

New Perspectives on Autobiographical Memory: The Integration of Narrative Processing and Autobiographical Reasoning

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Researchers from diverse psychological subdisciplines have increasingly turned their attention to the storied aspect of human thought. Narrative processing and autobiographical reasoning are 2 forms of this conscious thought. Narrative processing is the tendency to create thought units that use vivid imagery, sequential plots, characters, and salient goals. Autobiographical reasoning consists of interpreting and evaluating re-membered experiences. Both forms of thought are discussed in D. P. McAdams's (2001) personality theory and D. B. Pillemer's (2001) cognitive research. S. Bluck and T. Habermas (2001) highlight developmental aspects of narrative processing and autobiographical reasoning, particularly in adolescent identity formation. U. M. Staudinger (2001) illustrates how autobiographical reasoning about memories and life stories serves as a springboard for wisdom at different stages of the life cycle. Implications for integrating subdisciplines of psychology are discussed.

The Herman Raucher novel, *Summer of '42* (1971), is best known as a film from the early 1970s that told the story of Hermy, a teenaged boy, who falls in love with an older woman and finds his way from boyhood to manhood through a series of humorous and sentimental circumstances, all transpiring in the course of a single summer. By the end of that particular summer (framed within the context of a world war), love, sex, friendship, death, and loss have all laid down their particular outlines in Hermy's understanding of himself. One factor in the success of this "coming of age" story is its nostalgic vantage point. The adult Hermy, now at midlife, serves as the narrator of these long past events and reflects on their enduring significance in the decades since. That is, through reimagining and reinterpreting that summer's events over time, Hermy has created an autobiographical narrative. Through this narrative processing, the events, lessons, and emotions of his youth remain active and available to his ongoing stream of thought.

In a small hometown theater in Connecticut, one of us recently attended a new musical version of *Summer of '42*. The play begins with a silhouetted figure, wearing glasses, hat, and raincoat, his back turned to the audience, looking toward the beach cottage where many years earlier the older woman, the object of his first love, had lived. As the light fades on the figure and comes up on a group of boys, we return in flashback to the summer of his recollection. Later, in the play's last scene, Hermy, the teenaged boy we have witnessed throughout the night, puts on the raincoat and hat from the play's beginning. Turning his back to the audience, he watches the other actors pass before him in a cinema-like montage that reprises pivotal moments from his friendships and affair. Finally, in a bit of stagecraft handled with a skill that does not reveal its surprise, Hermy himself walks before the darkened figure in the raincoat. The director's trick conveys the conceit that our lives are indeed a story and that we are a character, albeit the main character, in that story.

This life story, according to Dan McAdams (1985, 1987, 1990, 1993, 1999), gives us our sense of identity: a narrative coherence that integrates our past experiences with our present concerns and future goals. All of the articles in this special issue take this storied nature of identity as an explicit or implicit starting point: They all focus on how individuals remember, interpret, and create narratives of the events of

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their lives. Whether the focus is on vivid sensory memories of single events (as discussed by Pillemer, 2001) or reminiscences about one's entire life (as articulated by Staudinger, 2001), the contributors to this special issue all address the way in which individuals use the functional and thematic aspects of their autobiographical memories in the service of the psychological, interpersonal, and directive goals of the self (Bluck & Alea, in press).

Individuals engage in *narrative processing* of their life experiences; they construct storied accounts of past events that range from brief anecdotes to fully developed autobiographies. These accounts rely on vivid imagery, familiar plot structures, and archetypal characters and are often linked to predominant cultural themes or conflicts. Individuals also engage in *autobiographical reasoning*: They reason about, interpret, and evaluate their memories. This reasoning process leads to inferences, lessons, and thematic insights. This interactive marriage of narrative processing and autobiographical reasoning captures the rich complexity of the stream of conscious thought about the personal past and is the integrative message offered by the diverse articles that follow.

Narrative Processing

As McAdams (2001) points out, the study of narratives in psychology dates back to Freud and Adler and can be traced through the work of Henry Murray, Erik Erikson, Robert White, and Dan Levinson and right up to the current research of Abigail Stewart (Stewart, Franz, & Layton, 1988) and Roy Baumeister (Baumeister, Wotman, & Stillwell, 1993). What differentiates the approach taken in the current issue from this previous work is that each of the researchers represented here does not merely see narrative aspects of the person as "portals" through which one can discover vital information about personality or development (cf. Peacock & Holland, 1988, cited in Linde, 1993; Singer, 1996). Instead, in this approach narrative forms the actual structures and foundations of the self or personality. McAdams accurately defines a shift that took place with the seminal work of Bruner (1986) and Tomkins (1979), as well as Polkinghorne (1988) and Sarbin (1986). These theorists and researchers asserted the concept of a distinct mode of thought that or-

ganized information through the familiar devices of story, including plot, intention, character, outcome, and theme. For the first three decades of the information-processing era in psychology, the 1950s–1970s, the field had been dominated by what Bruner (1986) characterized as the "paradigmatic mode of thought": "It employs categorization or conceptualization and the operations by which categories are established, instantiated, idealized and related to the other to form a system" (p. 12).

