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Attachment in the later years:
A commentary

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We are grateful to Carol Magai and Nathan Consedine for inviting us to comment on the innovative articles in this special issue of *Attachment & Human Development*, which deals with attachment in late life. Attachment theory has gradually been extended from its original focus on affectional bonds between infants and their parental caregivers (e.g., Ainsworth, Blehar, Waters, & Wall, 1978; Bowlby, 1969/ 1982) to adult romantic and marital relationships (e.g., Hazan & Shaver, 1987; Mikulincer & Shaver, 2003; Rholes & Simpson, 2004) and now to older adults' close, sustaining relationships. The new focus falls within the intended scope of the theory; both Bowlby (1969/1982) and Ainsworth (1991) wrote theoretically about attachment across the lifespan. Until recently, however, there were few empirical studies of attachment in the later years, a phase of life that raises interesting questions about the reversal of roles between older adults and their grown-up offspring, the gradual reduction in number of relationship partners as a person ages, and the possible shift of caregiving functions from human relationship partners to God, other religious figures, and internalized images of lost partners (e.g., deceased parents, siblings, and spouses). These engaging topics are addressed in this special issue.

Our assignment is to react to the articles while staying within a limited number of pages. We begin by describing the topics addressed by each of the articles, highlighting their novel contributions, and discussing the implications of their findings for attachment theory and research. We then attempt to identify some of the problems and challenges of studying attachment processes in late life, which we hope can be addressed in future research.

THE STUDY OF ATTACHMENT IN LATE LIFE:
TOPICS, CONTRIBUTIONS, AND IMPLICATIONS

The articles in this special issue address four important topics in the study of attachment in late life. The first, addressed by Antonucci, Akiyama, and Takahashi, is age-related changes in the number and identity of close relationship partners. Antonucci et al. adopted Kahn and Antonucci's (1980) convoy model and examined cross-cultural similarities and differences in the social networks of Japanese and American respondents aged 8 to 93. Their study is commendable because of its size, representative sampling, and innovative focus on older adults in two large societies. The authors document similar age-related changes in social network size and composition in Japan and the United States, with few gender differences in either

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country. The overall uniformity of the results suggests that important generalizations can be made about age-related changes in people's social networks, and to some extent about changes across the lifespan in what Bowlby (1969/1982) called a person's "hierarchy of attachment figures." The term "hierarchy" refers to a priority list, with some attachment figures being preferable to others when protection and support are needed, but with all of them being preferable to people who are not on the list at all.

We conclude from Antonucci et al.'s study that a typical person's hierarchy of attachment figures includes 10 or fewer individuals at all points in the lifespan, and that some figures remain on a person's list for years while others enter and leave the hierarchy depending on age, life stage, and normative life tasks. Data indicating that older adults' social networks shrink with age (e.g., Carstensen, 1992), a fact once thought to imply that an aging adult withdraws from the social world and declines physically and psychologically as death approaches, do not seem so ominous when we realize that a solid core of attachment figures is usually retained. Older adults may drop out of large, casual social networks, no longer have friends in a workplace, and become less involved in community groups, but this doesn't mean that their core attachment relationships evaporate or become unimportant – far from it.

It's interesting to learn that an older adult's attachment hierarchy often includes both a spouse (if the spouse is alive) and close relatives (e.g., siblings, children). This finding suggests that attachment figures are often part of a kinship network from birth to death, a discovery that fits well with evolutionary ("inclusive fitness") approaches to relationship psychology. Tancredy (2004) recently explored this idea in a study of sibling relationships and found that strong and lasting attachment is particularly likely between identical twins, who share 100% of their genes. Twins' reliance on their siblings as attachment figures actually increases as they get older, whereas non-twins typically exhibit decreased reliance on their non-twin siblings as they age. Even in modern industrialized societies, where considerable geographical and social mobility are possible, people still end up relying on close relatives for important attachment functions.

