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Noah Lyons Roost

University of Tennessee, Knoxville

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To the Graduate Council:

I am submitting herewith a thesis written by Noah Lyons Roost entitled "Mindfulness and Narrative: Connecting Experience and Story." I have examined the final electronic copy of this thesis for form and content and recommend that it be accepted in partial fulfillment of the requirements for the degree of Master of Arts, with a major in Psychology.

Robert G. Wahler, Major Professor

We have read this thesis and recommend its acceptance:

Kristi Gordon, Lowell Gaertner

Accepted for the Council:

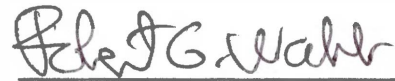
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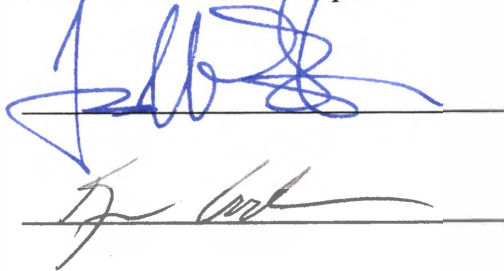
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Vice Chancellor and
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2005
P. 66

**Mindfulness and Narrative:
Connecting Experience and Story**

A Thesis

Presented for the

Master of Arts

Degree

The University of Tennessee, Knoxville

Noah Lyons Roost

May 2005

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ABSTRACT

Autobiographical narrative is the verbal summary of an individual's personal history. The quality of autobiographical narrative has been found to correlate with both emotional wellbeing (Oppenheim et al., 1997; Baerger & McAdams, 1999) and quality of social relationships (Van IJzendoorn, 1995; Shields et. al., 2001), and yet little has been done to examine other predictors or causes of narrative quality. Mindfulness training could potentially be a promising method of narrative enhancement. Mindfulness is the nonjudgmental, open awareness of what is currently occurring in the self and in the environment. Mindfulness is likely to promote open, objective awareness of new information and non-biased accommodation of existing schemas and narratives to new information. A similar prediction was recently made by Bishop et al. (2004). In their recent operationalization of mindfulness, they hypothesized that mindfulness practice leads to increased understanding of the subjectivity and limitations of one's own cognitive processes. They called for the use of coding procedures to assess the complexity of cognitive representations in self-narrative to test this hypothesis.

This study confirmed this hypothesis by demonstrating a positive relationship between mindfulness, as measured by the Mindfulness Attention Awareness Scale (Brown & Ryan, 2003) and narrative richness as coded according to Castlebury & Wahler's (1997) autobiographical narrative coding system. This indicates that mindful people typically generate more complex and detailed narratives. In addition the relationship between mindfulness and narrative coherence (Castlebury & Wahler, 1997) was also examined and a negative correlation was found suggesting that mindful people

also tend to have more disordered, unclear, or tangential narratives. These relationships continued to be statistically significant after controlling for several other personality factors, including the Big Five (Costa & McCrae, 1992).

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CHAPTER 1

INTROUDCTION

Mindfulness and Narrative: Connecting Experience and Story

Autobiographical narrative is the verbal summary of an individual's personal history. By condensing myriad individual experiences into prototypical patterns, narratives provide a map or template that provides cognitive organization and interpretation of the environment, explanation of the past, and prediction of the future. Both attachment theorists and social learning theorists predict that autobiographical narrative profoundly affects social relationships and general well being. According to attachment theory, early attachment experiences serves as a primary, central narrative or internal working model through which all other later relationships are viewed (Bowlby, 1982). This template often works as a self-fulfilling prophecy, creating expectations and interpersonal patterns that recreate the original attachment relationship in other important later relationships. In contrast social learning theorists focus on the narrative representations of the recent past and present, examining how these narratives reflect underlying social contingency patterns. Wahler and Castlebury (2002, p.301) state "present day experiences acquire salience when the narrator can trace their historical roots to highlight the contingency patterns that account for these experiences." Autobiographical narratives that incorporate more experiences and that adequately synthesize those experiences, create more accurate/useful models of contingency patterns. McAdams (1993) suggests another

essential function of autobiographical narrative: providing meaning and a coherent center to organize the many disparate roles of a modern life.

