). Whether such individual differences among secure and insecure infants and adults are best construed as rela-

tionship specific attachment related processes or as reflections of more coping styles is an interesting and important question.

3. Shaver and Mikulincer point to data substantial multiple correlations between sets of self report items and AAI status and between the AAI scales and self report scale scores. From our point of view, it is most interesting to correlate the AAI coherence score (or the secure vs. insecure classification) with total scores on the self-report scales. Many of the AAI scales are not correlated with the secure vs. insecure distinction and individual test items are often only modestly correlated with total scores (Waters, Treboux, Fyffe, & Crowell, 2002). In addition, multiple analyses using individual AAI scales and individual self report items open up the possibility of finding significant results by chance. Such analyses also tend to yield multiple correlations that capitalize on sample specific variance and shrink considerably on cross-validation.

4. The data reported here were compiled for this comment from raw data and from the sources identified in the footnotes. The table is presented only to illustrate trends in our experience with the AAI and attachment style measures. The use of results in this table is not intended to preclude publication elsewhere of specific results with complete descriptions of the methodology and discussion.

5. Our thanks to Kelly Brennan who developed discriminant weights contrasting Secure vs. other subjects from ECR data of over 1000 subjects. This analysis was performed only for the purposes comparing AAI secure vs. insecure classifications with a comparable dimension from the attachment styles questionnaire.

6. Two studies, Simpson, Rholes, & Nelligan (1992) and Fraley & Shaver (1998) have shown significant correlations between self-report measures of attachment style and attachment behavior in naturalistic or semi-naturalistic settings. This is a useful line of research. It is particularly useful that Simpson et al are undertaking to include both the AAI and the attachment styles measure

in a replication of their study. We note however that both studies examine separation-related behavior (prior to participating in a threatening experiment and in an airport departure lounge). One of the important findings of developmental research has been that attachment security across time and contexts is related not to separation responses but to behavior during reunions. The relevance of this observation in adult research deserves attention. In addition, it is worth noting that dependency (typically uncorrelated with security in developmental research), trait anxiety, and perhaps other variables might predict results parallel to those in these studies. As mentioned above, the issue of how much discriminant validity is enough is a difficult one. Nonetheless this issue too deserves attention in such research.