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The Hierarchical Personality Structure of Aspiring Creative Writers

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Empirical studies of personality traits in creative writers have demonstrated mixed findings, perhaps due to issues of sampling, measurement, and the reporting of statistical information. The goal of this study is to quantify the personality structure of aspiring creative writers according to a modern hierarchical model of trait personality. A sample of aspiring writers ($n = 93$) and nonwriters ($n = 114$) completed the Big Five inventory. Correlations with personality were carried out at three levels: the Big Five traits, the two higher-order factors (stability and plasticity), and the more detailed facet-level. Consistent with past research, creative writers scored higher on trait *openness*. Extending past work, the hierarchical analysis also revealed novel correlates for the higher-order meta-traits (stability and plasticity) and some of the lower-order facets (aesthetics, ideas, activity, assertiveness, and depression). Individuals with higher scores on agreeableness, stability, and assertiveness were less likely to be aspiring writers. The likelihood of being a writer also decreased with age. Taken together, these findings indicate that aspiring creative writers differ from nonwriters in trait personality, with differences emerging at all levels of the personality hierarchy.

Writers are often the target of stereotypical depiction, portrayed in books and movies as intelligent and intuitive, yet hopelessly self-destructive and plagued with tumultuous life experiences (Piiro, 2002). However, their works, interviews, and biographies reveal a more expansive inventory of personality traits. Piiro (2002) argued that these traits have included being independent and nonconformist, possessing an elevated concern for ethics and aesthetics, and maintaining a constant state of wonder and curiosity that allows for imaginative insight into emotions and the environment.

Piiro's (2002) claims about writers have been supported, to some degree, by empirical work on the personalities of creative individuals. These studies have often compared writers to individuals in other artistic occupations or the general population. Unfortunately, the findings reported by these past studies have been quite mixed. Additionally, interpreting these findings can be difficult because statistical information was not reported or control groups were not properly specified. There has yet to be a study of creative writers that employs a current model of trait personality and a control group of nonwriters that resembles the writers on other demographic variables. Such a study would offer further insight into some of the existing notions about writers and help to obtain a more accurate portrayal of their personalities.

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CREATIVE WRITERS AND PERSONALITY

Several important first steps have been taken toward better understanding the personality traits of writers. Unfortunately, however, reports have often omitted information pertaining to the methods employed or the findings obtained. For example, Drevdahl and Cattell (1958) tested a group of 153 artists, including 31 general writers and 58 science fiction writers, on a self-report measure of personality, Cattell's 16 PF Test (Cattell, Eber, & Tatsuoka, 1970). Drevdahl and Cattell noted several differences between science fiction writers and the rest of the artists. Science fiction writers were more intelligent, radical, and dominant, but less stable and controlled, and not as concerned with group standards. Interestingly, the test also revealed that these writers were more cyclothymic, but less emotionally sensitive than the other artists. Although Drevdahl and Cattell made qualitative comparisons between the groups of artists and the general population, they did not provide the statistical information necessary to quantify these comparisons. In addition, although the writers were selected from a list of individuals who had published extensively and whose work sold well, the selection criteria were not adequately described. There may also have been a problem of attrition, with only 153 respondents returning the questionnaires from the total of 212 artists asked to participate. In other words, the artists who chose to participate might have differed in personality from those who chose not to, impairing the representativeness of the sample examined.

Barron (1966) examined the personality traits of creative writers using a variety of assessment materials. As part of a larger investigation into creative functioning at the Institute of Personality Assessment and Research (IPAR), Barron and his team observed and interacted with 30 creative writers over the course of 3 days. They assessed the writers with a Q-sort, wherein Barron described each writer using a set of statements selected from 100 items and averaged these statements across the writers to arrive at a composite description of the group. Barron's observations mirrored Piiro's (2002) claims about writers, with writers most frequently described as independent, verbally fluent, aesthetically reactive, and possessing a value for intellectual and cognitive matters.

Barron also administered the Minnesota Multiphasic Personality Inventory (Hathaway & McKinley, 1951), a measure of personality structure and psychopathology. He noted an interesting, seemingly contradictory, pattern of findings: Creative writers scored high on all indices of pathology, but also high on ego-strength (an indicator of psychological well-being). Drevdahl and Cattell's (1958) study of writers yielded a similar pattern of apparently conflicting results. The writers in their

study were cyclothymic, but also less emotionally sensitive (Drevdahl & Cattell, 1958). This combination of findings suggests that there may be a unique and complex relationship between writing, personality, and mental health.