The second important topic addressed in this special issue is the possibility that adults, as they age, increasingly seek support and comfort from symbolic and religious figures (e.g., God, Jesus Christ). This topic is addressed by Cicirelli, who had already earned our considerable admiration for extending attachment research into late adulthood in investigations of the ways in which adult children often find themselves serving as attachment figures for their parents (see Cicirelli, 1993, 1995, for examples). In his article here, Cicirelli once again takes the lead by studying attachment to God in late life. He derives, from extensive face-to-face interviews, a score indicating what he calls "strength of attachment to God," and finds that women, African Americans, Christian fundamentalists, older adults with intense fear of death, those who have lost important attachment figures, and those who are younger within the 70–100 age range, tend to score high on this scale. Cicirelli's courage in tackling this intriguing topic is commendable and provides a good springboard for further research. His findings indicate that people of all ages, but especially older adults, can rely on symbolic figures to serve attachment functions. These results fit well with research and casual observations suggesting that some married adults who suffer the death of a spouse continue to experience the spouse's symbolic presence and consult mentally with the spouse about important life decisions (e.g., Klass, Silverman, & Nickman, 1996). Obviously, many people of all ages, in all cultures, experience themselves as interacting with gods, angels, saints, and

dead ancestors (e.g., Fraley & Shaver, 1999; Kirkpatrick, 1999). This is a matter worthy of deep psychological investigation.

We (Mikulincer & Shaver, 2004) have conducted experiments examining the symbolic "internalization" of attachment figures, with results supporting the theoretical prediction that these symbolic residues of attachment figures and relationships are an important part of people's social support systems. When using the WHOTO scale (Fraley & Davis, 1997; Hazan & Zeifman, 1994) in the United States and Israel (the two countries where we reside) to identify a person's attachment figures, it is not unusual to find God or Jesus high on people's lists. In some Asian societies, and perhaps even among older adults in Western societies, deceased relatives might also appear on the list. More research is needed on this pillar of psychological support systems, which may be especially important for older adults, assuming many of them have a relatively high ratio of symbolic and internalized to real (i.e., living, human) attachment figures.

A third important topic, addressed by two of the articles in this special issue (Magai, Consendine, Gillespie, O'Neam, & Vilker; Zhang & Labouvie-Vief), is the association between attachment and emotion regulation in late life. Magai et al. assessed alternative structural equation models linking younger and older adults' memories of their childhood socialization experiences (rewarding vs. punitive) with their current adult attachment style and emotion traits. They found significant associations among the three kinds of variables, and in particular found both direct effects of parental socialization practices on emotion traits and partial mediation of these effects by attachment style. They concluded that "attachment styles did not completely mediate the relation between internal working models of early emotion socialization and adult emotional traits" (p.405).

Magai et al.'s conclusions fit with the way most attachment researchers in the fields of personality and social psychology view the organization of attachment working models and the associations between attachment, emotion, and emotion regulation. (See Shaver & Mikulincer, 2002, 2004, for discussions of the two major research perspectives on adult attachment, one being clinical and developmental, the other being closely connected to research on personality and social processes.) The general or global attachment style assessed with simple self-report measures is not viewed as tapping the only working model of attachment possessed by a particular individual. Bowlby (1969/1982) theorized about multiple, even conflicting, attachment working models, and experimental social psychologists have shown empirically that people typically have multiple models of attachment applying to particular relationships or kinds of relationships (e.g., Baldwin et al., 1996). These different models, which can be contextually activated in experimental settings (as shown, for example, by Baldwin et al., 1996, and Mikulincer & Shaver, 2001), have different effects on momentary self-conceptions, defenses, and behaviors. Moreover, a person's global attachment style is viewed as reflecting all important interactions with attachment figures, including figures other than parents, such as very close friends, a spouse, or a therapist. Thus, an adult's global attachment style need not mirror or match his or her attachment orientation with one or both parents, either in the present or in early childhood.