Recently many of these theoretical claims about the importance of narrative have received significant empirical support. A large body of research substantiates attachment theory's premise that attachment related narratives strongly relate to quality of interpersonal relationships. The Adult Attachment Interview (AAI) provides a powerful method of quantifying the coherence of an adult's attachment related narratives (Main, 1996). The AAI requires adults to provide narratives about attachment related experiences, which are then classified as coherent or incoherent. A meta-analysis of studies examining the relationship between AAI status (coherent vs. incoherent) of adults and their children's attachment status (secure vs. insecure) as assessed by the strange situation yielded a very large effect size of 1.06 (van IJzendoorn, 1995), indicating that parents with coherent narratives were likely to have securely attached children. This effect size remained equally strong when based solely upon prospective studies, in which the AAI was given to parents before the birth of their child. Parental responsiveness is a potential mediating mechanism that partially accounts for the relationship between the coherence of adults attachment related narrative and children's attachment status. Van IJzendoorn (1995) found an effect size of .72 for the relationship between AAI status and parental responsiveness and parents AAI status accounted for 12% of the variation in responsiveness. Finally, in yet another meta-analysis van IJzendoorn & Bakermans-Kranenburg, (1996) found a modest correlation (.28) between the AAI status of fathers and mothers, indicating that women with coherent attachment related narratives were likely to be married to men with similarly coherent narratives. Thus in sum, the research

on the AAI indicates that better quality attachment related narratives are associated with responsive parenting, a greater likelihood of marrying a parent with a similarly coherent attachment narrative, and a greater likelihood of raising a securely attached child.

Studies independent of AAI methodology also find a relationship between narrative quality and interpersonal relationships. For example, Shields, Ryan, and Cicchetti, (2001) found that maltreated children had less coherent narrative representations of their parents than well treated children. Coherent narrative representation was related to peer preference and prosocial behavior and negatively related to aggression and peer rejection. Narrative coherence mediated the effect of maltreatment on peer rejection in part by mitigating emotional regulation problems. This study indicates that helping regulate emotion is one of the important functions of autobiographical narrative.

In addition to the associations with enhanced interpersonal relationships, better quality narratives are also associated with greater well being. Oppenheim, Nir, Warren, and Emde (1997) found that children with more coherent narratives were more likely to be rated by their mothers as having fewer behavior problems and better emotional regulation than children with poor narratives. In another meta-analysis of studies of the relationship between AAI status and various psychological disorders, (as cited in Van IJzendoorn 1995) found a strong relationship ($d=1.03$) between the quality of the adult attachment narrative and clinical status. Baerger and McAdams (1999) found positive correlations between narrative coherence and both happiness and life satisfaction and negative correlation with depression in adults. Expanding the relationship between

narrative and well-being, Pennebaker and Seagal (1999) found a positive correlation between use of cognitive words in narrative and physical health.

One shortcoming of the research on narrative is that quite diverse variables have been included in the different operationalizations of narrative coherence. The AAI (Main, 1996), the most thoroughly researched and validated system of narrative coding, evaluates the coherence of attachment related autobiographical narrative in terms of Grice's (1975) four maxims of coherent discourse: quality ("be consistent and have evidence for what you say"), quantity ("be succinct yet complete"), relation ("be relevant"), and manner ("be clear and orderly"). Oppenheim, Nir, Warren, and Emde (1997) also studied narrative coherence but conceptualized it in a different way. Using the Macarthur Story Stem Battery, they presented children with emotionally challenging family conflicts and asked each tell a story about the conflict. They relied on a single 10 point likert scale of coherence, based on cohesion, acknowledgement of the conflict, providing a resolution, and providing embellishing details. In yet another operationalization of narrative coherence Baerger and McAdams (1999) include four variables in their life story coherence rating system: orientation (is the narrative anchored in a specific time and place), structure (does the narrative have all of the elements of a good story and are they chronologically organized), affect (does the narrative have an emotional evaluation of what the experience meant to the narrator), and integration (is the narrative integrated into the rest of the narrator's life). Unfortunately, many different qualities have been brought together under the umbrella construct of coherence including clarity of language and thought, organization, conformity to a standard story format, concision, specificity, and inclusion of affect.