The paradigmatic approach has strengths, but it also placed some limitations on researchers' understanding of human personality. The paradigmatic approach to research did not simply mean reliance on categories of individual differences, along with quantitative methodology (such as factor analysis) to define these differences. It also meant that the individuals under study were conceptualized as making sense of themselves and representing themselves to others through paradigmatic forms of reasoning and communication.

For example, Higgins's extremely influential self-discrepancy theory of personality and affect (1987, 1989) relied on individuals' judgments of themselves based on lists of personality descriptors. The portrayal of individuals' internal self was limited to individuals' thoughts about the relative discrepancies between their self-evaluations and ideal or others' evaluations as expressed through adjectives such as "attractive" or "successful." Without diminishing the importance and value of this work to an understanding of self-concept, what seemed to be missing was another significant way in which people thought about themselves and expressed this knowledge to themselves and others.

Simply put, people in our culture, and many cultures, also express their sense of self in stories, and these stories are important sources of self-definition. As asserted by Bruner (1986) and Tomkins (1979), and acknowledged by Neisser (1978) and Schank and Abelson (1977) in cognitive psychology, the recollection of word pairs in laboratory memory studies or the rating of adjectives on a personality inventory does not tap into this critical narrative aspect of human thought.

The imaginative application of the *narrative mode* [italics added] leads instead to good stories, gripping drama, believable (though not necessarily "true") historical accounts. It deals in human or human-like in-

tention and action and the vicissitudes and consequences that mark their course. It strives to put its timeless miracles into the particular of experience, and to locate experience in time and place. (Bruner, 1986, p. 13)

As McAdams (2001) details, Tomkins's (1979) script theory was the first contemporary personality theory to place the story-making aspects of thought at the focal point of the development of personality and motivation. In particular, he suggested that certain affectively laden remembered scenes in our lives intensify through partial repetition and internal rehearsal to become overarching schemas for our understanding of certain interpersonal interactions. These templates or "scripts" can then direct our attention and actions in such ways that they bias our current interactions to fulfill their affective sequences and particular themes. Several empirical studies and clinical case studies have substantiated Tomkins's claims for the importance of scenes and scripts in human personality (R. Carlson, 1981, 1982; L. Carlson & Carlson, 1984; Demorest & Alexander, 1992; McAdams, Lensky, Daple, & Allen, 1988; McAdams, Reynolds, Lewis, Patton, & Bowman, in press; Singer & Singer, 1992).

Drawing on the influence of Adler, Murray, Erikson, and Tomkins, as well as his own narrative research on the intimacy motive, McAdams synthesized many of these ideas into his highly original life story theory of identity (McAdams, 1985, 1987, 1990, 1993, 1996). As described in his contribution to this issue, the life story theory characterizes individuals as their own biographers, building a narrative of self that commences in adolescence and continues to evolve over the various stages of the adult life cycle. Individuals make sense of their lives through a reliance on familiar plot lines, archetypal characters, and significant remembered episodes. They use these components of the life story to weave together diverse experiences into a coherent narrative that creates a sense of unity over time and a defined purpose for future action.

In a recent review chapter, McAdams (1999) provided a wide sampling of research that has embraced this storied perspective on personality and identity. Increasingly, researchers are examining how individuals' sense of meaning and behavioral tendencies are a function of the stories they construct of their past interactions in

the world. For example, McAdams reviews some of his recent work (McAdams et al., in press) that demonstrates certain individuals' tendency to organize their life stories according to themes of "redemption" and "contamination." By affording the narrative processing of social, cognitive, and affective information such a central role in their theories of personality, McAdams and other personality researchers have opened the door for collaborative work with cognitive and developmental psychologists who study autobiographical memory.

As Singer (1995) has proposed, one power of narrative processing is that it brings into consciousness an analogue version of goal-relevant life situations. Storied thought is our closest approximation to an in vivo encounter with events whose outcomes may have significant effects on our well-being.