For other reasons as well, attachment style is not likely to be the exclusive mediator of long-term emotional effects of early experiences with parents. Theoretically speaking, attachment style should act as a mediator mainly when the attachment system is activated by threats, at which times the issues of proximity and support become especially salient. In some of our own studies of the mediation by attachment

working models of the association between external stressors and internal cognitive and emotional responses (e.g., Mikulincer & Shaver, 2004), the mediation is statistically significant in stressful experimental conditions but not in emotionally neutral control conditions. One of our reasons for being interested in attachment theory is that it is not a static trait theory of personality, according to which a particular trait will always be manifested in a particular attitude or behavior. It is a dynamic, person-situation interaction theory, which predicts that attachment styles and working models will be manifested in measurable cognitions, emotions, and behaviors mainly when the attachment system is activated. At such times, evoked emotions are likely to be a complex function of the currently accessible working model and contextual cues concerning actual or imagined partner reactions to one's cries for help.

According to attachment theory, which we sometimes think should have been called ''behavioral systems theory,'' early experiences with parents affect not only the functioning and representational underpinnings of the attachment system, but also other important behavioral systems such as exploration, affiliation, caregiving, and sex. The operation of these behavioral systems may be affected by dispositional and situationally influenced attachment security (as we have shown in several studies; e.g., Gillath, Shaver, & Mikulincer, in press; Schachner & Shaver, 2004), but they may also be more powerfully influenced by parental reactions to other behavioral systems (e.g., rewarding a child for exploration or affiliation, encouraging a child to serve a sibling or friend as an empathic, supportive caregiver). Such experiences may affect the functioning of the various behavioral systems, which in turn can also mediate the effects of these experiences on adult emotionality.

It is also important to consider that basic emotions (such as anger and sadness) do not arise only within the context of attachment relationships. True, Bowlby discussed anger mainly in relation to the ''protest'' exhibited by infants when their attachment figures fail to respond to their needs, but he acknowledged that people become angry for many other reasons, and some of a person's ideas about when anger is appropriate and how it may be expressed come from situations (e.g., Little League baseball games) in which parents are not specifically acting in their roles as attachment figures. Thus, it would be surprising if attachment-related interactions with parents, even if these were perfectly reflected in an adult's attachment style (which we would not expect them to be), were the only kinds of interactions in which parents had an influence on their children's emotions or emotion ideologies.

Relations between attachment and emotion regulation were also addressed by Zhang and Labouvie-Vief, who examined covariation among adult attachment style, coping, and well-being over a six-year period. Their longitudinal study has a number of strengths. Most previous studies of connections between attachment style, coping, and well-being have looked at correlations between these variables at a single point in time. Zhang and Labouvie-Vief examined within-individual changes in these variables and correlations among them over time, which is useful in revealing some of the developmental processes involved. The authors also examined the moderation by age of changes in attachment style and associations between attachment style and other variables. This is noteworthy because there may be times in life when attachment style is especially malleable. Like infancy and adolescence, old age may be such a time when relationships and self-perceptions undergo transformation as a person loses close relationship partners to death and becomes increasingly aware of dependency and mortality.

Zhang and Labouvie-Vief's study provides important information about the stability of self-reported adult attachment style over time, the effects of age on attachment style, and the association between attachment style and emotion regulation. The findings reveal that, although an adult's attachment style is relatively stable over a 6-year period, there is also considerable fluidity. The study also shows that age is related to self-reported attachment style, with older adults being more secure and dismissing and less preoccupied than younger adults, and that attachment security is related to constructive coping strategies, lower levels of defensive coping, higher levels of self-reported well-being, and lower levels of depression. These findings fit with our own characterization of felt security as a resilience resource that helps a person maintain emotional equanimity without extensive use of defenses (Mikulincer & Shaver, 2003).

Zhang and Labouvie-Vief found the stability estimates for attachment-style measures to be lower than the stability estimates for the "big five" personality traits. They interpreted this difference as indicating that the big five traits are personality dispositions, perhaps rooted in genetic temperament, whereas attachment styles are "constructed out of relationship experiences" (p.430) and are "more contextually driven and subjective to dynamic change" (p.430). This conclusion highlights the dependence of attachment styles on relational and contextual factors, such as the attachment system's current activation level, current attachment figures' responses to cries for help, and the quality of one's relationship with a particular current attachment figure. Despite our tendency to agree, on theoretical grounds, with the authors' conclusions about the relatively greater malleability of attachment style (as compared with temperamentally rooted personality traits), we wonder whether the findings depend to some extent on Zhang and Labouvie-Vief's use of very brief and perhaps less than optimally reliable attachment measures. The relative stability of different constructs cannot be confidently determined unless the constructs being compared are measured equally well.