Consistent with this possibility, several studies have examined the association between writers and psychopathology with fascinating results. For example, interviews with 30 creative writing professors revealed a greater prevalence of affective disorders, specifically of the bipolar type, as compared with matched controls (Andreasen & Glick, 1988). Post (1994) read biographies of 291 famous men in six categories (scientists, politicians, thinkers, visual artists, composers, and creative writers) and made psychiatric diagnoses of them. He found that 48% of creative writers had severe psychopathology, mostly depression. Among men in other categories, rates of severe psychopathology were lower. Similarly, a large-scale investigation of over 1,000 eminent individuals in a variety of creative professions also indicated that poets had the highest rates of depression and psychosis (Ludwig, 1995). Another study of female writers and matched controls similarly found a higher prevalence of depression and other mental health disorders in writers (Ludwig, 1994). Interestingly, writers were also more likely to be related to a mentally ill or creative individual, as well as more likely to have experienced childhood physical or sexual abuse (Ludwig, 1994). Also of note, Kaufman (2001) analyzed biographical data for 1,629 writers and in his sample, female poets had a higher rate of mental illness compared with male and female fiction and nonfiction writers, playwrights, and male poets. These studies suggest a higher prevalence of mental illness in writers compared to those in other occupations, with some evidence that gender and environmental experiences play a role. How these results map onto possible differences in normal trait personality, however, is not yet clear and merits further investigation (cf. Samuel, Simms, Clark, Livesley, & Widiger, 2010; Simms, 2007).

In the IPAR studies, Barron (1966) also administered the California Psychological Inventory (Gough, 1987) to his sample of 30 creative writers. The writers obtained high scores on flexibility, self-acceptance, social presence, and psychological-mindedness. They also had lower scores on good impression and achievement through conformance, communality, and socialization, suggesting that the writers were independent and non-conformist. Unfortunately, the results from Barron's studies at IPAR have been difficult to interpret because only qualitative comparisons were reported, with no reporting of statistics in the form of comparison tests, specific scores, or effect sizes. Furthermore, the size of his sample was necessarily small, given that the writers were tested over several days on a wide range of aspects.

Improving upon past work, several studies have examined the personality of writers within the framework of the Big Five model, the most prevalent model of personality at present (Goldberg, 1990; John & Srivastava, 1999). The Big Five model posits that a great number of cognitive and behavioral tendencies can be characterized by five major factors: extraversion, neuroticism, conscientiousness, agreeableness, and openness. The trait most obviously related to creativity is openness, which broadly refers to the need to enlarge and examine experience (John & Srivastava, 1999). Openness is characterized by a tendency toward imagination and curiosity for new ideas, sensations, and feelings (McCrae & Sutin, 2009). Although writers have been previously described in terms that appear related to openness, such as placing a value on intellectual and aesthetic experiences and possessing an originality of perception (Piiro, 2002; Barron, 1966), several studies have reported no differences in trait openness for writers, compared to others. For example, after Barron (1968) administered the Myers-Briggs Type Indicator (Myers, 1976) to a sample of 30 creative writers, he reported that they tended to be more introverted than extraverted, with no mention of the other traits. Unfortunately, no comparison group was described in this report. In other research, Mohan and Tiwana (1987) administered the Eysenck Personality Questionnaire (EPQ; Eysenck & Eysenck, 1975) to a sample of 100 North Indian writers. These writers reported higher rates of neuroticism (or emotional instability) and lower levels of extraversion, as compared to the general population means listed in the EPQ manual. Unfortunately, the magnitude of these differences was not reported. Finally, Merten and Fischer (1999) contrasted EPQ results of 40 writers and 40 actors with previously studied samples of 40 schizophrenics and 40 healthy controls. A comparison between the writers and actors yielded no significant differences in personality and a comparison of writers with the healthy controls was not reported.