Synthesizing many of the differing variables described above, Wahler and Castlebury (2002) advocate examining narrative quality in terms of richness and coherence. Castlebury and Wahler's, (1998) training manual contains operational definitions of each (see Appendix A). A coherent narrative is clear, free of tangents, organized, relevant, and cohesive as a whole. This definition of coherence incorporates elements of Grice's (1975) maxim of "relation" and "manner", Oppenheim, Nir, Warren, and Emde's (1997) "cohesion", and Baerger and McAdam's (1999) "structure". As defined in the training manual, a rich narrative contains a reference to a specific event, elaborative details, evaluation of the emotional significance of the event, and multiple viewpoints. These criteria also reflect narrative complexity, and hence richness can be seen as a specific type of complexity. Richness includes criteria related to Grice's (1975) maxim of "quality", Oppenheim, Nir, Warren, & Emde's (1997) "embellishing details", and Baerger and McAdams (1999) "orientation" and "affect" variables. Richness and coherence can vary independently of each other in the same narrative. For example, an extremely brief and simple narrative is coherent but not rich, while a complex but convoluted narrative would likely be rich but not coherent. Richness and coherence are likely to impart different benefits. Like a map that is clear and easily read, a coherent narrative makes interpretation of experience faster, easier, and perhaps more accurate. Like a detailed map covering a great amount of territory, a rich and complex narrative aids in making subtle distinction when interpreting experience and provides guidance in a great number of contexts.

Considering narrative coherence and richness are closely related to such essential aspects of human functioning as interpersonal relations and psychological well-being, a

better understanding of the process of narrative improvement is essential.

Autobiographical narratives can be seen simply as verbally mediated autobiographical schemas. Piaget's theory of schema assimilation and accommodation provides a valuable perspective on the process of narrative change. Faced with a new experience, people can respond in three ways. They can ignore the new information, assimilate the experience into their existing narrative, or accommodate their narrative to the new information. For example, a young man with an insecure attachment has a guiding theme in his narrative that other people cannot be relied upon or trusted. He takes a class with a seemingly stable and trustworthy teacher. He could ignore the experience and forget all about the teacher. He could assimilate this experience and interpret his teacher as fundamentally manipulative and untrustworthy. Or, he could accommodate his narrative to this new experience, revising his narrative to begin to include a differentiation between trustworthy and untrustworthy people. Ignoring new information adds nothing to a narrative, while rigidly assimilating information distorts the information and adds little complexity to the narrative itself. In contrast, accommodating the narrative to new information has a great value because it is more likely to lead to a richer and more complex narrative that can better account for new experiences.

The relationship between narrative coherence and accommodation is less clear. Children, adolescents, and even young adults learn how to accommodate their narratives to new information with the help of a mentor. For example Welch-Ross (1997), found that mothers who participated in their children's memory conversations were significantly more likely to have children who are able to reason about conflicting mental representations. Without such parental scaffolding and the subsequent ability to reason

about conflicting schematic elements, a child is less likely to resolve apparent contradictions when accommodating their narrative to new information. When a person has been taught these types of skills by a parent or mentor, accommodation is likely to result in a more coherent narrative lacking internal contradictions or tangents. However, accommodation in a person lacking these skills will likely lead to increased convolution and contradiction and decreased clarity.

Assuming that frequent accommodation of a narrative to new experiences leads to a richer and more complex narrative, we would expect that cultivation of open and accepting awareness of new experiences should be associated with richer and perhaps more coherent narratives. Mindfulness is the nonjudgmental, open awareness of what is currently occurring in the self and in the environment. Accommodation requires awareness of new information and openness to that information so that it does not have to be distorted or ignored to fit preexisting narrative themes. A mindful state provides this. Langer defined mindfulness as “the process of drawing novel distinctions (Langer and Moldoveau, 2000, p1)”. A recent meeting of mindfulness investigators (Bishop et al., 2004, p 234), predicted that because mindfulness practice leads to increased understanding of the subjectivity and limitations of one’s own cognitive processes, mindfulness should be associated with “complexity of cognitive representations in self narratives” and called for research to test this hypothesis. Williams, Teasdale, Segal, & Soulsby, (2000) have provided preliminary empirical support for this hypothesis. They have demonstrated that mindfulness training reduces the number of overly global memories in formerly depressed adults. Overly global memories tend to be a vague summary of past events rather than a description of specific event, and thus should be

associated with a lack of narrative richness. This study will further test Bishop's claim that mindfulness is associated with more complex cognitive representation in the self-narrative. Castlebury and Wahler's (1998) definition of narrative richness will be used to operationalize narrative complexity because as discussed above it is a very closely related concept to richness. In addition the relationship between coherence as defined by Castlebury and Wahler (1998) and mindfulness will be examined.