Zhang and Labouvie-Vief suggest that "in later life, older people who experience declines in resources may deal with losses of attachment relationships (such as losses of spouses and close friends) and declined self-capacity by defensively placing more emphasis on independence and self-reliance and less emphasis on interdependence" (p.432). This is how the authors deal with what they believe is a move in old age toward dismissing attachment. They may be right, but these speculations do not explain why there is also an increase with age in secure attachment, which does not necessarily entail "less emphasis on interdependence." We suspect that the best explanation of the findings is an age-related decline in attachment anxiety, which results in higher scores on both the secure and dismissing rating scales. Whether this causes a person to seem more secure or more dismissing depends on the person's score on the avoidance dimension (of the two-dimensional, anxiety-by-avoidance space used in our research).

In this context, it is useful to consider Cicirelli's discussion of the possibility that self-report measures developed to assess attachment styles in the context of romantic relationships are inappropriately worded for older adults, some of whom may choose the "dismissing" alternative to indicate their withdrawal from the domain of romance, the irrelevance to them of romance-related anxiety, and so on. Whenever measures of attachment developed for studies of romantic relationships are adapted for use in other relationship domains, it is important to consider how well the original language applies to the new domains.

A fourth important issue addressed in this special issue is the reversal of roles between older adults and their grown-up offspring. Steele, Phibbs, and Woods conducted an innovative study in which they assessed associations between adult daughters' Adult Attachment Interview (AAI) scores and the behavior of their mentally impaired mothers, who were suffering various degrees of dementia, during a reunion episode following a 45-to-60-minute separation. As the authors explain, this procedure is somewhat like Ainsworth's strange situation procedure for assessing the attachment patterns of 12-to-18-month-old infants, a situation that involves two scripted 3-minute separations followed by reunions between caregiver and infant. Steele et al. found that joyful and ''secure'' behaviors on the part of the older adult mothers, including proximity seeking, contact maintaining, and overall responsiveness, were positively associated with their adult daughters' coherence of mind and coherence of transcript ratings based on the AAI, even after controlling for severity of the mothers' dementia. The study is the first to assess attachment-related variables in this kind of interaction between older adult mothers and their middle-aged daughters using the AAI rather than self-report questionnaires, and the first to code actual reunion behavior in ways that parallel the codes used in Ainsworth's strange situation procedure.

The idea of using a reunion situation to study attachment behavior is laudable, because it follows Bowlby's reasoning that attachment-related processes should be particularly evident during episodes of separation from and reunion with an attachment figure. This idea is especially applicable when a person is undergoing stress and wishes to be near a protective attachment figure. In the situation studied by Steele et al., it seems likely that the older adult mothers were somewhat unnerved by interacting with a stranger while being separated from their daughter. Moreover, since both mother and daughter spent the time discussing family social relations, attachment issues might have been salient for reasons beyond those related to the separation per se.

The same kinds of ideas have been successfully tested in studies of dating and married couples (e.g., Carpenter & Kirkpatrick, 1996; Medway et al., 1995). For example, Medway et al. (1995) used intensive interviews to study separations due to overseas deployment of husbands during war, finding that secure individuals reported more positive emotions and less conflict upon reunion than anxious or avoidant individuals. However, the relationship partners in the published studies of romantic attachment were peers and equals, although one was more distressed than the other because of the situations in which they found themselves. In the Steele et al. study, there was a clearer hierarchical relationship between the young adult daughter (who was serving mainly as a caregiver) and the demented mother (who was dependent on her daughter for protection and care). Still, at one time the roles had presumably been reversed, when the daughter was a child and the now older adult mother was a young adult parent. It's difficult to know how mental representations of the long-time prior roles might interact or conflict with the newer mental representations of the reversed roles. We say this not to be critical of this pioneering study, but with the hope of pointing to an important topic for future research.