Narratives focus on a specific subset of events in our life, link them to a desired goal, and inform us about the feelings (both kind and intensity) associated with attainment or nonattainment of the goal in question. . . . Once a narrative is fixed and "perceived" by consciousness, we now have a coherent way of experiencing a particular [self] . . . and the associated cognitions, affects, goals, behavioral routines, and psychophysiological cues. (Singer, 1995, pp. 447-448)

All of these recent perspectives on narrative aspects of thought converge on a common set of properties that allow us to define *narrative processing* more precisely. Drawing on Gergen and Gergen (1988, pp. 19-22), narrative processing encompasses thought units that incorporate the following criteria: (a) establishment of a valued end point, (b) selection of events relevant to the goal state, (c) ordering of events, (d) establishment of causal linkages, and (e) demarcation signs or boundaries.

According to this definition, narrative processing channels a particular current in the stream of consciousness and directs it toward a particular desired goal. In establishing this end point, it organizes a subset of relevant events that provide information about the status of an activated goal. This goal status (i.e., achieved or not) signals the type and intensity of affect experienced (e.g., joy, sorrow, pride, or amusement). The events that precede goal outcomes assume a temporal or sequential order of actions or activities that advance or block goal attainment. The sequential relationship of these events enables one to draw inferences about

causality within the narrative. Finally, narratives begin and end; these markers set boundaries on efforts at goal attainment and affective expression. They also allow for the separation of one set of thoughts from another in the overall stream of consciousness.

David Pillemer's (2001) contribution to this special issue and his previous work (e.g., Pillemer, 1992, 1998; Pillemer, Picariello, Law, & Reichman, 1996) offer some outstanding examples of how the narrative processing of past experiences links autobiographical memory and personal identity. He highlights how individuals draw on vivid and affectively intense memories of certain pivotal events in their lives for a variety of psychological and interpersonal functions, including inspiration, moral guidance, communication of the self to others, and entertainment or amusement. For example, reading Michael Jordan's surprising account of an early setback in his basketball career and his subsequent commitment to overcome this disappointment, we grasp intellectually, but also emotionally, the role that determination and pride played in Jordan's subsequent success. As Pillemer suggests, vivid personal memories provide a commentary on the importance of certain goals in our lives and, by doing so, help express our overarching system of values and beliefs. An adult may express a commitment to civil rights, but a single momentous memory of being beaten and arrested during a civil rights demonstration may serve to crystallize that belief in a deeper, more enduring and definitive way.

People in recovery from addiction often use the expression "You can't just talk the talk; you have to walk the walk as well." In the stream of conscious waking thought, narrative processing is the closest we can come to "walking the walk" without getting up out of our chair. A specific momentous memory vivifies an idea for us, giving it a reality and immediacy that nothing short of the actual event could have. Pillemer (2001) emphasizes this point when he addresses the question of the organization of personal memories recalled by individuals. He provides research support for his contention that the more specific and detailed a memory, the more likely it is to have affective significance and to motivate action. In fact, diffuse and general memories may be an effective way of defending against the message or emotion associ-

ated with a specific and vivid remembered event.

Autobiographical Reasoning

Just as personality researchers are focusing on memory through an interest in narrative, cognitive psychologists are incorporating affect, motivation, and personality into their models of memory. Conway and Pleydell-Pearce (2000) recently published a landmark article that is certain to accelerate these collaborative efforts in the coming decade. Their proposal of a hierarchical autobiographical knowledge base that is linked to goals within the self-system is the culmination of two decades of emerging work in autobiographical memory (Brewer, 1986, 1996; Conway, 1996; Conway & Rubin, 1993; Fitzgerald, 1996; Neisser, 1982, 1986; Neisser & Winograd, 1988; Pillemer, 1998; Reiser, 1983; Reiser, Black, & Abelson, 1985; Reiser, Black, & Kalamarides, 1986; Robinson, 1992; Robinson & Taylor, 1998; Rubin, 1986, 1996, 1998; Schank, 1982; Schank & Abelson, 1977). Conway and Pleydell-Pearce explicitly linked their cognitive model to contemporary narrative research in personality and developmental psychology, as well as recent advances in neuropsychology. Drawing on work by Markus (Markus & Nurius, 1986; Markus & Ruvolo, 1989), McAdams (McAdams, Diamond, de St. Aubin, & Mansfield, 1997), Singer (Moffitt & Singer, 1994; Singer, 1990; Singer & Salovey, 1993), Strauman (1990, 1996), Thorne (1995, 2000), and Woike (1995; Woike, Gershkovich, Piorkowski, & Polo, 1999), among others, Conway and Pleydell-Pearce argued that narrative memories about the self retain their accessibility and affective significance as a function of their relevance to the most salient and enduring goals of the self or personality. In turn, these goal-linked and affectively charged memories help to define and further guide the priorities of the self-system.