If a relationship between mindfulness and narrative coherence and richness is found, that relationship could be an artifact of correlations with other personality factors¹. Accordingly, additional personality measures are included to see if a potential relationship between mindfulness and narrative can be explained simply through their relationship with other personality measures. Extraversion, neuroticism, agreeableness, conscientiousness, and openness to new experience, known as the big five personality traits (Costa & McCrae, 1992, Digman, 1990), are often conceptualized as fundamental aspects of personality. There is reason to believe they are correlated with mindfulness. Brown and Ryan (2003) found a positive correlation between mindfulness and openness to new experience and a negative relationship with neuroticism. Furthermore, in a theoretical article, Sternberg (2000) predicted that mindfulness should also be associated with conscientiousness. The big five will be the primary personality factors included in this study. However, considering that narrative is a product of self-observation and that mindfulness includes attention to intra-psychic phenomena, it will be important to differentiate the role of mindfulness from other self awareness related constructs like

¹ Mindfulness describes a state of consciousness, however, a propensity to be frequently mindful varies among individuals, and thus frequency of mindfulness can be seen as personality trait.

reflection and rumination. Accordingly the Rumination/Reflection Questionnaire (Trapnell & Campbell, 1999) is also included in this study.

In summary, this is a pilot study designed to test the predicted co-variation between measures of mindfulness and narrative richness. In addition the relationship between mindfulness and coherence will be investigated. Both of these relationships will be further examined in the context of their associations with other personality variables.

CHAPTER 2

METHOD

Participants

This study examined responses from 77 participants drawn from a subject pool of undergraduate students enrolled in psychology classes at a large Southeastern public university. They ranged in age from eighteen to forty six with a median age of nineteen. Thirty of the participants were male and forty seven were female.

Self Report Measures

This study relies on a recently developed self-report measure of mindfulness, called the Mindfulness Attention Awareness Scale or MAAS (Brown & Ryan 2003). The scale asks respondents to rate according to a six point likert scale how frequently or infrequently the respondent has each of fifteen experiences. Each experience describes a different aspect of mindlessness. Examples include statements such as “I could be experiencing some emotion and not be conscious of it until some time later” and “I find myself listening to someone with one ear, doing something else at the same time.” Higher scores on the MAAS are associated with reporting less frequent experiences of mindlessness. The MAAS has been demonstrated to be a valid and reliable measure of mindfulness, exhibiting high internal consistency (Brown and Ryan, 2003) and validity. For example, Brown and Ryan’s 2003 validation studies demonstrated that Zen practitioners, who theoretically should be mindfulness exemplars, had significantly

higher scores on the MAAS than a control group. Furthermore they also found positive correlations between MAAS scores and self report measures of well being and self awareness and negative correlations with measures of psychological distress.

The big five personality traits (Costa & McCrae, 1992, Digman 1990) are the most popular trait theory today. The NEO-Five Factor Inventory or NEO-FFI (Costa & McCrae, 1992) provides a relatively brief yet strong measure of all five traits. The NEO-FFI has proven to be both a reliable and valid measure (Costa & McCrae, 1988). Furthermore, After applying the NEO-FFI in a sample of college students, Holden and Fekken (1994) endorsed its use with a college sample. Accordingly, this study will measure the big five personality traits with the NEO-FFI.

Mindfulness involves self awareness and so it is important to distinguish between mindfulness and other self awareness related constructs. Fenigstein, Scheier, and Buss (1976) studied self-consciousness and distinguished between public self consciousness, which involves a focus on the appearance of the self to others, and private self-consciousness, which involves curious introspection and self observation. Mindfulness is most similar to private self-consciousness. Attempting to explain why private self consciousness was found to be correlated with both increased self knowledge and increased psychological distress, Trapnell and Campbell (1999) broke private self consciousness into two constructs: "Reflection", which measures "intellectual self attention" and is related to openness to new experience, and "Rumination", which is related to neuroticism.