It's worth noting that there are a few published studies in which self-report attachment measures completed by parents were used to predict outcomes of interactions with their distressed children (e.g., Edelstein et al., 2004; Goodman, Quas, Batterman-Faunce, Riddlesberger, & Kuhn, 1997). In these studies, children's

cognitive and emotional reactions to distressing situations combined with separation from parents were predictable from the parents' scores on self-report attachment measures. Thus, as in the Steele et al. study, there seems to be an association between a caregiver's attachment style and reactions of the person who is attached to the caregiver following separations and other distress-eliciting experiences.

PROBLEMS AND CHALLENGES IN THE STUDY OF ATTACHMENT IN LATE LIFE

In this section, we mention some important conceptual and methodological problems and challenges raised by the articles in this special issue. We hope these comments will serve as useful guidelines for future research on attachment in late life. Our caveats and warnings stem from a combined total of 30 years experience with attachment research and from thinking about the stimulating and provocative articles in this special issue. Even when critical, we are aware both of the difficulties inherent in conducting research on adult attachment and of the creativity, energy, and courage demonstrated by the authors of the articles to which we are reacting. They have provided a valuable foundation for future work.

The studies in this issue, as well as much other research, suggest that most people rely for their core sense of security on a fairly small group of attachment figures. Even in advanced industrialized societies, the average person's attachment figures seem to include mostly individuals who are related to the person genetically, or – in the case of a marital partner – someone with whom the person has produced or may produce genetic offspring. This is an interesting fact as we approach a situation in advanced industrial societies where many older adults come from ''broken'' and mixed families, and many come from smaller families than were typical in previous generations. It would be useful to keep attachment theory in mind when assessing people's social networks, because network measures may overestimate the number of people on whom a person mainly relies for a sense of safety and security. The list of actual attachment figures may be quite small.

It is worth noting that there are several alternative measures of adult attachment, but they do not all measure the same thing, so it is important to match measures appropriately with research goals. Psychological closeness and importance are not the same as attachment, even though the three variables are substantially correlated. Nor do all affectional bonds qualify as attachment bonds, at least according to attachment theory, which is deliberately based on a narrow, technical definition of attachment. A continuing conceptual and psychometric problem will be distinguishing attachment relationships from other kinds of relationships and the attachment aspects of a relationship from its other aspects.

These distinctions are particularly important when interpreting Antonucci et al.'s findings. The instructions they gave their study participants for choosing relationship partners to place in an inner circle of attachment figures emphasized ''closeness'' and ''importance'' rather than reliance on a person for protection and comfort in times of need. This emphasis on ''closeness and ''importance'' may explain the surprising finding that many young adults placed their own small children in the inner circle of relationship partners, because ''close'' and ''important'' are words that parents of young children would understandably use to describe their relationships with their offspring. Attachment theorists, in contrast, view a parent's reliance on his or her

young children for protection and support as a dangerous form of role reversal that robs a child of the security that should be provided by a parental secure base.

In some of our studies (e.g., Mikulincer, Gillath, & Shaver, 2002) we identified research participants' attachment figures using the WHOTO scale (Hazan & Zeifman, 1994). This measure asks a respondent to name the particular people on whom he or she relies for various forms of protection and support, and then to describe each such person's role in the respondent's life (e.g., mother, father, sibling, romantic partner, friend, teacher, therapist, God). We conducted several experiments in which we subliminally primed participants with threat words (e.g., failure, separation) and then determined indirectly (using reaction times in lexical decision and Stroop tasks) which names became automatically more available for mental processing when a person felt threatened. It turned out that the names of attachment figures (identified with the WHOTO questionnaire) became more available in response to threat words, but not in response to neutral words, and this did not happen for the names of close relationship partners not mentioned in the WHOTO. Thus, both theoretically and empirically, attachment figures are not just close, important relationship partners. They are special individuals to whom a person turns when protection and support are needed.