Nevertheless, there has been some evidence linking creative writers and openness. Greengross and Miller (2009) studied humor professionals, administering a measure of Big Five traits to 31 professional comedians, 9 amateurs, and 10 comedy writers. Compared to a control group, all the comedians scored higher on openness. Comedy writers in particular scored highest on this trait, implying that openness might be especially important for creative writing. The sample size of writers in this study was rather small, however, and it is unclear whether these results generalize to other types of writers who do not focus on comedy. Another study by Kaufman (2002) compared 41 creative writing students and 40 student journalists on a thinking style task. To assess the influence of personality on task performance, both groups also completed the NEO Personality

Inventory Revised (NEO-PI-R; Costa & McCrae, 1992). Kaufman reported that, in comparison to the student journalists, creative writing students scored higher on neuroticism and openness, and lower on conscientiousness. This finding suggests that creative writers differed from journalists on these attributes, but it does not specify how creative writers compare to the general population.

An investigation of Bangalore-based artists by Pavrita, Chandrashekar, and Choudhury (2007) may provide some additional insight regarding the Big Five traits of writers and nonwriters. In this study, 40 writers, 40 musicians, and 40 controls completed the NEO-PI-R. To form the control group, Pavrita and colleagues chose participants who were residing in the same house as the writers and musicians, but were not involved in any major creative activity as a hobby or profession. They found that writers and musicians scored higher than the noncreative controls on all the Big Five dimensions (Pavrita et al., 2007). This seems to be the only study that has compared writers to controls on the Big Five traits. There are, however, some potential concerns with the control participants in this study, with issues possibly arising from the sampling procedure. Specifically, those who choose to reside in a house with artists and musicians may not be representative of the general population and all control participants knew that they were being compared to their artistic housemates. The latter could have biased the responding of this control group, potentially judging their own personality in comparison to their creative peers. In sum, there has yet to be a large-scale survey of the personality of creative writers, employing a widely accepted model of personality with a validated measurement instrument, and contrasting these results with an appropriate control group.

PERSONALITY MODELS

The categorization of personality into the Big Five traits has been met with considerable consensus (Simms, 2007; Soto & John, 2009; cf. Ashton & Lee, 2007), with this model demonstrating impressive generalizability for a comprehensive set of traits (Goldberg, 1990). Modern personality research has also moved beyond the Big Five model to an examination of how personality can be viewed as a hierarchical structure (Markon, 2009), with broad dimensions, as well as specific facets, as subtypes of the Big Five traits. Different levels of the personality hierarchy offer different levels of specificity and can thus provide unique information about personality.

When the intercorrelations between Big Five traits have been taken into consideration, two higher-order factors have been revealed, known as alpha and beta (Digman, 1997), or stability and plasticity (DeYoung,

Peterson, & Higgins, 2002). Stability is comprised of agreeableness, conscientiousness, and emotional stability, and reflects the tendency to maintain goals, relationships, and emotional states. On the other hand, plasticity is formed by extraversion and openness, and describes the tendency to explore and seek novelty (DeYoung et al., 2002). These higher-order traits might be better candidates than the Big Five traits for mapping onto biological models, with stability and plasticity having been associated with unique neural networks and neurotransmitters (DeYoung, 2006). Plasticity, for example, has been linked to dopamine, the neurotransmitter associated with approach behavior, incentive reward sensitivity, and response to novelty (DeYoung, Peterson, & Higgins, 2005). Stability and plasticity might best be conceived of as two major overarching goals, with different levels in both accounting for variability in personality, guided by underlying biological processes (DeYoung et al., 2002).

Stability and plasticity have also been linked to differences in attention and perception, with interesting implications for creative writers. After being repeatedly exposed to a stimulus that appears to have no relevance, perceivers will begin to ignore it (Lubow & Gewirtz, 1995), with future associations with this stimulus learned more slowly as a result. This process, known as latent inhibition, is decreased in individuals who display higher levels of plasticity (Peterson & Carson, 2000; Peterson, Smith, & Carson, 2002). In other words, individuals higher in plasticity are less likely to deem a stimulus as irrelevant and are quicker to identify a newly relevant (but formerly irrelevant) stimulus as important. Decreased tendencies toward latent inhibition may mean a greater likelihood of perceiving incoming stimuli as new and interesting (Peterson & Carson, 2000), which might facilitate the creative writing process (Piiro, 2002). In support of this idea, decreased latent inhibition has been associated with creative achievement (Carson, Peterson, & Higgins, 2003). Thus, examining the personality of writers at higher levels of the personality hierarchy, with respect to stability and plasticity, might reveal unique information about writers that is obscured by the Big Five level.

