

Continuity and Change in the Life Story: A Longitudinal Study of Autobiographical Memories in Emerging Adulthood

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ABSTRACT If a person's internalized and evolving life story (narrative identity) is to be considered an integral feature of personality itself, then aspects of that story should manifest some continuity over time while also providing evidence regarding important personality change. Accordingly, college freshmen and seniors provided detailed written accounts of 10 key scenes in their life stories, and they repeated the same procedure 3 months and then 3 years later. The accounts were content analyzed for reliable narrative indices employed in previous studies of life stories: emotional tone, motivational themes (agency, communion, personal growth), and narrative complexity. The results showed substantial continuity over time for narrative complexity and positive (vs. negative) emotional tone and moderate but still significant continuity for themes of agency and growth. In addition, emerging adults (1) constructed more emotionally positive stories and showed (2) greater levels of emotional nuance and self-differentiation and (3) greater understanding of their own personal development in the 4th year of the study compared to the 1st year. The study is the first to demonstrate both temporal continuity and developmental

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change in narrative identity over time in a broad sampling of personally meaningful life-story scenes.

Narrative approaches to personality suggest that people create meaning and purpose in their lives through the construction of life stories (Hermans, 1996; McAdams, 1985, 1999; Singer, 2004; Thorne, 2000; Tomkins, 1987). People explain who they are, how they came to be, and where they believe their lives may be going by formulating, telling, and revising stories about the personal past and the imagined future (Bruner, 1990). A person's life story is an internalized and evolving narrative of the self that selectively reconstructs the past and anticipates the future in such a way as to provide a life with an overall sense of coherence and purpose. Like dispositional traits, it has been argued, individual differences in the structure and content of life stories represent significant and measurable aspects of personality itself (Hooker & McAdams, 2003; McAdams, 1995). In that traits sketch out broad consistencies in behavior and experience, trait assessments ultimately yield a *dispositional profile* of psychological individuality (e.g., Costa & McCrae, 1994). By contrast, life stories speak to how a person integrates his or her life in time and social context and what he or she believes that life means, ultimately expressing the person's *narrative identity* (Singer, 2004). A full accounting of personality should encompass, among other things, both dispositional profiles and narrative identities.

If, however, narrative identity is to be considered an integral feature of personality itself, then the themes, images, and plots that make it up should show some evidence of continuity over time. Yet virtually no studies have examined the extent to which individual differences in the structure and content of life stories show longitudinal consistency. Nor have quantitative, empirical studies carefully examined developmental change. Narrative psychologists typically argue that life stories are strongly shaped by environmental and cultural forces, leading to the expectation that narrative identities should be rather less stable than dispositional traits over time (McAdams, 1994), more subject to situational fluctuation and negotiation (Shotter & Gergen, 1989), and likely to reveal developmental change (Young, Stewart, & Miner-Rubino, 2001). At the same time, narrative identity would be expected to show *some* thematic continuity from one point in time to the next if it reflects characteristic ways in which people make meaning of their lives

(McAdams, 1985; Singer, 1995). The current study employs a longitudinal design to address the extent to which individual differences in certain basic features of life stories show continuity over time and the extent to which they express developmental change.

Life-Narrative Continuity and Developmental Change

Personality research on life stories has tended to focus on the identification and measurement of key autobiographical scenes, or what Singer and Salovey (1993) first termed *self-defining memories* (Blagov & Singer, 2004; McLean & Thorne, 2003). A common research strategy is to collect narrative accounts of important scenes in the life story, code them for psychologically significant themes and images, and then relate the resultant scores to other measures of personality, development, or well-being. For example, studies have documented significant relationships between life-narrative themes and self-report traits (McAdams et al., 2004), TAT-based motives (McAdams, Hoffman, Mansfield, & Day, 1996; Woike, 1995), and developmental stages and concerns (Bauer & McAdams, 2004a; Bluck & Gluck, 2004; Conway & Holmes, 2004; King, Scollon, Ramsey, & Williams, 2000; McAdams, Diamond, de St. Aubin, & Mansfield, 1997; Pals, 1999). Research also shows that themes of personal redemption (McAdams, Reynolds, Lewis, Patten, & Bowman, 2001) and self-determination and growth (Bauer & McAdams, 2004b; Bauer, McAdams, & Sakaeda, 2005; King & Rapsin, 2004; King & Smith, 2004) in key life-story scenes predict psychological well-being and successful coping with stress. Personality psychologists have also explored how accounts of life-story scenes are shaped by interpersonal relationships (Pasupathi, 2001; Thorne, McLean, & Lawrence, 2004) and by gender, class, and culture (McAdams, 2006; Wang & Conway, 2004; Young et al., 2001).

Although personality psychologists have developed a number of coding schemes for analyzing individual differences in the content and structure of life-story scenes, they have paid little attention to the issue of temporal stability versus change in these individual differences. The one exception is Thorne, Cutting, and Skaw (1998), who collected young adults' accounts of important memories about interpersonal relationships at two points in time, separated by 6 months. They found that only 12% of the relationship memories told

at the second session could be identified as the exact same events described by the same participants the first time around. The researchers found little evidence for longitudinal stability, moreover, with respect to the main characters (e.g., parents, siblings, friends) portrayed in the events. When the memories were coded for emotional and motivational themes, however, some evidence for stability was obtained. Among the 46 participants tested, modest but significant correlations were found between the percentage of memories identified at Time 1 and at Time 2 showing positive outcomes ($r = .25$), negative outcomes ($r = .32$), the desire to assert or control ($r = .28$), and the desire to avoid ($r = .40$).

Should one expect to find longitudinal continuity in life-narrative accounts? Narrative researchers who adopt postmodern approaches in the social sciences tend to argue that life-story accounts are momentary performances expressing the exigencies of the interpersonal situation in which they are told (e.g., Shotter & Gergen, 1989; Wortham, 2001). From this perspective, life narratives are viewed as forms of discourse that are more likely to reveal language games and cultural norms than inherent tendencies in persons. Although they do not downplay the performative and discursive functions of life-story telling, other narrative psychologists maintain that people's accounts of significant life-story scenes may nonetheless express core themes (Wiseman & Barber, 2004) and underlying dynamics (Singer, 1995) of personality. For example, Schultz (2003) argues that certain life-story episodes function as "prototypical scenes" because they capture "the core parameters of an individual life story" (p. 151). Psychological case studies and other idiographic reports often work from the same premise. In an idiographic study of 24 women followed from early adulthood to middle age, Josselson (2000) charted underlying continuities in the psychological issues and concerns expressed in the women's narrative accounts, even as they described different events and autobiographical details from one interview session to the next.