When we move, as researchers, from the realm of living attachment figures to the realms of deceased attachment figures and religious personages, it is important to keep in mind that not all attachments, whether with living attachment figures or with mentally represented ones, are secure. This is important for interpreting Cicirelli's findings. In his unidimensional measure of attachment to God, Cicirelli specifically assessed whether a person has God in his or her hierarchy of attachment figures. One can answer yes to this question without necessarily implying that the attachment to God is secure. Moreover, a person who does not usually rely on God as an attachment figure may suddenly do so if his or her level of anxiety (including death anxiety) becomes sufficiently high, as indicated by Kirkpatrick's (1999) summary of evidence that "there are no atheists in foxholes," unless the atheists have alternative attachment figures to call upon. Dying soldiers reportedly call out for "Mommy," a lover, a spouse, or God. If this foxhole phenomenon is interpreted in terms of death anxiety, it fits well with Cicirelli's findings.

In fact, without distinguishing between strength or degree of attachment and quality of attachment (designated with terms like secure, anxious, or avoidant), one can alternatively interpret Cicirelli's measure of *attachment* to God, as he did, or as an unintended measure of *anxious* attachment. Notice, for example, that scores on Cicirelli's attachment to God measure correlate significantly with fear of death, which seems odd if God really provides security for Cicirelli's high scorers, but is compatible with previous research (e.g., Mikulincer, Florian, & Tolmacz, 1990) if anxiously attached people score high on attachment to God as Cicirelli measures it. The idea that attachment anxiety is related to higher scores on Cicirelli's measure is also compatible with his finding that higher scores are associated with loss of human attachment figures to death. Finally, the fact that fundamentalists, evangelicals, and charismatics (Type II Protestants) score higher on Cicirelli's measure is compatible with Kirkpatrick and Shaver's (1990, 1992) discovery that attachment anxiety is associated with highly expressive religious behavior such as rhythmic singing and dancing, fainting, and "speaking in tongues" (i.e., being overwhelmed by the Holy Spirit). The correlations between Cicirelli's measure and social status (SES, minority group membership) may also be due to insecurities of various kinds, perhaps

including attachment insecurity but also stressful life events and threatening medical conditions. Thus, in addition to measuring attachment, or strength of attachment, in future studies, it would be useful to measure security of attachment and the various forms of insecurity.

Further research should also address the nature and functions of attachment to deceased individuals (perceived to be still alive as spirits) and religious figures. Is it possible for an otherwise insecure person to be functionally secure by virtue of imagined relationships with non-physical beings? Is it possible for an otherwise secure person to be functionally insecure as a consequence of imagining that a deceased parent or spouse, or an angry God, is unhappy with the person? Can someone incorporate features of an attachment figure, either a real person or a religious figure such as the Buddha or Jesus, into the self and thereby benefit from that person's or figure's strengths and virtues? We suspect that the answer to all of these questions is yes, but they have not received much empirical attention from attachment researchers.

The findings reported in this special issue indicate that adults, on average, seem to become less anxiously attached with age, at least as measured by self-report attachment scales. This could be because many people who were relatively anxious in adolescence and early adulthood find one or more security-enhancing attachment figures somewhere along the path through adulthood, or become mature in ways that allow for healthy recasting of attachment working models. But the reduction in anxiety may also have a physiological explanation; people may become less emotionally or autonomically reactive with age. Whatever the correct explanation proves to be, researchers should not decide prematurely that older adults are more dismissingly avoidant than younger adults. This may seem to be the case only because, as adults become less anxious on average, the ones who were fearfully avoidant become less fearful without becoming less avoidant. At the same time, many preoccupied people may become more secure by lowering their attachment anxiety scores while retaining low scores on the avoidance dimension (cf. Mickelson, Kessler, & Shaver, 1997). Aside from this issue, we need to be careful when using attachment scales designed originally to measure young adults' styles of romantic attachment to measure generic attachment patterns in late life. Older adults may appear to be more dismissingly avoidant because the romantically tinged answer alternatives in the measure seem inappropriate to them.