Examining the higher-order traits necessarily involves a loss of detail, in that it averages across Big Five traits and obscures possibly interesting associations that might occur at the level of the Big Five. The same, however, could be said of the Big Five traits, which are themselves relatively broad categories of cognitive and behavioral tendencies. Lower levels of the personality hierarchy provide a more specific level of analysis, breaking each trait into two or more subtraits known as facets or aspects (Costa & McCrae, 1992; DeYoung, Quilty, & Peterson, 2007; Soto & John, 2009). One particular model developed by Soto and John (2009) has separated

each Big Five trait into two subtraits, creating a 10-facet model of personality. This 10-facet model derived assertiveness and activity from extraversion, altruism and compliance from agreeableness, order and self-discipline from conscientiousness, anxiety and depression from emotional stability, and aesthetics and ideas from openness. In this way, levels of more specific traits are examined in relation to each domain. It might be possible, for example, for writers to score higher on one facet of a Big Five trait, but lower on another. In which case, the Big Five level of analysis would show no association between the trait and being a writer. However, a facet-level analysis for this same trait would reveal these potentially interesting associations. Although the facets of each trait are highly correlated, they are still capable of revealing unique associations (e.g., DeYoung et al., 2007; Hirsh, DeYoung, Xu, & Peterson, 2010). Each level of the personality hierarchy provides unique and possibly insightful information, which is why a multilevel personality analysis is important (e.g., Tackett, Krueger, Iacono, & McGue, 2008; Tackett et al., 2012). The higher-order traits and lower-order facets both provide additional information when combined with the Big Five traits.

This study examined the personality traits of aspiring creative writers among psychology undergraduates and compared these to a similar sample of control participants, at the higher-order, Big Five, and facet-level of personality. Based on past investigations of creative writers, some tentative hypotheses were possible. At the Big Five level, aspiring writers were predicted to be higher in openness, but also less extraverted and less emotionally stable. At the higher-order level, aspiring writers were predicted to be higher in plasticity and possibly lower in stability. Hypotheses were more difficult to form at the 10-facet level, but it was predicted that aspiring writers might score higher on depression (Andreasen & Glick, 1988; Ludwig, 1995). Aspiring writers were also predicted to be particularly low on assertiveness or activity, which would account for previous anecdotal observations of high introversion for writers. Finally, aspiring writers would likely score higher on the openness facets of ideas or aesthetics, or both. In light of past work demonstrating that gender differences have existed for personality (e.g., Weisberg, DeYoung, & Hirsh, 2011), gender was treated as a control variable in the analyses to better isolate the differences associated with creative writing.

METHOD

Participants

Participants for this study were recruited from York University's psychology undergraduate research

participant pool. Prescreening questions were used to select participants to form two distinct groups: aspiring creative writers and nonwriters. Participants were prescreened using 3 questions: “I enjoy writing fiction,” “I enjoy writing poetry,” and “I am good at writing fiction or poetry.” The prescreening questions were rated on a 5-point Likert scale from 1 (*strongly disagree*) to 5 (*strongly agree*). The inclusion criteria for the aspiring creative writers group included responses of 4 or higher for “I enjoy writing fiction,” and responses of 3 or higher for “I enjoy writing poetry” and “I am good at writing fiction or poetry.” For the nonwriters group, the inclusion criteria included responses of 2 or lower for these items (the inverse of the inclusion criteria for the writers group). In an effort to match both samples on verbal ability, participants rated themselves on two items, “I have good grammar and language skills” and “I have a good vocabulary,” using a 5-point Likert scale ranging from 1 (*strongly disagree*) to 5 (*strongly agree*). Participants who indicated that they had a good vocabulary and good language skills (reporting 4 or higher on these items) were considered eligible for the study. Based on these criteria, 209 participants were recruited to complete the study: 93 writers (71 female; $M_{\text{age}} = 20.32$, $SD_{\text{age}} = 3.89$) and 114 nonwriters (71 female; $M_{\text{age}} = 21.03$, $SD_{\text{age}} = 4.40$). The data from two participants were not used: one participant failed to indicate consent to participate and another was noted by an experimenter to be inattentive while responding.