If both personality and cognitive psychology have converged on the powerful role that narrative processing plays in human thought, affect, and motivation, the work in these areas still leaves open the question of how human beings develop the capacity to think in this manner. Susan Bluck and Tilmann Habermas (2001) suggest that narrative processing of one's own life events is a sophisticated type of autobio-

graphical reasoning: the temporal and interpretive linking of life's events. Granting that autobiographical reasoning and narrative processing are indeed linked cognitive affective activities, what are their developmental trajectories over the life course? Are we more likely to engage in these modes of thought at different stages of the life cycle, and does our ability to do so improve with age or experience? These questions are addressed by the contribution of Bluck and Habermas as well as that of Ursula Staudinger (2001). From these authors' perspectives, narrative processing is closely linked to but distinguishable from individuals' capacity to reason about the memories that surface in consciousness. Staudinger (2001) presents a visual model that illustrates clearly how the act of reminiscence does not necessarily entail a reflective response to the event recalled into active consciousness. Rather, our inclination to think and feel in stories is enhanced by an additional effort to extract meaning from experiences and memories and to integrate their themes with other related episodes from our lives.

Bluck and Habermas (2001) substantiate McAdams's (1985, 2001) life story theory of identity concerning the critical role of adolescence and young adulthood in narrative identity. McAdams's theory draws on Erikson's assertion that the forging of identity begins with the development of complex abstract thought in adolescence as the individual first defines a sense of self distinct from his or her parents and aligned with particular ideological strands within the surrounding society. In adolescence, McAdams proposes, we find our voice and begin to tell our life story.

Accordingly, Bluck and Habermas (2001; Habermas & Bluck, 2000) argue that this confluence of individuals' emerging cognitive capacities for abstract reflection and the motivational press on adolescents to define their sense of identity leads to the first concerted use of autobiographical memory to construct a life story. Their work explains the social-cognitive tools that individuals must develop to carve out an initial self-defining story. They specifically trace how individuals develop the capacity for autobiographical reasoning. This form of thought is a process of self-reflection in which an individual draws on past experiences to find linkages to other past events or to current concerns and actions. Although the term *reasoning* is a

rather agentic one, the notion of autobiographical reasoning allows for the gradual building of thematic and interpretive links between memories through their repeated consideration. Thus, not all autobiographical reasoning is volitionally engaged in with an end point in mind. Instead, linkages and themes are developed by repeated thinking about and talking about one's life events.

The development of autobiographical reasoning, according to Habermas and Bluck (2000), requires a capacity for temporal coherence, a cultural concept of biography, thematic coherence, and causal coherence. *Temporal coherence* entails knowledge of the predictable sequence of events in typical narratives. A *cultural concept of biography* refers to knowledge of the normative and salient events that might be included in a life story (e.g., milestones such as graduations, marriages, and moves). *Thematic coherence* involves individuals' capacity to step back from recalled experiences and extract metaphors, lessons, or messages. Finally, *causal coherence* signifies individuals' understanding of the explanations and motives behind the life events they recall. Individuals' explanations for why events have occurred reflect their own emerging theories of human intention and motivation. Through repeated autobiographical reasoning, the life story emerges in adolescence. Once this life story process is launched, it continually evolves over the life span of the individual as new events are experienced and old events are reevaluated.

Staudinger (2001) uses the overarching term *life reflection* to express her approach to autobiographical reasoning and narrative processing. If we step back from our life and seek a sense of meaning or theme from this life in its entirety, we are engaging in "life review." If we select a particular incident or episode from the larger life story (e.g., a specific momentous event) as the target of reflection, then such activity might be considered autobiographical reasoning about a self-defining memory (Singer & Salovey, 1993). As Pillemer's (2001) emphasis on function suggests, life reflection can serve a variety of purposes. Staudinger (2001) enumerates some in her article, including the categorization of different types of experiences, abstraction of a theme or message from the remembered life event or events, and use of the

memory or life review for motivation or mood regulation.