Should life-narrative accounts reveal developmental change? The current study examines the life stories of young people between the approximate ages of 18 and 25, a period in the life course that Arnett (2000) labeled *emerging adulthood*. Many different theories suggest that important strides in personality development may occur in emerging adulthood as it plays itself out in modern societies (e.g., Erikson, 1963; Loevinger, 1976; McAdams, 1985; Perry, 1970;

Sheldon, 2004). It is during this developmental period, for example, that individuals often leave their homes and families of origin to begin college, the military, or work and begin to take on adult roles and responsibilities. Emerging adults are typically expected to explore various occupational and ideological roles in society as they begin to consolidate what Erikson (1963) called *ego identity*. As part of the process of identity exploration, furthermore, emerging adults are expected to develop increasingly more differentiated and integrated understandings of themselves (Habermas & Bluck, 2000; Perry, 1970) and increasingly to value personal growth in their lives (Deci & Ryan, 1991; Loevinger, 1976; Sheldon, 2004).

The Current Study

The current investigation examines interindividual continuity and development in lengthy and highly detailed life-narrative accounts collected from emerging adults in a 3-year longitudinal study. The sample consists of college students who were either freshman or seniors at the beginning of the study (Time 1). The students were assessed 3 months later (Time 2) and then almost 3 years after that (Time 3). At Time 3, then, the original freshmen were mostly seniors and the original seniors were 3 years out of school. The sample, therefore, spans the ages between about 18 (original freshmen at Time 1) and 25 (original seniors at Time 3). At each of the three assessments, the participants provided detailed written accounts of 10 key life-story scenes, such as high points, turning points, and earliest memories in life. The narrative accounts were then coded for a set of emotional, motivational, and cognitive categories that have been successfully employed in previous life-narrative studies. In order to derive the most reliable estimates of life-narrative trends, the resultant scores were aggregated (Epstein, 1979) across the 10 memory accounts.

Previous studies have shown that extended narrative accounts of key autobiographical scenes can be reliably coded for emotional tone (e.g., McAdams et al., 2001, 2004; Thorne et al., 1998). Stories with a positive emotional tone feature happy endings and the expression of such positive affects as joy and excitement/interest. Those with a negative emotional tone show unhappy outcomes and negative affects like sadness/distress and fear/anxiety. McAdams et al. (2001) found that emotional tone in life narrative accounts

was positively associated with self-report life satisfaction, and McAdams et al. (2004) showed a negative association between emotional tone and the trait of Neuroticism. The current study employed a simple rating system for emotional tone used in these previous studies.

Motivational themes in life-narrative accounts have previously been examined from two very different standpoints. The first follows Bakan's (1966) distinction between *agency* and *communion*. Themes of agency suggest personal achievement, power, and the assertion of the individual self. Themes of communion express desires for love, friendship, and community. McAdams et al. (1996) and Woike (1995) have linked agentic and communal themes to TAT-based motives for power and intimacy respectively. McAdams et al. (2004) also found that communion themes in life-narrative accounts were modestly associated with the trait of agreeableness, and Mansfield and McAdams (1996) found a positive association between communion and measures of generativity in midlife adults. A second motivational approach follows Deci and Ryan's (1991) self-determination theory in assessing intrinsic motivations for personal development. Bauer and McAdams (2004b; Bauer et al., 2005) found that individuals telling life-narrative accounts featuring motivational themes of personal growth were more likely than individuals whose accounts did not emphasize these themes to score high on Loevinger's (1976) measure of ego development, as well as psychological well-being. The current study, then, incorporated the motivational themes of agency, communion, and personal growth, adopting scoring procedures used in previous studies.

Finally, the dimension of narrative complexity taps into an aspect of life narration that is reflective of cognitive elaboration. Adapting for life-narrative studies the scheme developed by Suedfeld, Tetlock, and Streufert (1992) to measure conceptual/integrative complexity in open-ended texts, McAdams et al. (2004) coded accounts of key autobiographical scenes for the extent to which the narrator expresses multiple and conflicting thoughts, motivations, or self-images. More complex (multiple, conflicting) narrative accounts were associated with the trait of openness to experience. Similar measures of narrative complexity have also been linked to ego development (McAdams, 1985).

The study's first aim is to determine the extent to which indices of emotional tone, motivational themes, and narrative complexity in

extended life-narrative accounts exhibit interindividual continuity over time. Watson (2004) argued that longitudinal studies of personality should distinguish between short-term continuity in individual differences (what Watson called “dependability”) and longer-term continuity (for which Watson saved the term “stability”). This study’s inclusion of a 3-month (Time 1 to Time 2) and a 3-year (Time 1 to Time 3) interval between assessments provides a rough approximation of Watson’s suggested design. Accordingly, the study’s first hypothesis is that all three narrative categories—emotional tone, motivational themes, and narrative complexity—should show at least modest stability in individual differences over the short-term (3 months) and the longer term (3 years). It is expected that short-term stability should be higher than longer-term stability.

The study’s second aim is to chart developmental change in life-narrative accounts over the 3-year period. Over time, emerging adults are expected to make developmental gains in self-understanding (Erikson, 1963; Loevinger, 1976) and self-determination (Deci & Ryan, 1991; Sheldon, 2004). Accordingly, the study’s second hypothesis is that scores on narrative complexity and integrative personal growth should be positively associated with age. Consequently, it is expected that the senior cohort should score higher than the freshman cohort on narrative complexity and motivation for personal growth and that scores on these two indices for both cohorts should increase between Time 1 and Time 3.