Their Rumination/ Reflection Questionnaire or RRQ (Trapnell & Campbell, 1999) is also included in this study. It has good internal consistency (Trapnell & Campbell, 1999) and has been validated by subsequent studies. For example, Teasdale and Green (2004) recently found that rumination, but not reflection, was associated with increased accessibility to negatively affectedly charged memories.

Narrative Coding

Personal narratives were collected from each participant by research assistants. The research assistants used a standardized prompt and five standardized questions (see Appendix B for a complete list of prompts) to elicit verbal narratives, which were tape recorded and later transcribed. Narratives were then coded by five research assistants using Castlebury and Wahler's(1997) coding manual. The manual contains five yes-no questions regarding coherence and five yes-no question regarding richness (see Appendix A). Each participant's individual richness and coherence scores for all narratives were summed providing each participant with a global richness and a global coherence score. Interrater agreement was moderate. The Intraclass correlation coefficient for richness was .70 and for coherence was .72.

Data Analysis

The first step in analyzing the data was collecting descriptive statistics, including means and standard deviations, for all measures included in this study. Next, Pearson correlations will be found for coherence, richness, and mindfulness, with all measures. Because a positive correlation between mindfulness and narrative richness is predicted,

our analysis will also include a one tailed significance test of that relationship. Finally, simultaneous regressions will assess the amount of unique variance attributable to mindfulness and the other personality variables when predicting narrative richness and coherence.

CHAPTER 3

RESULTS

Descriptive statistics for each of the measures used can be found in Table A1. The Mean global coherence score was 20.8 and the mean richness score was 12.2. This discrepancy indicates that most narratives were fairly coherent but only moderately rich. There are several possible explanations of this. Incoherence is less tolerable than a lack of richness and as such is much more likely to be punished or remediated. Due to college entrance requirements of some degree of coherent communication, a college sample is unlikely to include participants who are unable to provide a coherent narrative. It is also likely that it is easier to construct a coherent narrative than a rich one. As Table A-1 shows, many participants provided very brief and simplistic narratives lacking richness, but obviously quite coherent. The following is an example of such a narrative provided as answer to the prompt, "Tell me about the transition from being in class and doing work to going home or to your dorm room at the end of the day." "Well, in class I study...or I pay attention and study. And when I go to my dorm room I don't do anything but lay around and watch television."

This sample as a whole appears to be relatively unmindful. The mean MAAS score in this sample was 3.75 compared to mean the MAAS score, Brown and Ryan (1993) reported of 4.29 among Zen practitioners and 3.97 among an adult control group. This sample's big five personality trait mean scores were elevated compared to the mean scores of Costa and McCrae's (1992) normative sample of college students, indicating

that this sample is somewhat more neurotic and much more extraverted, open to new experience, agreeable, and conscientious.

The internal consistency of the both richness and coherence measures was not strong. Cronbach's alpha for the five coherence questions was .59 and for the five richness questions was .40. The low internal consistency of the richness measure is not surprising considering that Castlebury and Wahler's (1998) initial validation study of the narrative coding system reported a factor analysis that found that the five coherence questions loaded onto a single factor but that the five richness questions loaded onto three factors.

Intercorrelations were run on narrative richness and coherence and all other measures (see Table A-2). A positive correlation between mindfulness and narrative richness was detected with a one tailed significance test ($r=.201$, $p=.040$). This relationship became marginal when assessed with a two tailed test ($p=.079$). In addition narrative richness was found to be significantly correlated with openness to new experience ($r=.235$, $p=.044$). Narrative coherence negatively correlated with mindfulness ($r=-.389$, $p<.001$). It had no significant relationship with other personality factors.

Simultaneous regressions were run in which all the personality variables were entered as predictors of both narrative richness and coherence. Mindfulness and openness to new experience were both significant predictors of narrative richness (see Table A-3). Mindfulness was the only significant predictor of narrative coherence (see Table A-4).