Both Bluck and Habermas (2001) and Staudinger (2001) highlight how the social ecological factors of any particular period in the life span further influence how individuals recall and reason about the memories that constitute their ongoing life narrative. For example, Staudinger (2001) proposes that life reflective activities will correspond to specific developmental tasks presented by different phases of the life span. Life reflection related to identity and problem solving will be particularly salient in the teens up to the 30s; the use of memories and stories to teach and inform will increase in the 40s to one's final decades; and the life review aspects of life reflection will take center stage as the individual prepares for death. As such, life phase may be seen as one of several contextual factors that guide the content and style of autobiographical reasoning and may subsequently affect the types of narratives that individuals produce about their lives.

Staudinger (2001) also points out that how individuals approach their life review experiences may help us to understand the life span development of wisdom. She highlights that life reflection, in its most powerful form, serves "epistemic" and "emancipatory" functions. That is, we may recruit past experiences into consciousness to draw difficult lessons or insights that liberate us to take a new direction or make a fresh resolve in our lives. Alternatively, we may reside nostalgically in a static vision of our past that reinforces our current status and leaves us not only unchanged but more inured against change. In presenting data on individuals who have demonstrated wisdom, as determined through a rigorous nomination procedure, Staudinger found that "wise" individuals were more inclined than comparison groups to reflect actively and evaluatively about the memories they recalled. This result clearly suggests a link to Salovey and Mayer's (e.g., Salovey, Mayer, Goldman, Turvey, & Palfai, 1995) efforts to define a capacity for emotional intelligence or Robert Sternberg's (1985) work on practical intelligence. Such wisdom may accumulate over the life span, but it is also clearly more present for some individuals at each phase of life.

As a whole, these four articles create an integrated picture of the prominent place that nar-

rative processing and autobiographical reasoning hold in human thought. We can trace the development of their emergence in consciousness, their role in identity formation, their influence on personality variation, and their relationship to psychological growth. The power of narrative processing and autobiographical reasoning to facilitate change in psychotherapy has also been documented in clinical research and case studies (Bruhn, 1990; Singer, 1997, in press; Singer & Salovey, 1993; White & Epstein, 1990).

In addition, although the contributions to this issue have focused on evaluative reasoning and narrative processing in terms of autobiographical memory and life review, some of these ideas can also be applied to other forms of narrative processing, including fantasy, daydreaming, night dreaming, and guided imagery (see Antrobus, 1999; Epstein, 1999; Klinger, 1999; J. L. Singer, 1975). In all of these modes of thought, human beings channel the stream of thought into prescribed narrative sequences that rely on both cultural and personal templates; these in turn order and direct our ideas and emotions. As thoughts take the form of stories, their capacity to highlight desired goals and to energize the different systems of the personality toward these salient goals is markedly increased (Conway & Pleydell-Pearce, 2000; Habermas & Bluck, 2000; Singer, 1995). Autobiographical reasoning allows us to evaluate and link together experience into coherent narratives that can be shared with others. Narrative processing and autobiographical reasoning allow us to live in the world once removed from its reality; we can relive a remembered event and then reason about its consequences before we step forward and take action.

Not the event itself, but Hermy's memory for and *story* of his first love, and his *thoughts* about that story, live within him. They inform him about both the ecstasy and pain of giving himself over to another human being. In each of us, the stories we have crafted from life experiences infuse our thoughts with knowledge to be gleaned about the world. For psychologists studying development, cognition, emotion, personality, or psychotherapy, the various manifestations of storied thought and the inferences they evoke are indeed a vital, and no longer neglected, part of our inquiries into human nature.