METHOD

Sample and Procedure

In the fall of 2000, college freshmen and seniors attending Northwestern University were recruited for a study of “Autobiographical Memories in College Students” through posted flyers, advertisements in the campus newspaper, and sign-up tables located in the Student Union. Students who expressed interest in participating were given a booklet of measures to complete at their leisure and asked to return the booklet in person or via campus mail within 2 weeks. Pre-testing indicated that the booklet required between 3 and 5 hours of time to complete. After 3 weeks, the experimenters contacted by phone or email those individuals who had not yet returned the booklets and encouraged them to do so. Each student

who eventually completed the measures was paid \$50 for participating in the first part (Time 1) of the study.

At the back of each booklet was a sheet asking the student if he or she would like to participate in the same study again. The instructions explained that if the student were interested in participating again, he or she would be contacted in approximately 3 months (early spring of 2001—Time 2) to receive a second booklet and once again in 3 years (fall of 2003—Time 3) to receive a third. The instructions explained that the student would be paid \$50 for participating each time and emphasized that the student was under no obligation to participate at Time 2 and Time 3. Those who agreed to continue their participation were contacted via phone and email at Time 2 (early spring of 2001), and booklets were mailed to them. Again, follow-up calls were made. Booklets were returned via campus mail and in person. For Time 3 (fall of 2003), the participants (approximately half of the students had now graduated from college) who had agreed to continue in the study were again contacted via email, regular mail, and phone calls. Once again, follow-up calls and reminder emails and letters were sent to encourage participants to complete the measures. For Time 3, the participants returned the booklets through campus mail and regular (U.S. Postal Service) mail.

The procedures yielded 145 participants for Time 1, 112 participants (72% of the original sample) for Time 2, and 87 participants (60% of the original sample) at Time 3. Reflecting disproportionate gender breakdowns for psychology classes and (presumably) for interest in volunteering for psychology studies, many more females than males participated in the study. However, attrition was similar for genders and for cohorts. The female percentages were 74% (107 out of 145) for Time 1, 74% (83 out of 112) for Time 2, and 77% (67 out of 87) for Time 3. With respect to academic class breakdowns, the study netted 64 freshmen (44%) and 81 seniors (56%) at Time 1, 48 freshmen (43%) and 64 seniors (57%) at Time 2, and 40 of the original freshmen (now mainly seniors) (46%) and 47 of the original seniors (now 3 years postgraduate) (54%) at Time 3. At Time 1, students ranged in age from 18 to 23 (mean age = 19.7). At Time 1, all of the freshmen were either 18 or 19 years old; seniors ranged in age from 20 to 23. In terms of race/ethnicity at Time 1, 101 students (69.7%) indicated white, 27 (18.6%) indicated Asian American, 7 (4.8%) indicated African American, 3 (2.1%) indicated Hispanic, and 7 students (4.8%) indicated "other."

For each of the three testing sessions, the participants received the same booklet of measures. The booklet included the instructions for completing a Guided Autobiography. The booklet also included a short measure of personality traits, a sentence-completion test, a list of strivings

and life goals, and measures of mood, but these were not used in the current study.

Guided Autobiography: 10 Scenes

The Guided Autobiography is a written procedure asking respondents to identify and describe the most important episodes or events in “the story of your life.” The instructions explain that while the respondent will not be able to tell his or her entire life story on this occasion, he or she will have the opportunity to select 10 key scenes (episodes, events) that stand out as especially vivid or important in the story. For each of the scenes, the respondent is asked to provide a written account that is at least one to two paragraphs in length. Each account is written on the front and (if necessary) back of a single sheet. (Some respondents choose to type their responses on computers and insert their own sheets into the booklet.) The instructions explain that each account should describe what happened in the event, when the event happened, who was involved in the event, and what the respondent was thinking and feeling during the event. In addition, each account should consider why the respondent has indeed chosen this particular scene to describe: “Why do you think that this is an important event in your life story? What does this event say about who you are, who you were, who you might be, or how you have developed over time?” Variations on the Guided Autobiography procedure have been used in a number of previous studies (e.g., Bauer et al., 2005; McAdams & de St. Aubin, 1992; McAdams et al., 2004).

For the current study, the Guided Autobiography procedure asked for two each of five different kinds of scenes in the life story—making for 10 scenes in all. The first two scenes were “High Points” (also called “Peak Experiences,” after Maslow, 1968). These are particular moments in the story that stand out because they are so good and positive. Scenes 3 and 4 are “Low Points” (also called “Nadir Experiences”). Nadir experiences are the worst moments in the story—scenes that stand out because they are so negative. Next (for Scenes 5 and 6), the subjects described two “Turning Points” in their story. A Turning Point is a “particular episode in your life story in which you underwent an important transition or change with respect to your understanding of yourself.” For Scenes 7 and 8, the participant described two “Early Memories.” Finally, the participant was asked to identify two “Other Memories,” each of which is a particular scene “from any period in your life that you have not already described” but which “stands out in your mind as an especially vivid or significant memory.” Each of the 10 narrative accounts, then, portrayed a different important scene in the life story.

For Time 2 and Time 3, participants received essentially the same instructions as they did for Time 1 with respect to the life-story scenes. No instructions were given regarding the advisability of describing the same events they described the first time around. Therefore, participants were free to choose the same scenes they had described earlier or to choose new ones.

Coding the Narratives

Across the three testing periods, over 3,400 narrative accounts of important autobiographical scenes were collected. The average length for a single account (one memory of one scene) was about 200 words. Each narrative account of an autobiographical scene was coded for emotional tone, motivational themes, and narrative complexity according to objective and reliable coding systems employed in previous published studies. Coders also determined the average number of words per account and the extent to which respondents described the same events in their lives from one testing session to another.

Emotional tone. Following McAdams et al. (2001, 2004), two independent coders rated each account for overall positivity of emotional tone on a 5-point scale, running from a rating of 1 for *very unhappy story, very negative emotional tone* to a rating of 5 for *very happy story, very positive emotional tone*. Ratings were summed across the 10 scenes for each participant and then divided by the number of scenes, yielding a hypothetical range of 1.0 to 5.0. Interscorer reliability for total scores was $r = +.84$.