When thinking about attachment anxiety (at any age), we should keep in mind that measures of this construct correlate substantially with more general measures of anxiety, negative affectivity, and neuroticism. This variable has always pervaded, and frequently haunted, the personality assessment field and is among the ''big five'' factors repeatedly found in broad studies of personality (John & Srivastava, 1999). When measures of attachment anxiety or security prove to be correlated with some other variable, or when a construct like trait anxiety or trait anger correlates with remembered emotion socialization by parents, we should check to see whether general neuroticism underlies or explains the association. Fortunately, in recent studies of adult attachment, controlling for neuroticism or general anxiety has not eliminated theoretically important findings supporting attachment theory (Shaver & Mikulincer, 2004). Still, it is important to keep checking.

We should also keep in mind that the attachment system is not the only behavioral system discussed by Bowlby. He wrote about the fear, exploration, affiliation, caregiving, and sexual systems as well, and all of these can affect a person's emotion

regulation and well-being. These ideas fit well with Magai et al.'s conclusion that the effects on adult emotion traits of childhood experiences with parents are not completely mediated by adult attachment orientation. In general, the body of research on attachment has been overly focused on attachment and oblivious to the other behavioral systems. This situation is changing as researchers create measures for the other behavioral systems, but until we have a broader picture of those systems, it makes sense not to place too much emphasis or burden on the single concept of attachment.

With these considerations in mind, we want to say a few words about Tomkins' (1962, 1963, 1991) theory as an alternative to attachment theory. Magai et al. contend that ''attachment theory has tended to treat emotion socialization phenomena and, implicitly, their adult emotion outcomes, as exclusively relational'' (p.394). This is misleading for two reasons. First, attachment theory focuses on several behavioral systems in addition to attachment, and some of them, such as exploration, are not very relational at all. Thus, the theory acknowledges that a person's emotional development may be affected by many experiences other than social interactions with attachment figures. Second, the theory includes the important idea, common in psychoanalytic theories, that affect-regulation processes originating in childhood, including those stemming from childhood interactions with attachment figures, may be internalized and integrated with other intrapsychic processes, such that their original relational context no longer dominates their use in all settings. We (Mikulincer & Shaver, 2004) have shown, for example, that secure people are likely to have internalized both self-soothing processes and some of their attachment figures' personal qualities, which they then use when encountering the frustration of failing repeatedly on a non-social laboratory task. This is just one example of ways in which attachment-related experiences – not only with parents but with subsequent attachment figures as well – may affect a person in ways that interact with a variety of contextual and internal factors to influence emotion-regulation processes outside relational contexts.

We are not arguing against Tomkins' theory of emotional development, which seems (based on Magai et al.'s account) to focus mainly on direct learning (i.e., reinforcement of particular ways of expressing and regulating emotions), explicit and implicit imitation and modeling, and adoption of a parental ideology about emotions, emotional expression, and emotion regulation. The learning processes emphasized in Tomkins' theory are quite compatible with attachment theory. In comparing the two theories, we should be careful to delineate the qualities of temperament and early experience that affect later emotional activation, regulation, and expression, and the ways in which these experiences become crystallized in expectations, concerns, mental strategies, and behavioral patterns. Since there is considerable overlap between Tomkins' ideas and those of Bowlby (not surprisingly, since both were affected by the learning, cognitive, and psychodynamic theories of their era), a goal of future theory and research should be to eliminate unnecessary redundancies between the theories and construct the most parsimonious and empirically accurate integrative theoretical model. Magai et al.'s study provides interesting ideas and data relevant to this task.

Another important matter for further research is the need for longitudinal studies. In this special issue, the study by Zhang and Labouvie-Vief provides a good example. Attachment theory is a developmental theory; it deals with stability and change in social and emotional behavior across the lifespan. It is important, therefore, to

conduct longitudinal studies of attachment phenomena and attempt to squeeze all possible causal information out of them. In conducting such studies, one confronts the problem of measuring the appropriate variables and then studying the direction(s) of causality among them over time. We desperately need both good longitudinal studies and more experimental studies, because they are our only hope of disentangling the causal connections inferred initially from cross-sectional studies. Our impression of Zhang and Labouvie-Vief's study is that it offers very rich opportunities to explore causality, but as reported here many of the possible data analyses remain to be revealed, so we look forward eagerly to additional reports of their findings.