Materials

Big five inventory (BFI). The BFI is a measure of the Big Five personality traits: extraversion, agreeableness, conscientiousness, emotional stability, and openness (John & Srivastava, 1999). It consists of 44 descriptive phrases, with each trait represented by 8–10 items. Participants indicate how much they relate to each phrase on a five-point scale, ranging from 1 (*strongly disagree*) to 5 (*strongly agree*), with responses grouped by trait and averaged. Higher scores indicate a higher level of a given trait. Scores for the higher-order factors, plasticity and stability (DeYoung et al., 2002), are obtained by averaging z -scores of their related traits. Extraversion and openness form plasticity and agreeableness, conscientiousness, and emotional stability form stability. To obtain scores for the 10-facets, items on the BFI are further subdivided, with each facet represented by 2–5 items (Soto & John, 2009).

Writing habits. Self-reported writing habits were measured using a series of face-valid questions regarding enjoyment and preference for writing in different genres (Appendix). Responses were made on a 7-point Likert scale ranging from 1 (*strongly disagree*) to 7 (*strongly*

agree). The genres assessed were fiction, poetry, and nonfiction. Frequency of writing was also assessed, with participants asked to rate how often they wrote in the various genres on an 8-point Likert scale, ranging from high frequency, 1 (*roughly every day*) to low frequency, 8 (*never*).

Procedure

Upon arrival at the lab, participants read and agreed to a consent form outlining the nature of the tasks and questionnaires. To avoid biases in responses or behaviors, participants were not informed of the study’s focus on creative writers. The participants completed the measure of writing habits and trait personality, as well as other measures unrelated to this particular study, in a randomized order. Upon completion, the participants were then debriefed and received partial course credit for their participation.

Results

Writing habits and preferences. The first goal was to determine whether the prescreen questions were successful in creating two groups, one composed of individuals engaged with creative writing and the other not. Independent samples t -tests were conducted to examine group differences for self-reported writing behavior (Table 1). Writers reported greater preference and liking for writing fiction and poetry, and a higher frequency of writing fiction and poetry than nonwriters. Results were slightly mixed for nonfiction writing. Writers reported a slightly greater frequency in writing nonfiction than nonwriters, although nonwriters reported greater preference in writing nonfiction. There was no statistically significant difference between writers and nonwriters for self-reported liking of writing nonfiction. Overall, these results demonstrated that the prescreen questions were successful in dividing the sample into fiction and poetry writers, and individuals who did not write in these genres.

The next step was to examine the differences between the two groups on a variety of personality traits. A review of the normality of the distributions revealed several outliers for some traits at the Big Five (i.e., agreeableness) and facet levels (i.e., the agreeableness facets of altruism and compliance, and the conscientiousness facet of self-discipline). Outliers were identified as scores that were at least three standard deviations from the mean. Nonparametric t -tests, the Mann Whitney-U, were therefore used for these traits.

Big five personality traits. Exploring how writers and nonwriters differed with respect to the Big Five personality traits, significant group differences were

TABLE 1
Mean Scores for Writing Habits by Group

Item	Writers		Nonwriters		<i>t</i> (<i>df</i>)	<i>p</i> -Value	Cohen's <i>d</i>
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>			
Like writing fiction	5.02	1.84	2.47	1.6	10.7 (206)	<.01	1.48
Write fiction	3.59	2.16	1.71	1.34	7.66 (206)	<.01	1.07
Prefer writing fiction	5.36	1.83	2.76	1.75	10.43 (206)	<.01	1.45
Like writing poetry	4.30	2.10	2.16	1.39	8.8 (206)	<.01	1.23
Write poetry	3.47	2.38	1.63	1.22	7.17 (206)	<.01	1.02
Like writing nonfiction	2.89	1.70	2.79	1.93	0.41 (206)	.68	.06
Write nonfiction	2.86	2.17	2.18	1.69	2.53 (206)	.01	.35
Prefer writing nonfiction	2.65	1.84	3.63	2.03	3.63 (206)	<.01	-.51

Note. Enjoyment and preference (Items 1, 3, 5, 7, 8) were scored on a 7-point scale. Frequency (Items 2, 4, 6) was scored on an 8-point scale.

found for trait openness, with writers scoring higher than nonwriters (Table 2). No statistically significant differences were found for the other four traits, although writers did score lower in agreeableness than nonwriters and this difference approached statistical significance ($p = .08$).