Motivational themes. All narrative accounts were coded for two different sets of motivational themes. Following Bakan (1966) and Wiggins (1982), the first assesses the salience of *agency* and *communion* in life-narrative accounts. Agency refers to motivations to assert, expand, and control the self while communion refers to motivations for love, intimacy, and belongingness. Two independent coders trained on practice materials and then scored all the narratives in Time 1 for four agency themes (achievement/responsibility, power/impact, self-mastery, and status/victory) and four communion themes (love/friendship, dialogue, caring/help, and unity/togetherness) according to the system developed in McAdams et al. (1996). Interscorer reliability for total agency scores was $+ .82$ and for communion was $+ .86$. One of the two coders then proceeded to score all of the narratives in Time 2 and Time 3 for agency and communion, following standard procedures employed in McAdams et al. (1996). For each participant, the total agency score was the number of agency themes (out of four) identified across the 10 episodes, yielding a hypothetical

range of 0 to 40. The same procedure was followed for communion, yielding again a hypothetical score range of 0 to 40.

The second coding procedure for motivational themes derived from Deci and Ryan's (1991) self-determination theory (see also Sheldon & Kasser, 1995) and other humanistic approaches. From this perspective, motivation may be evaluated in terms of the extent to which the narrative exhibits self-determined personal growth. Modifying a procedure used in Bauer and McAdams (2004b; Bauer et al., 2005), two coders scored each narrative for personal growth on a 3-point scale. A score of 2 was given when the narrator described an event that served explicitly to promote the positive development of the self. For example, the narrator might report that he or she learned a new lesson about life, came to a deeper self-understanding, reached a higher level of development, or discovered something new and important about the self, people, or the world in general. A score of 0 was given for accounts in which no evidence for personal growth could be found. An intermediate score of 1 was given for accounts that appeared to offer some, albeit vague or qualified, evidence for personal growth. In order to keep the coding as simple as possible, no distinctions were made with respect to the kinds of growth reported. Therefore, growth examples ranged from simple lessons learned to attaining deep insights in life. Personal growth ratings were summed across the 10 scenes, yielding a hypothetical range of scores from 0 to 20. Intercoder reliability was $+ .81$.

Narrative complexity. Narrative complexity was assessed through an adaptation of the *conceptual/integrative complexity* scoring procedure developed by Suedfeld et al. (1992) and used in McAdams et al. (2004). The procedure, often used in coding political rhetoric and argumentation (e.g., Tetlock, 1984), assesses the extent to which a verbal or written account shows differentiation and integration of thought. In the current study, a single trained coder (with $r > +.80$ for agreement with practice stories) coded each scene for narrative complexity by making a simple yes/no judgment. (The convention of using a single coder trained to high levels of reliability on extensive practice materials for content analysis of written materials is a well-established convention in studies of TAT-based needs and sentence-completion-test measures of ego development; see Smith, 1992.) The account received a score of $+1$ if it showed any evidence for differentiation of thought, as when the writer incorporated multiple points of view (e.g., role taking), mixed motivations (e.g., doing a single thing for many conflicting reasons), complex emotional experiences (e.g., mixing opposite emotions in the same moment), or contradictory aspects of the self. The account received a score of 0 when no such evidence for multiple points of view, mixed motivations, complex emotional

experiences, or contradictory aspects of self could be found. For each participant, scores were summed across the 10 scenes to arrive at a total score, ranging hypothetically from 0 to 10.

Other coding. To answer the question of how often participants repeated the same events in their memory accounts from one testing session to the next, a single coder examined the accounts provided by each participant according to their five types—that is, high points, low points, turning points, early memories, and other memories. To assess repetition from Time 1 to Time 2, for example, the coder read a particular participant's four high points (two from Time 1 and two from Time 2) and then assigned a score of 0 if none of the events at Time 1 was repeated at Time 2, a score of 1 if one of the two events from Time 1 was repeated at Time 2, and a score of 2 if both of the events described at Time 1 were repeated in accounts of high points at Time 2. The coder then followed the same procedure with the four low points, four turning points, four early memories, and four other memories. (The few instances in which making this judgment was difficult were decided by a second coder.) The five repetition scores were then summed across the memory types for each participant, yielding totals ranging hypothetically from 0 (no repetitions from Time 1 to Time 2) to 10 (all 10 events described in the 10 scenes from Time 1 are described again at Time 2). The same procedure was then followed in determining repetitions between Time 1 and Time 3.

Finally, a single coder counted the number of words used by each participant in his or her two turning point events (and then divided the total by 2), to arrive at an estimate of typical story length for Time 1, Time 2, and Time 3. Past studies have shown that number of words per scene is highly correlated across different scenes (McAdams et al., 2004), so the number of words for turning points was viewed as an adequate proxy for number of words overall.

RESULTS

Time 1

As described under Method, scores for particular narrative categories on individual life-story scenes were aggregated across scenes to obtain more reliable indices for each category. The procedure is justified to the extent that the scores per category on individual scenes are at least modestly positively correlated (Epstein, 1979). Inspection of the data suggested that the aggregation was justified in this case.

For example, scores on agency themes in high-point scenes at Time 1 were positively correlated with scores on agency themes in turning points, low points, earliest memories, and other memories, although the correlations reached statistical significance only for high points with turning points. The same general pattern prevailed for all of the narrative indices: correlations across types of scene per coding category were generally positive (typically ranging between .05 and .20), though usually not statistically significant.

Table 1 provides descriptive statistics for the main variables at Time 1. The pattern of results suggested that even though the participants described some especially positive (high points) and especially negative (low points) scenes, the emotional tone ratings summed across the 10 scenes varied in a tight distribution around a mean that was very close to the midpoint of the 5-point scale (ranging from 1.8 to 3.7, group $M = 2.95$, $SD = 0.38$). The descriptive statistics also suggest that high narrative complexity was the exception rather than the rule in students' autobiographical accounts. About one out of every four memories showed any evidence of mixed emotions, multiple perspectives or motivations, or a differentiated presentation of the self (group M for narrative complexity = 2.41, $SD = 1.62$). As far as gender differences are concerned, women scored higher than men on communion, $t(143) = 3.08$, $p < .01$, but no other significant gender differences emerged.