References

- Antrobus, J. S. (1999). Toward a neurocognitive processing model of imaginal thought. In J. A. Singer & P. Salovey (Eds.), *At play in the fields of consciousness: Essays in honor of Jerome L. Singer* (pp. 3–28). Mahwah, NJ: Erlbaum.
- Baumeister, R. F., Wotman, S. R., & Stillwell, A. M. (1993). Unrequited love: On heartbreak, anger, guilt, scriptlessness, and humiliation. *Journal of Personality and Social Psychology*, *64*, 377–394.
- Bluck, S., & Alea, N. (in press). Exploring the functions of autobiographical memory: Why do I remember the autumn? In J. D. Webster & B. K. Haight (Eds.), *Critical advances in reminiscence theory: From theory to application*. New York: Springer.
- Bluck, S., & Habermas, T. (2001). Extending the study of autobiographical memory: Thinking back about life across the life span. *Review of General Psychology*, *5*, 135–147.
- Brewer, W. F. (1986). What is autobiographical memory? In D. Rubin (Ed.), *Autobiographical memory* (pp. 25–49). New York: Cambridge University Press.
- Brewer, W. F. (1996). What is recollective memory? In D. Rubin (Ed.), *Remembering our past: Studies in autobiographical memory* (pp. 19–66). New York: Cambridge University Press.
- Bruhn, A. R. (1990). Cognitive-perceptual theory and the projective use of autobiographical memory. *Journal of Personality Assessment*, *55*, 95–114.
- Bruner, J. S. (1986). *Actual minds, possible worlds*. Cambridge, MA: Harvard University Press.
- Carlson, L., & Carlson, R. (1984). Affect and psychological magnification: Derivations from Tomkins' script theory. *Journal of Personality*, *2*, 36–45.
- Carlson, R. (1981). Studies in script theory: I. Adult analogs of a childhood nuclear scene. *Journal of Personality and Social Psychology*, *40*, 501–510.
- Carlson, R. (1982). Studies in script theory: II. Altruistic nuclear scripts. *Perceptual and Motor Skills*, *55*, 595–610.
- Conway, M. A. (1996). Autobiographical knowledge and autobiographical memories. In D. C. Rubin (Ed.), *Remembering our past: Studies in autobiographical memory* (pp. 67–93). New York: Cambridge University Press.
- Conway, M. A., & Pleydell-Pearce, C. W. (2000). The construction of autobiographical memories in the self-memory system. *Psychological Review*, *107*, 261–288.
- Conway, M. A., & Rubin, D. C. (1993). The structure of autobiographical memory. In A. E. Collins, S. E. Gathercole, M. A. Conway, & P. E. Morris (Eds.), *Theories of memory* (pp. 103–137). Hove, England: Erlbaum.
- Demorest, A. P., & Alexander, I. E. (1992). Affective scripts as organizers of personal experience. *Journal of Personality*, *60*, 645–663.
- Epstein, S. (1999). The interpretation of dreams from the perspective of cognitive-experiential self theory. In J. A. Singer & P. Salovey (Eds.), *At play in the fields of consciousness: Essays in honor of Jerome L. Singer* (pp. 51–82). Mahwah, NJ: Erlbaum.
- Fitzgerald, J. M. (1996). Intersecting meanings of reminiscence in adult development and aging. In D. C. Rubin (Ed.), *Remembering our past: Studies in autobiographical memory* (pp. 360–383). New York: Cambridge University Press.
- Gergen, K. J., & Gergen, M. M. (1988). Narratives and the self as relationship. In L. Berkowitz (Ed.), *Advances in experimental social psychology* (Vol. 21, pp. 17–56). New York: Academic Press.
- Habermas, T., & Bluck, S. (2000). Getting a life: The emergence of the life story in adolescence. *Psychological Bulletin*, *126*, 748–769.
- Higgins, E. T. (1987). Self-discrepancy: A theory relating self and affect. *Psychological Review*, *94*, 319–340.
- Higgins, E. T. (1989). Continuities and discontinuities in self-regulatory and self-evaluating process: A developmental theory relating self and affect. *Journal of Personality*, *57*, 407–444.
- Klinger, E. (1999). Thought flow: Properties and mechanisms underlying shifts in content. In J. A. Singer & P. Salovey (Eds.), *At play in the fields of consciousness: Essays in honor of Jerome L. Singer* (pp. 29–50). Mahwah, NJ: Erlbaum.
- Linde, C. (1993). *Life stories: The creation of coherence*. New York: Oxford University Press.
- Markus, H., & Nurius, P. (1986). Possible selves. *American Psychologist*, *41*, 954–969.
- Markus, H., & Ruvolo, A. (1989). Possible selves: Personalized representation of goals. In L. A. Pervin (Ed.), *Goal concepts in personality and social psychology* (pp. 211–242). Hillsdale, NJ: Erlbaum.
- McAdams, D. P. (1985). *Power, intimacy, and the life story: Personological inquiries into identity*. New York: Guilford Press.
- McAdams, D. P. (1987). A life-story model of identity. In R. Hogan & W. H. Jones (Eds.), *Perspectives in personality* (Vol. 2, pp. 15–50). Greenwich, CT: JAI Press.
- McAdams, D. P. (1990). Unity and purpose in human lives: The emergence of identity as the life story. In A. I. Rabin, R. A. Zucker, R. A. Emmons, & S. Frank (Eds.), *Studying persons and lives* (pp. 148–200). New York: Springer.
- McAdams, D. P. (1993). *The stories we live by: Personal myths and the making of the self*. New York: Morrow.
- McAdams, D. P. (1996). Personality, modernity, and the storied self: A contemporary framework for