CHAPTER 4

DISCUSSION

This study provides empirical evidence of the relationship between mindfulness and narrative richness, and hence support for Bishop et al.'s (2003) hypothesis that mindfulness should be associated with complex cognitive representations in narratives. This relationship can be understood in several ways. Mindfulness involves open, accepting awareness of both internal and environmental phenomena (Nyanaponika, 1972), which implies open-minded recognition of diverse new information without the need to distort the information to conform to prior assumptions (i.e. narrative schema). This lays the foundation for the accommodation of the narrative to the new information, resulting in a more complex narrative. In contrast a less mindful person would be more likely both to be unaware of the new information, and when aware, to interpret the new information in a biased way in order to conform with the guiding assumption of his or her preexisting narrative, thus allowing for assimilation¹. However, it is likely that the relationship between mindfulness and narrative richness is bi-directional. It is equally plausible that a richer more complex narrative allows for more frequent states of mindfulness. One impediment to mindfulness is becoming "lost in thought." Experiencing something that cannot be readily understood is likely to cause just such a state. A narrative lacking richness is like a map lacking detail, it will frequently lead its

¹ These claims are supported by Williams, Teasdale, Segal, & Soulsby, (2000) finding that mindfulness meditation leads to the inclusion of increasing levels of specific details in their autobiographical memories, which should be associated with richer narratives.

owner to feel lost and have to try to make sense of where he or she is. In contrast a rich narrative can readily explain many new experiences, and hence be less likely to result in confusion and distraction from the present moment. Further research employing an experimental design will be needed to illuminate the causal mechanisms behind the relationship between narrative richness and mindfulness. For example, future research could examine the effects of mindfulness training programs (e.g. Kabat Zinn's (1990) Mindfulness Based Stress Reduction) on narrative richness, as measured before and after the intervention. The question of causality is important because if mindfulness is found to increase narrative richness, mindfulness training could be used as a psychological intervention to help people with overly rigid and simplistic narratives.

Mindfulness was also found to be negatively correlated with narrative coherence. Again the data is correlational and cannot support claims of causality; however, it is hard to understand how a less coherent narrative could facilitate mindfulness. The most seemingly likely explanation, is that mindfulness is associated with accommodation of narratives to new information, and accommodation at times results in less orderly organization and increased digressions, and thus disrupted narrative coherence. Unfortunately, the median age of this sample was nineteen, so this study cannot examine the relationship between mindfulness and narrative coherence later in life. It is possible that mindfulness would continue to be associated with narrative incoherence. On the other hand, perhaps as people first begin to be frequently mindful, they are often challenged to accommodate their narratives to new information, resulting in a destabilization of their narrative's coherence. Perhaps after time, however, their increasingly rich narratives are less often destabilized by new information, and thus they

are able to restore full coherence to their narrative. Data from an older sample and particularly data from a sample that has been mindful for several years, will be required to answer this question.

Reliance on a young sample may be responsible for an additional shortcoming of the study: as discussed above, this sample has low average MAAS scores, indicating that they are relatively unmindful. Restricting the range of mindfulness likely reduced the power of the study. Further research including data from exemplars may detect an even more significant relationship between mindfulness and narrative richness and coherence.

This study has several other shortcomings. The primary focus of this study was the relationship between narrative richness and mindfulness. Although this relationship was detected with a one tailed test of significance, a more conservative two-tailed test of significance failed to detect the correlation, suggesting that the finding could potentially be a type 1 error. Replication of the correlation will be necessary to alleviate this doubt. Another shortcoming of the study is the low internal reliability of the richness and coherence measures. This may indicate that coherence and richness, as measured, are not single constructs but rather are combinations of multiple related constructs. Further research examining the properties of each of the individual items, as opposed to richness and coherence as whole constructs, will be necessary to answer this question.