Table 2 shows intercorrelations among the narrative variables at Time 1. Agency was positively associated with overall emotional tone, and both agency and communion were positively associated with both narrative complexity and personal growth. But none of

Table 1
Descriptive Statistics for Narrative Indices at Time 1

	Range	Mean	<i>SD</i>
Emotional tone	1.80–3.70	2.95	0.38
Agency	0–9	4.34	2.02
Communion	0–14	5.06	2.97
Personal growth	0–14	4.57	2.57
Narrative complexity	0–7	2.41	1.62
Number of words per scene	60–829	207	119

Note: $N = 145$.

Table 2
Intercorrelations for Narrative Indices at Time 1

	2.	3.	4.	5.	6.
1. Emotional tone	.18*	.15	.15	-.06	.01
2. Agency		.01	.31***	.20*	.02
3. Communion			.18*	.26**	.29***
4. Personal growth				.28**	.09
5. Narrative complexity					.39***
6. Number of words per scene					

* $p < .05$. ** $p < .01$. *** $p < .001$.

these significant correlations was especially robust, the strongest being between agency themes and personal growth ($r = .31$, $p < .01$). Finally, number of words per scene was significantly correlated with communion ($r = .29$, $p < .001$) and with narrative complexity ($r = .39$, $p < .001$). Students who wrote longer accounts tended also to express more themes of friendship, love, and related communion themes, and they tended to construct more richly differentiated scenes.

Continuity Over Time

Students who participated at Time 1 were asked if they would like to complete the same measures again at Time 2 (3 months following Time 1) and at Time 3 (3 years following Time 1). Those who stayed in the study for Time 3 scored higher than those who did not participate at Time 3 on Time-1 agency themes (M s of 4.71 and 3.80 respectively, $t(143) = 2.74$, $p < .01$). No differences were observed, however, for emotional tone, communion, personal growth, narrative complexity, story length, gender, or class standing (freshmen vs. seniors) when comparing Time 1 scores for those participants who continued in the study through Time 3 and those who did not.

Table 3 shows test-retest correlations over the short term (3 months; Column 1 in Table 3) and longer term (3 years; Columns 2 and 3 in Table 3) for the narrative variables. Table 3 shows longer-term “stability” (Watson, 2004) correlations over the 3-year period in two different ways. The second column in Table 3 shows the retest correlations for Time 1 to Time 3. The third column shows the

Table 3
 Longitudinal Stability of Individual Differences on Narrative Indices
 (Correlations)

	Short-term (3 months)	Longer-term (3 years)	
	(Time 1 to 2) (<i>n</i> = 112)	(Time 1 to 3) (<i>n</i> = 87)	(Time 1+2 to 3) (<i>n</i> = 76)
Emotional tone	.59***	.43***	.53***
Agency	.35***	.45***	.43***
Communion	.43***	.18	.28*
Personal growth	.35***	.35***	.41***
Narrative complexity	.59***	.53***	.60***
Number of words per scene	.64***	.40***	.64***

* $p < .05$. ** $p < .01$. *** $p < .001$.

correlations between the aggregated narrative scores from the 1st year in the study (across Time 1 and Time 2) and the Time-3 score. For the purposes of the third column, then, assessments at Time 1 and Time 2 (3 months apart) were pooled to yield what are presumably more reliable indices for all measures. Therefore, the resultant retest correlations in the third column express estimates of longitudinal stability as charted between the 1st year in the study (Times 1 and 2 combined) and the 4th year (Time 3, 3 years post-Time-1).

Retest correlations for individual differences in thematic categories from autobiographical memories ranged widely. With respect to short-term (3-month) dependability, overall emotional tone ratings and narrative complexity showed the highest correlations (+.59 in both cases). The motivational themes showed lower retest correlations over the 3-month range (.43 for communion, .35 for both agency and personal growth).

With respect to longer-term stability of individual differences over the 3-year span, narrative complexity ($r = +.53$ from Time 1 to Time 3; $r = +.60$ from the 1st year (Time 1 and Time 2) to the 4th year (Time 3) showed the highest level of stability. Nonetheless, for Time 1 to Time 3 correlations (Column 2 in Table 3), three of the four other narrative indices showed statistically significant stability correlations, ranging from +.45 for agency themes and +.43 for

emotional tone to $+0.35$ for personal growth. Only communion themes showed no evidence of longer-term stability in individual differences when correlations were calculated between Time 1 and Time 3. However, when scores on the narrative indices were pooled across Time 1 and Time 2 to yield more reliable estimates for scores in the 1st year of the study, 3-year stability correlations (Column 3 in Table 3) reached statistical significance even for communion.

Therefore, the most reliable and stable of the narrative indices appeared to be emotional tone and narrative complexity. The results suggest that individual differences in the overall emotional quality of the narrative and the extent to which the story's protagonist is described in a complex and psychologically nuanced manner are relatively predictable from one time to the next over a 3-year period in a sample of emerging adults. Motivational themes of agency and personal growth showed the next highest levels of stability. By contrast, communion themes showed very modest retest correlations over 3 years when Time 1 and Time 2 scores were pooled (Column 3 in Table 3) and did not even reach statistical significance when correlating Time 1 scores with Time 3 scores (Column 2 in Table 3).

Breaking the sample into the two age/class cohorts (freshmen and seniors at Time 1) revealed similar patterns in each. For both groups, the autobiographical indices of emotional tone and narrative complexity showed substantial dependability and stability (in the $.40$ – $.60$ range); the autobiographical indices of agency themes and personal growth showed lower but still significant levels of dependability and stability (in the $.30$ – $.40$ range).

Finally, as described under Method, a coder directly compared the particular high points, low points, turning points, earliest memories, and other vivid scenes described by each participant over the three testing periods to determine the extent to which participants tended to repeat the same events in their accounts from one testing period to the next. For comparisons between Time 1 and Time 2, scores ranged from 0 (no event repeated) to 8 (8 out of the 10 events described at Time 1 were repeated in accounts given at Time 2), with a mean of 2.25 ($SD = 2.00$). For comparisons between Time 1 and Time 3, repeat scores ranged from 0 to 5, with a mean of 1.72 ($SD = 1.16$). Not surprisingly, participants tended to repeat significantly more events from Time 1 to Time 2 compared with Time 1 to Time 3, $t(75) = 2.44$, $p < .05$. Furthermore, the tendency to repeat events was itself relatively consistent over time. The number of Time

1 to Time 2 repeats was positively associated with the number of Time 1 to Time 3 repeats, $r(75) = .47$, $p < .001$. Importantly, there was no evidence to suggest that the longitudinal continuity displayed for the narrative indices was due to participants' repeating the same events over time. For example, when the sample was split into those scoring above and those below the mean on number of repeats from Time 1 to Time 3, the corresponding retest correlations (from Time 1 to Time 3) for each of the two subsamples were not significantly different from each other for all the narrative indices.