- studying persons. *Psychological Inquiry*, 7, 295–321.
- McAdams, D. P. (1999). Personal narratives and the life story. In L. Pervin & O. John (Eds.), *Handbook of personality: Theory and research* (2nd ed., pp. 478–500). New York: Guilford Press.
- McAdams, D. P. (2001). The psychology of life stories. *Review of General Psychology*, 5, 100–122.
- McAdams, D. P., Diamond, A., de St. Aubin, E., & Mansfield, E. (1997). Stories of commitment: The psychosocial construction of generative lives. *Journal of Personality and Social Psychology*, 72, 678–694.
- McAdams, D. P., Lensky, D. B., Daple, S. A., & Allen, J. (1988). Depression and the organization of autobiographical memory. *Journal of Social and Clinical Psychology*, 7, 332–349.
- McAdams, D. P., Reynolds, J., Lewis, M. L., Patton, A., & Bowman, P. T. (in press). When bad things turn good and good things turn bad: Sequences of redemption and contamination in life narrative, and their relation to psychosocial adaptation in midlife adults and in students. *Personality and Social Psychology Bulletin*.
- Moffitt, K. H., & Singer, J. A. (1994). Continuity in the life story: Self-defining memories, affect, and approach/avoidance personal strivings. *Journal of Personality*, 62, 21–43.
- Neisser, U. (1978). Memory: What are the important questions? In M. M. Gruneberg, P. E. Morris, & R. N. Sykes (Eds.), *Practical aspects of memory* (pp. 3–24). London: Academic Press.
- Neisser, U. (Ed.). (1982). *Memory observed*. San Francisco: Freeman.
- Neisser, U. (1986). Nested structure in autobiographical memory. In D. C. Rubin (Ed.), *Autobiographical memory* (pp. 71–81). New York: Cambridge University Press.
- Neisser, U., & Winograd, E. (Eds.). (1988). *Remembering reconsidered: Ecological approaches to the study of memory*. New York: Cambridge University Press.
- Pillemer, D. B. (1992). Remembering personal circumstances: A functional analysis. In E. Winograd & U. Neisser (Eds.), *Affect and accuracy in recall: Studies of "flashbulb" memories* (pp. 234–264). New York: Cambridge University Press.
- Pillemer, D. B. (1998). *Momentous events, vivid memories*. Cambridge, MA: Harvard University Press.
- Pillemer, D. B. (2001). Momentous events and the life story. *Review of General Psychology*, 5, 123–134.
- Pillemer, D. B., Picariello, M. L., Law, A. B., & Reichman, J. S. (1996). Memories of college: The importance of specific educational episodes. In D. C. Rubin (Ed.), *Remembering our past: Studies in autobiographical memory* (pp. 318–337). New York: Cambridge University Press.
- Polkinghorne, D. (1988). *Narrative knowing and the human sciences*. Albany: State University of New York Press.
- Raucher, H. (1971). *Summer of '42*. New York: Putnam.
- Reiser, B. J. (1983). *Contexts and indices in autobiographical memory*. New Haven, CT: Cognitive Science Program, Yale University.
- Reiser, B. J., Black, J. B., & Abelson, R. P. (1985). Knowledge structures in the organization and retrieval of autobiographical memories. *Cognitive Psychology*, 17, 89–137.
- Reiser, B. J., Black, J. B., & Kalamarides, P. (1986). Strategic memory search processes. In D. C. Rubin (Ed.), *Autobiographical memory* (pp. 100–121). New York: Cambridge University Press.
- Robinson, J. A. (1992). First experience memories: Contexts and function in personal histories. In M. A. Conway, D. C. Rubin, H. Spinnler, & W. A. Wagenaar (Eds.), *Theoretical perspectives on autobiographical memory* (pp. 223–239). Dordrecht, the Netherlands: Kluwer Academic.
- Robinson, J. A., & Taylor, L. R. (1998). Autobiographical memory and self-narrative: A tale of two stories. In C. P. Thompson, D. J. Herrman, D. Bruce, J. D. Read, D. G. Payne, & M. P. Toglia (Eds.), *Autobiographical memory: Theoretical and applied perspectives* (pp. 125–144). Mahwah, NJ: Erlbaum.
- Rubin, D. C. (Ed.). (1986). *Autobiographical memory*. New York: Cambridge University Press.
- Rubin, D. C. (Ed.). (1996). *Remembering our past: Studies in autobiographical memory*. New York: Cambridge University Press.
- Rubin, D. C. (1998). Beginnings of a theory of autobiographical remembering. In C. P. Thompson, D. J. Herrmann, D. Bruce, J. D. Read, D. G. Payne, & M. P. Toglia (Eds.), *Autobiographical memory: Theoretical and applied perspectives* (pp. 47–67). Mahwah, NJ: Erlbaum.
- Salovey, P., Mayer, J. D., Golman, S. L., Turvey, C., & Palfai, T. P. (1995). Emotional attention, clarity, and repair: Exploring emotional intelligence using the Trait Meta-Mood Scale. In J. W. Pennebaker (Ed.), *Emotion, disclosure, and health* (pp. 125–154). Washington, DC: American Psychological Association.
- Sarbin, T. (1986). The narrative as root metaphor for psychology. In T. Sarbin (Ed.), *Narrative psychology: The storied nature of human conduct* (pp. 3–21). New York: Praeger.
- Schank, R. C. (1982). *Dynamic memory: A theory of reminding and learning in computers and people*. New York: Cambridge University Press.