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APPENDICES

Table A-1

Means and Standard Deviations of Coding and Self Report Measures

	Mean	SD
Richness	12.22	2.80
Coherence	20.80	3.08
Mindfulness	56.27	11.33
Neuroticism	33.82	8.64
Extraversion	44.33	8.17
Openness	40.39	6.80
Agreeableness	44.98	7.30
Conscientiousness	43.85	9.82
Reflection	40.24	8.40
Rumination	42.80	8.43

Table A-2

Richness, Coherence, and Mindfulness Correlations

		Richness	Coherence	Mindfulness
Richness	Pearson Correlation	.	.	.201(*)
	Sig. (1-tailed)	.	.	.040
Richness	Pearson Correlation	1	-.097	.201
	Sig. (2-tailed)	.	.397	.079
Coherence	Pearson Correlation	-.097	1	-.389(**)
	Sig. (2-tailed)	.397	.	.000
Mindfulness	Pearson Correlation	.201	-.389(**)	1
	Sig. (2-tailed)	.079	.000	.
Neuroticism	Pearson Correlation	.045	.137	-.295(**)
	Sig. (2-tailed)	.702	.240	.007
Extraversion	Pearson Correlation	.109	-.036	-.010
	Sig. (2-tailed)	.350	.757	.932
Openness	Pearson Correlation	.235(*)	-.056	.136
	Sig. (2-tailed)	.044	.635	.225
Agreeableness	Pearson Correlation	.037	.004	.040
	Sig. (2-tailed)	.746	.976	.716
Conscientiousness	Pearson Correlation	-.079	.089	.079
	Sig. (2-tailed)	.494	.441	.472
Reflection	Pearson Correlation	.122	-.158	.203
	Sig. (2-tailed)	.290	.169	.065
Rumination	Pearson Correlation	-.039	.063	-.195
	Sig. (2-tailed)	.736	.589	.076

** Correlation is significant at the 0.01 level (2-tailed).

*Correlation is significant at the 0.05 level (2-tailed).

Table A-3

Mindfulness and Other Personality Factors as Predictors of Narrative Richness

Model	Unstandardized		Standardized	t	Sig.
	Coefficients		Coefficients		
	B	Std. Error	Beta		
1 (Constant)	.172	5.904		.029	.977
Neuroticism	.049	.066	.148	.739	.463
Extraversion	.038	.047	.112	.806	.424
Openness	.169	.082	.382	2.062	.044
Agreeableness	.021	.050	.056	.418	.677
Conscientiousness	-.009	.040	-.032	-.221	.826
Rumination	.002	.064	.005	.026	.979
Reflection	-.069	.073	-.192	-.944	.349
Mindfulness	.070	.035	.269	2.023	.048

Table A-4

Mindfulness and Other Personality Factors as Predictors of Narrative Coherence

Model	Unstandardized		Standardized	t	Sig.
	Coefficients		Coefficients		
	B	Std. Error	Beta		
1 (Constant)	-1.920	4.964		-.387	.700
Neuroticism	.044	.055	.159	.797	.429
Extraversion	.039	.039	.139	.998	.323
Openness	.105	.070	.281	1.509	.137
Agreeableness	.042	.042	.131	.988	.327
Conscientiousness	-.010	.034	-.042	-.288	.775
Rumination	-.019	.054	-.065	-.359	.721
Reflection	-.028	.061	-.094	-.462	.646
Mindfulness	.072	.029	.331	2.506	.015

Appendix A

Coherence Questions

1. Upon reading the narrative, do you as the reader understand the central points or main ideas made by the narrator?
2. Are all the ideas or happenings presented by the narrator relevant to the question being asked?
3. Does the narrator's response follow a clear and orderly progression?
4. Is the narrator's response free of tangential remarks?
5. Do the parts of the narrator's responses fit together to form a sensible whole?

Richness Questions

1. Is at least one idea or happening, introduced by the narrator, elaborated beyond its initial introduction?
2. Is at least one specific or concrete event described?
3. Is the narrator's response free of vague or ambiguous thought?
4. Does the narrator support the idea presented through any evaluative comments?
5. Does the narrator provide information with regard to others?

Appendix B

A research assistant provided each participant with the following prompt:

“We are studying people’s description of everyday experiences. I would like you to answer five questions. Please try to answer each question with at least a paragraph long answer.”

They were then asked the following five questions in order:

“Tell me about the transition from being in class and doing work to going home or to your dorm room at the end of the day.”

“Tell me about how it is you know what you are feeling.”

“If you have any religious or spiritual beliefs, tell me about how those beliefs have changed as you have grown older.”

“What was puberty like for you?”

“Tell me about another major transition you made in life.”

VITA

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