Developmental Change

Developmental change was tested by comparing freshmen to senior scores (cross-sectional, between subjects) and examining changes in scores over time (longitudinal, repeated measures within subjects) in a series of analyses of variance (and covariance). In order to use the most reliable indices in these analyses, scores on narrative indices from Time 1 and Time 2 were summed and divided by two, yielding mean scores for each participant for the 1st year in the study (across testing sessions that were 3 months apart). Change over time, then, was indicated by comparing mean scores determined in the 1st year (Time 1 and Time 2 combined) with scores from the 4th year (Time 3). Because number of words per account, furthermore, was significantly associated with some of the narrative indices (Table 2), account length was used as a covariate in all analyses employing the narrative measures. To assess developmental change in the narrative indices, analyses of covariance (ANCOVA) were performed, with class standing as the between-subject factor, average story length as the (between-subject) covariate, and time of testing (1st year, 3 years later) as a repeated measures factor. (The analyses were also performed without the word-count covariate [ANOVA], yielding very similar findings overall.)

Significant effects for time were obtained for overall emotional tone. Ratings of overall emotional positivity increased from the 1st to the 4th year, $F(1, 73) = 5.53$, $p < .05$. However, no significant effects were found for class standing or for the interaction of time and class standing. Stories written in the 4th year were happier overall than those written in the 1st year.

No significant effects of time or class standing were obtained for the motivational themes of agency and communion. However,

developmental effects were obtained for the motivational theme of personal growth, as hypothesized. Scores on personal growth increased from the 1st to the 4th year in the study ($F(1, 73) = 5.21, p < .05$). However, while seniors scored slightly higher than freshmen, the difference was not statistically significant ($F(1, 73) = 1.85, p = .17$). Therefore, evidence for a developmental increase in personal growth was obtained from the repeated-measures effect, with participants showing higher scores over time, but was not obtained from the between-subjects effect in that the older cohort did not score consistently significantly higher than did the younger cohort.

Narrative complexity also showed some evidence for developmental change, as hypothesized. Scores increased significantly from the 1st to the 4th year, $F(1, 73) = 7.69, p < .01$. The between-subjects effect for class standing was not statistically significant but suggested a nonsignificant trend whereby the senior cohort showed slightly higher scores than the freshmen cohort on narrative complexity, $F(1, 73) = 3.08, p = .08$. In addition, a nonsignificant interaction trend was observed, $F(1, 73) = 3.14, p = .08$, suggesting that the differences between the older and younger cohort were relatively larger (but not reaching statistical significance) in the 1st year of the study, compared to the 4th year. In sum, narrative complexity scores for both cohorts increased over time. The original freshmen showed higher scores by the time they became seniors, and the original seniors showed higher scores 3 years out of college. Though not quite statistically significant, the older cohort tended to score slightly higher than the younger cohort, especially in the 1st year of the study when the students in the older cohort were seniors and the younger were freshmen.

DISCUSSION

This 3-year longitudinal study of emerging adults is the first to document longitudinal continuity and developmental change in measurable features of narrative identity. Content themes in autobiographical recollections of significant life-story scenes showed nontrivial levels of short-term (3-month) and longer-term (3-year) continuity. Narrative measures of emotional tone and conceptual complexity showed the highest levels of continuity, followed by the motivational themes of agency and personal growth. By contrast,

motivational themes of communion showed the lowest levels of continuity. With respect to developmental change, the strongest evidence was found for narrative complexity, which increased significantly over the 3-year course of the study and showed a near-significant between-subjects effect for cohort (original seniors tending to score higher than original freshmen). Evidence for the hypothesized developmental trend for motivational themes of personal growth was also found, as was evidence for a (nonhypothesized) increase in emotional positivity in life stories over time.

The issue of temporal continuity is foundational for personality psychology. Personality variables are expected to show respectable levels of short-term continuity (test-retest reliability, or what Watson, 2004, calls “dependability”) and longer-term continuity (Watson’s “stability”) over time. What counts as “respectable,” however, depends on the nature of the construct. Broad dispositional traits like Extraversion and Neuroticism are conceptualized as highly stable dimensions, and their methods of assessment (e.g., self-report scales, peer ratings) are designed to maximize stability (Heatherton & Nichols, 1994). To this end, Robins, Fraley, Roberts, and Trzesniewski (2001) reported Big Five retest correlations over the 4 years of college ranging from $+ .53$ for Neuroticism to $+ .71$ for Extraversion. In the current study, retest correlations for narrative complexity fell well within the range shown for traits in Robins et al. (2001), those for emotional tone fell just below, and the retest correlations for the motivational themes were in a lower range.

Overall, therefore, four of the five measures of narrative identity employed in the current study showed impressive levels of longitudinal continuity in a sample of emerging adults, though at levels somewhat below what is typically shown for dispositional traits. It should not be surprising, however, that life-story indices would show lower levels of short-term and longer-term stability than traits. Narrative theories suggest that people’s life stories, in contrast to dispositional traits for the most part, evolve substantially over time (McAdams, 1994; Singer, 2004). Furthermore, the favored measurement strategies for narrative identity—interpretation of open-ended story texts themselves—are especially sensitive to a host of personological, developmental, and contextual factors that may influence just what kinds of responses are produced. (See McClelland, 1980, for a parallel argument regarding the use of TAT stories for assessing individual differences in social motives of achievement, power,

and intimacy.) Rather than rate themselves on predetermined dimensions, participants tell stories about the self in response to such prompts as “describe a high-point scene in your life story” or “give an account of a key turning point in your life.” Their response options are many, and from one testing session to the next they are likely to choose different autobiographical scenes to highlight. Illustrating that point clearly is the current study’s finding that only about one autobiographical event in five described in the first testing session was repeated in subsequent testing sessions. (At the same time, the tendency to repeat events from one testing session to the next was not associated with increased continuity on narrative indices.)