Higher-order personality traits. Table 2 reports the results of the comparison of the writers on the two higher-order factors. Writers exhibited higher levels of plasticity than nonwriters (Table 2), and lower levels of stability than nonwriters, although the latter effect just failed to reach threshold for statistical significance ($p = .06$).

Personality facets. A facet-level analysis was undertaken to examine potential personality differences between writers and nonwriters at a more highly differentiated level of personality (Table 3). Examining the facet level of personality revealed a number of differences between the two groups. As expected, and replicating the Big Five level analysis, writers scored higher than nonwriters on both facets of openness: aesthetics and ideas. However, differences were also observed for facets related to other Big Five traits, revealing additional differences obscured by the Big Five trait level. Specifically,

writers reported higher scores on the extraversion facet of activity, but no differences for the other extraversion facet of assertiveness. Similarly, writers reported higher levels of depression but not anxiety, both of which are facets of neuroticism (or emotional stability reversed). No other statistically significant differences were found at the facet-level.

Unique associations and control for gender. Because the two groups differed in their gender and age composition, it was important to rule out gender and age as playing a role in the differences observed between groups. It was also key to control for the shared variance that existed between different traits; because traits are not orthogonal to one another, regression or other methods have been required to examine unique associations. To achieve a clearer picture of personality differences between writers and nonwriters, a series of binary logistic regressions were conducted to examine the unique prediction of group membership (writer vs. nonwriter) by individual traits after controlling for gender and age. One participant who did not indicate his or her gender was excluded from these analyses.

The analysis began with the Big Five model of personality, with all Big Five traits entered as predictors

TABLE 2
Personality Differences by Group, Big Two and Big Five Level

Trait	Writers		Nonwriters		<i>t</i> (<i>df</i>)	<i>p</i> -Value	Cohen's <i>d</i>
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>			
Stability	-.11	.77	.09	.71	-1.95 (205)	.05	-.27
Plasticity	.26	.73	-.21	.74	4.51 (205)	<.01	.64
Extraversion	3.51	.83	3.46	.74	.48 (205)	.63	.06
Conscientiousness	3.57	.62	3.67	.53	-1.28 (205)	.20	-.17
Agreeableness	3.85	.60	3.97	.62	4683.50*	.14	-.20
Emotional stability	3.10	.80	3.28	.77	-1.57 (205)	.12	-.23
Openness	3.98	.49	3.47	.58	6.82 (205)	<.01	.95

Note. *The Mann-Whitney U test statistic was employed here due to nonnormality of the distribution.

TABLE 3
Personality Differences by Group, Facet Level

Facet	Writers		Nonwriters		<i>t</i> (<i>df</i>)	<i>p</i> -Value	Cohen's <i>d</i>
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>			
E: Assertiveness	3.23	.92	3.25	.82	-.18 (205)	.86	-.02
E: Activity	4.07	.87	3.77	.83	2.52 (205)	.01	.35
A: Altruism	4.01	.60	4.07	.69	5002.50*	.57	-.10
A: Compliance	3.75	.83	3.94	.70	4665.50*	.07	-.25
C: Order	3.10	1.03	3.3	.90	-1.46 (205)	.15	-.21
C: Self-discipline	3.50	.69	3.60	.60	4932.50*	.21	-.16
N: Anxiety	2.84	.92	2.78	.89	.44 (205)	.66	.07
N: Depression	2.92	.94	2.58	.94	2.56 (205)	.01	.36
O: Aesthetics	3.86	.81	3.17	.92	5.65 (205)	<.01	.80
O: Ideas	3.94	.54	3.55	.57	5.12 (205)	<.01	.70

Note. Letters before each facet correspond to the associated Big Five trait, with E = Extraversion, A = Agreeableness, C = Conscientiousness, N = Neuroticism, and O = Openness. Scores for Activity, Altruism, Compliance, Order, Self-discipline, Aesthetics and Ideas are transformed. *Mann-Whitney U test statistic.

of group membership along with gender and age as controls (Table 4). Openness predicted greater likelihood of being a writer and agreeableness predicted a decreased likelihood of being a writer, and these associations persisted even after taking into account gender and age. The remaining three traits were not unique predictors of being a writer. In addition, age uniquely predicted group membership after controlling for gender and the Big Five traits, with older individuals less likely to be writers. Gender was not a unique predictor.