- Schank, R. C., & Abelson, R. P. (1977). *Scripts, plans, goals, and understanding*. Hillsdale, NJ: Erlbaum.
- Singer, J. A. (1990). Affective responses to autobiographical memories and their relationship to long-term goals. *Journal of Personality*, *58*, 535–563.
- Singer, J. A. (1995). Seeing one's self: Locating narrative memory in a framework of personality. *Journal of Personality*, *63*, 429–457.
- Singer, J. A. (1996). The story of your life: A process perspective on narrative and emotion in adult development. In C. Magai & S. H. McFadden (Eds.), *Handbook of emotion, adult development, and aging* (pp. 443–463). San Diego, CA: Academic Press.
- Singer, J. A. (1997). *Message in a bottle: Stories of men and addiction*. New York: Free Press.
- Singer, J. A. (in press). In and out of the amber cloud: A life story analysis of a heroin addict. In D. P. McAdams & R. Josselson (Eds.), *Turns in the road: Narrative studies of lives in transition*. Washington, DC: American Psychological Association.
- Singer, J. A., & Salovey, P. (1993). *The remembered self: Emotion and memory in personality*. New York: Free Press.
- Singer, J. A., & Singer, J. L. (1992). Transference in psychotherapy and daily life: Implications of current memory and social cognition research. In J. W. Barron, M. N. Eagle, & D. L. Wolitzky (Eds.), *Interface of psychoanalysis and psychology* (pp. 516–538). Washington, DC: American Psychological Association.
- Singer, J. L. (1975). Navigating the stream of consciousness: Research in daydreaming and related inner experience. *American Psychologist*, *30*, 727–738.
- Staudinger, U. M. (2001). Life reflection: A social-cognitive analysis of life review. *Review of General Psychology*, *5*, 148–160.
- Sternberg, R. J. (1985). *Beyond I.Q.: A triarchic theory of intelligence*. New York: Cambridge University Press.
- Stewart, A. J., Franz, C., & Layton, I. (1988). The changing self: Using personal documents to study lives. *Journal of Personality*, *56*, 41–74.
- Strauman, T. J. (1990). Self-guides and emotionally significant childhood memories: A study of retrieval efficiency and incidental negative emotional content. *Journal of Personality and Social Psychology*, *59*, 869–880.
- Strauman, T. J. (1996). Stability within the self: A longitudinal study of the structural implications of self-discrepancy theory. *Journal of Personality and Social Psychology*, *71*, 1142–1153.
- Thorne, A. (1995). Developmental truths in memories of childhood and adolescence. *Journal of Personality*, *63*, 138–163.
- Thorne, A. (2000). Personal memory telling and personality development. *Personality and Social Psychology Review*, *4*, 45–56.
- Tomkins, S. S. (1979). Script theory: Differential magnification of affects. In H. E. Howe & R. A. Dienstbier (Eds.), *Nebraska Symposium on Motivation* (Vol. 26, pp. 201–236). Lincoln: University of Nebraska Press.
- White, M., & Epston, D. (1990). *Narrative means to therapeutic ends*. New York: Norton.
- Woike, B. A. (1995). Most-memorable experiences: Evidence for a link between implicit and explicit motives and social cognitive processes in everyday life. *Journal of Personality and Social Psychology*, *68*, 1081–1091.
- Woike, B. A., Gershkovich, I., Piorowski, R., & Polo, M. (1999). The role of motives in the context and structure of autobiographical memory. *Journal of Personality and Social Psychology*, *76*, 600–612.

Received December 23, 2000

Accepted January 2, 2001 ■