Put simply, narrative identity itself is typically not viewed to be as stable as are traits, and the open-ended thematic methods used to assess individual differences in narrative identity are somewhat less controlled and predictable (less reliable in the psychometric sense) than the standard self-report scales used to assess traits. The current study is not designed to determine the extent to which the methodology per se, as opposed to the very concept of narrative identity itself, is “responsible” for determining the stability coefficients obtained. Most likely, both are involved. The important point, however, is that four of the five narrative indices do show impressive longitudinal stability, even if the coefficients are below what is typically obtained for self-report traits. Of course, the continuity shown does not apply to life stories writ large but only to the measured indices employed in the study. Life stories may be examined and coded in many different ways. The current study focuses only on relatively simple indices that have been employed in previous studies to show that at least some features of narrative identity may show continuity over time.

Indeed, what may be surprising for some researchers is that the narrative measures show any longitudinal continuity at all! Among social scientists regularly employing narrative methods and concepts are many who see narrative as an antidote to trait conceptions and other approaches they deem to be static and reductionistic (e.g., Shotter & Gergen, 1989; Smythe, 1998). From this point of view, life stories are discursive performances that are not expected to show continuity over time and across situations. People continue to develop their narrative identity from one moment to the next. If this viewpoint carried the day, however, it is difficult to imagine why

personality psychologists would ever be interested in narrative identity. The general expectation among narrative researchers working within the mainstream traditions of personality psychology (e.g., McAdams, 1995; Singer, 2004; Thorne, 2000) is that even if participants describe different autobiographical scenes from one testing session to the next, some continuity in the themes and images they employ should be expressed. People make meaning out of their lives through narrative, and it is expected that individual people employ their own characteristic strategies and procedures for narrative meaning making. In addition, each participant draws from experiences in his or her own life—an autobiographical pool of memories, images, and so on that is structured, or can be structured, in some kind of personally meaningful way (Tomkins, 1987). The expectation of at least some continuity and personal organization should prevail even for the emerging adulthood years, a period viewed by Arnett (2000) and others as characterized by some degree of flux and transition.

As an example, consider one young woman's (Sarah's) narrative account of one important turning point scene in her life, provided at Time 1:

I went abroad this summer to “study abroad.” Really, I went abroad to chase after my Italian boy, Tony. My first love. I was driven with the desire to see him again, to know if we could still be perfect for each other. Well, I found him and spent a week with him, all the while realizing that he wasn't the pedestal of wonder I had built him up to be in my head. I told him this in the nicest way possible, by writing him a very nice note and leaving it on his night table the morning after I left. I had spent the last year thinking no boy was as great as him. I had lost a lot of self-confidence on the way. Now, walking out of his front door, I knew I could make it on my own. I had made him laugh, I had found my confidence. I knew that there were more, better boys to come. I finally was able to get over my first love, and to move on. A huge weight was lifted off my shoulders as I stood on his doorstep, at an apartment on a street in Milan. I was free!

At Time 2 (3 months after the initial testing session), Sarah again chose the Italian-boy event to narrate as one of her two life-story turning points. Her second account delves more deeply into the

emotional toll this relationship extracted. She says that she was “obsessed over him for a year” before she took the trip. She suggests that she took the trip with the implicit expectation that Tony would eventually disappoint her, which would then enable her to “get rid of this emotional baggage.” She underscores just how “weird, really weird” was her fateful week in Milan: “Strangely, we acted like a couple who’d been dating all year, though we hadn’t even talked all year.” The differences between the two accounts are very interesting and perhaps indicative of Sarah’s rapidly evolving reinterpretation of this event and its meaning for her overall life story. Nonetheless, some of the same themes appear in both accounts: The story is about romantic love (motivational theme of communion) and personal growth. It conveys a moderately positive emotional tone and with its mixture of conflicting motivations and feelings suggests more narrative complexity than is common in the life-narrative accounts collected in this study.

Three years later (Time 3), Sarah no longer chose to tell the Italian-boy story. Her two life-story turning points instead involved a bittersweet memory from early adolescence in which she realizes she is no longer a “little girl” and a recent decision to quit a dead-end job. The prevailing motif in both stories is ambivalence about moving forward in life and the attendant difficulty of leaving the past behind. The stories are not as light and emotionally upbeat as the accounts of the week in Milan, and they do not incorporate the communal theme of romantic love. However, considerable continuity can be seen in narrative complexity and the emphasis on personal growth. In both versions of the Italian-boy story and in the two turning point scenes that Sarah tells 3 years later, she consistently juxtaposes conflicting emotional and motivational states: She chases after Tony in order to release herself from him; she makes her lover laugh, and then she leaves him behind; she wishes she were still a little girl, and she wants to feel mature and independent; she chokes back tears of anger and fear when she offers her resignation, and she exults in her newfound freedom. Moreover, in these accounts, as well as many others that Sarah provides, she repeatedly describes how she has grown and changed as a result of the experiences she has had. Many accounts take the form of what McAdams (2006) calls a *redemption sequence*. They begin with a sense that she is compromised, conflicted, or confined in some manner, and they end with her release. “I was free!” she proclaims at the end of the first Italian-boy

account. Yet each episode of liberation seems to teach her something about herself or about the world, or at least she thinks it does. A consistent theme in Sarah's life story is her belief that she is continually learning, changing, and growing and, relatedly, that growth comes from pain and setbacks.