Another important challenge for future research is the issue of role reversal, a process in which older adults with grown children rely on their children to serve some or all of the standard functions of attachment figures. We suspect that, just as insecure attachment relationships create problems for both children and parental attachment figures early in life, insecure relationships between older adults and their grown children, now serving as attachment figures, also create serious (and theoretically interesting) problems for both relationship partners (see Cicirelli, 1993, 1995, and Steele et al., this issue, for examples). We would expect to see continuing conflicts related to feelings of insufficient care, anger at past treatment, attempts to coerce and control care, and so on. On the other hand, the role-reversal process may create an opportunity to heal old wounds and reconstruct a relationship on more secure terms. This may be a point at which informed clinical intervention could increase the likelihood of positive outcomes.

The study of role reversal in late life highlights the intricate interplay of the attachment and caregiving systems. This has been a problem for research on romantic and marital relationships, where both partners sometimes play the role of "stronger and wiser" caregiver and sometimes play the role of weaker and needier care recipient. The difficulty is compounded when middle-aged adults become "stronger and wiser" than their aging and declining parents, because it is difficult for researchers to tell how attachment and caregiving systems operate in such role-reversed situations. This complexity creates problems of interpretation in Steele et al.'s study. The study differs from other AAI research in that previous studies examined the association between mothers' AAI classifications and their children's classifications in Ainsworth's strange situation. In those studies, a mother's AAI classification was based on her recollections of early attachment-related experiences with her own mother and father (or alternative attachment figures) and not very much on her accounts of the relationship with her own dependent child. In contrast, in the Steele et al. study, AAI interviewees talked at length about their relationship with their dependent mother who was suffering from dementia. Thus, the assessment procedure may have confounded attachment and caregiving (assuming that mental representations related to these two behavioral systems are distinct). In addition, the reunion episode occurred after both a separation and discussion by both women about their family histories, which probably activated declarative and procedural memories related to both attachment and caregiving. In fact, in the reunion situation studied by Steele et al., it isn't really clear who is occupying which role and to what degree. While quite acceptable in such a pioneering study, it raises some difficult questions for future research.

It might be interesting to measure not only the daughter's representations (in the AAI) of her mother as a caregiver and the mother's reaction to separation and

reunion, as was done by Steele et al., but also the daughter's representation of herself as a caregiver and her reactions to the reunion with her mother. If it were possible to administer anything like the same kinds of measures to the mother (which would presumably be more difficult the more advanced her dementia was), it would be interesting to see how the mother represented herself as a caregiver and attachment figure for her daughter, and perhaps also her own memories of her relationships with her parents (the usual focus of the AAI). In this way, we might gain a more complete picture of the complex matrix, both inter- and intrapersonal, of caregiving and attachment when both parties are adults. Admittedly, it is difficult to specify how mental representations of a new, role-reversed relationship should interact with decades-old representations of a relationship that no longer obtains.

This is just one example of how overly simplified the notion of "adult attachment style" is. Both Bowlby's writings and recent research indicate that attachment-related behavior is rooted in complex, multiple, conflicting mental representations, and at the same time is substantially affected by contextual forces. Thus, although it is necessary to simplify in order to make progress in studying any complex psychological phenomenon, it is wise not to reduce everything to a single construct or to one measure of a single construct. In our work, we always try to keep in mind that there is, on the one hand, complex everyday reality as we experience it subjectively and encounter it in the behavior of other people. And, on the other hand, there is psychological theory, with its associated hypothetical constructs, and an ever-evolving toolbox of psychological measures. The trick is to discover and document something important and valid about real life, thereby nudging psychological science forward, without mistaking our tentative, overly simplified picture for everything that is actually there.

Further study of attachment issues in late life, along the lines pioneered in the articles in this special issue, will greatly enrich our understanding of attachment, aging, close relationships, mental representations of relationships, and their role in emotion regulation and mental health. The authors of the articles deserve thanks and congratulations for opening doors to a whole new world of phenomena needing exploration.

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