In an effort to demonstrate that narrative indices of personality do indeed show impressive levels of longitudinal continuity, the current study makes a number of methodological compromises. First, the study adopts a small set of relatively simple narrative indices that have been used in previous studies. The indices of emotional tone, agency, communion, personal growth, and narrative complexity refer to very basic and relatively static features of life stories. Indeed, the indices resemble parallel trait dimensions in some ways—positive emotional tone suggests Extraversion and negative emotional tone suggests Neuroticism; personal growth and narrative complexity share some conceptual space with Openness to Experience; communion is reminiscent of the trait of Agreeableness. Proponents of narrative approaches to personality often argue that their studies go well beyond the simple categories of trait dimensions to explicate dynamic patterns in human lives (McAdams, 2006; Singer, 2004). The reasoning behind the current study, however, was to maximize the likelihood of demonstrating some longitudinal continuity with the simplest and most basic narrative indices in order to build a strong foundation for future narrative research. The same rationale lies behind a second methodological compromise—the decision to aggregate scores across many different life-narrative scenes. Although aggregating glosses over interesting differences that may be obtained when one compares, say, turning-point scenes to earliest memories, the same procedure maximizes the likelihood of obtaining relatively reliable estimates of simple narrative indices (Epstein, 1979). Again, the main goal of demonstrating temporal continuity trumped other considerations that might have made for a more nuanced and person-centered analysis.

The simple coding schemes employed in the present study bear some resemblance to content-analysis procedures used for imaginative stories written for the Thematic Apperception Test (TAT: McClelland, 1980). In particular, the agency themes resemble power and achievement motivation and the communion categories resemble the intimacy and affiliation motive scoring systems. Indeed, these scoring systems were originally designed to incorporate themes

from the TAT literature (McAdams et al., 1996), and past studies have shown that TAT-based motives are significant predictors of corresponding themes in life stories (McAdams, 1985). One should not conclude, however, that the construction of a life story is the same thing as telling fantasy narratives for the TAT. Whereas the TAT procedure is designed to sample randomly the flow of spontaneous, operant thought (McClelland, 1980), the procedures employed in the current study, and in most life-narrative research, focus explicitly on how a person makes sense of his or her own life in time. Whereas the TAT asks the respondent to respond imaginatively to an ambiguous picture cue, the life-story task is grounded in a person's real life. Respondents are asked to narrate and explain important scenes in their own life story, as they really recall them and in terms of how they really understand their function today. Although the recollection of life-narrative scenes is assumed to involve a good deal of construction and interpretation, the ultimate response is nothing like a fantasy. The respondent is urged, furthermore, to recall and describe only the most significant scenes in the life story, or what Singer and Salovey (1993) describe as *self-defining memories*. It is the arrangement and interpretation of these memories and their construction in light of long-term personal goals that, many theorists argue, provides life with unity and purpose and lies at the heart of narrative identity (Singer, 2004; Tomkins, 1987).

Narrative approaches to personality may be especially valuable in the study of change and development. Over time and experience, narrative identity is expected to change considerably more than dispositional traits, and narrative methods would appear to be more open to change and nuance compared to self-report trait scales. Developmental theories of many different stripes argue that emerging adulthood is a time of substantial personality change and development (Arnett, 2000; Erikson, 1963; Perry, 1970). More specifically, a range of theories suggests that as young people move through the emerging adulthood years, they should develop increasingly complex self-conceptions that incorporate an understanding of personal growth and integration (Erikson, 1963; Loevinger, 1976; McAdams, 1985; Sheldon, 2004). The results from the current study are generally consistent with this expectation, showing that participants wrote life-narrative accounts with higher levels of narrative complexity and personal growth in the 4th year of the study compared to the 1st. Whereas the observed increase makes sense in terms of theory about

emerging adulthood, one cannot rule out the possibility that the same kind of increase could, in principle, be shown for groups of participants in other age cohorts. For example, it is possible that the mere exercise of writing about one's life on three successive occasions, albeit spread across 4 years, could make for the production of more complex stories incorporating themes of personal growth on the 3rd occasion—a kind of long-term practice effect. Without repeating this study's procedures for other age cohorts, this possibility cannot be definitively ruled out.

In addition to increases in complexity and personal growth, life-narrative accounts at Time 3 also showed more positive emotional tone. This finding was unexpected, and it is not easily explained. One possibility is that the increase in positive emotional tone in life-narrative scenes over time reflects a general increase in happiness or a trait of positive affectivity. Some studies have shown that happiness may increase over the adult life span, but the emphasis in this research has been on gradual, long-term trends that span from the early adulthood years (the 20s) into old age (e.g., Mroczek & Kolarz, 1998). By contrast, the current study looks at a 3-year period for individuals who, at the beginning of the study, range in age from 18 to 23. Another, related explanation is that the increase reflects a kind of psychological maturation and increased sense of comfort with the self—a development that some researchers have also linked to hypothesized increases on traits of agreeableness and conscientiousness in the early-adult years (Robins et al., 2001).

Moving from Time 1 to Time 3 in the current study, the participants constructed life-narrative accounts that were more emotionally positive, psychologically complex, and indicative of personal growth over time. The Time-3 accounts resemble more closely than do their Time-1 counterparts what Bauer et al. (2005) and King and Raspin (2004) describe as narratives of the good life—the kind of psychologically nuanced and hopeful life stories that tend to be produced by “happy and mature people” (Bauer et al., 2005, p. 203). In this regard, it seems correct, in a very general way, to suggest that the students in this sample were more mature at Time 3 than they were at Time 1. It is also possible that they were feeling more optimistic about their lives. Here the socioeconomic and cultural context for the study's sample may play an important role. By no means a random sampling of young Americans, the participants in this study were disproportionately middle- and upper-middle-class, and all

attended an elite American university. Their job prospects and life options are surely more enhanced than would be the case for most subsamples of emerging adults in the United States today. It would not be surprising, therefore, to find, as the current study does, that their narrative constructions of their own lives might become even more optimistic over time, as the relative advantages that many of them enjoy in life become more and more evident. It remains an interesting and open question as to whether other samples of emerging adults in the United States would show a similar pattern.

In sum, the current study paves the way for future research on narrative approaches to personality by showing for the first time that relatively simple features of narrative identity aggregated across multiple scenes—indices of emotional tone, the motivation for agency, motivation for personal growth, and narrative complexity—exhibit respectable levels of longitudinal continuity over a 3-year period. The results also document important patterns of personality development that theorists of emerging adulthood have proposed. Taken together, these two sets of results provide strong support for the viability and strength of narrative personality research as a complement to more traditional self-report, trait-based approaches. Future research on narrative identity promises to shed new light on both continuity and change in personality from emerging adulthood into midlife and beyond.

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