With respect to the Big Two model of personality, both stability and plasticity were found to predict group membership uniquely after taking into account gender and age (Table 2). Higher levels of stability predicted less likelihood of being a writer, whereas higher levels of plasticity predicted a greater likelihood of being a

writer. Gender was also a unique predictor of group membership, with women being more likely to be writers, controlling for the higher-order factors of personality. Age was not a unique predictor in this analysis.

It was then examined which of the 10 facets of personality would uniquely predict being a writer, controlling for gender and age. A novel portrait of the personality of writers emerged, with both openness facets (aesthetics and ideas) uniquely predicting being a writer (see Table 3). The two extraversion facets displayed divergent associations, with activity predicting greater likelihood of being a writer and assertiveness predicting a decreased likelihood. Age, but not gender, uniquely predicted group membership, with older individuals less likely to be writers, controlling for the 10 facets of personality.

TABLE 4
Regression Showing Prediction of Group Membership by Age, Gender, and the Big Five Personality Traits

Variable	<i>B</i>	<i>SE</i>	95% CI for Odds Ratio			
			Lower	Odds Ratio	Upper	
Model 1						
$R^2 = .04$ (Cox & Snell), .05 (Nagelkerke)	Age	.06	.04	.99	1.06	1.14
Model $\chi^2 = 8.07^*$	Gender	.73*	.32	1.12	2.07	3.85
	Constant	-1.23	.80		.29	
Model 2						
$R^2 = .26$ (Cox & Snell), .35 (Nagelkerke)	Age	.09*	.04	1.01	1.09	1.19
Model $\chi^2 = 61.65^*$	Gender	.66	.39	.90	1.94	4.20
	Extraversion	.05	.23	.67	1.05	1.63
	Agreeableness	.66*	.30	1.06	1.93	3.50
	Conscientiousness	.24	.32	.68	1.27	2.35
	Emotional stability	.17	.27	.70	1.18	2.00
	Openness	-2.20*	.37	.05	.11	.23
	Constant	2.25	1.76		9.44	

Note. * $p < .05$.

TABLE 5
Regression Showing Prediction of Group Membership by Age, Gender, and the Higher-Order Personality Factors

	Variable	B	SE	95% CI for Odds Ratio		
				Lower	Odds Ratio	Upper
Model 1						
$R^2 = .04$ (Cox & Snell), .05 (Nagelkerke)	Age	.06	.04	.99	1.06	1.14
Model $\chi^2 = 8.07^*$	Gender	.73*	.32	1.12	2.07	3.85
	Constant	-1.23	.80		.29	
Model 2						
$R^2 = .17$ (Cox & Snell), .23 (Nagelkerke)	Age	.05	.04	.98	1.06	1.14
Model $\chi^2 = 38.26^*$	Gender	.69*	.34	1.01	1.99	3.90
	Stability	.71*	.24	1.28	2.04	3.25
	Plasticity	-1.15*	.24	.20	.32	.51
	Constant	-1.06	.81		.35	

Note. * $p < .05$.

TABLE 6
Regression Showing Prediction of Group Membership by Age, Gender, and the Personality Facets

	Variable	B	SE	95% CI for Odds Ratio		
				Lower	Odds Ratio	Upper
Model 1						
$R^2 = .04$ (Cox & Snell), .05 (Nagelkerke)	Age	.06	.04	.99	1.06	1.14
Model $\chi^2 = 8.07^*$	Gender	.73*	.32	1.12	2.07	3.85
	Constant	-1.23	.80		.29	
Model 2						
$R^2 = .28$ (Cox & Snell), .37 (Nagelkerke)	Age	.09*	.04	1.01	1.10	1.19
Model $\chi^2 = 66.95^*$	Gender	.64	.42	.84	1.90	4.29
	Assertiveness	.53*	.25	1.04	1.69	2.77
	Activity	-.76*	.27	.28	.47	.79
	Altruism	.21	.35	.62	1.23	2.44
	Compliance	.58	.31	.97	1.78	3.28
	Order	.07	.21	.71	1.07	1.62
	Self-discipline	.00	.37	.49	1.00	2.06
	Anxiety	.14	.24	.72	1.15	1.85
	Depression	-.31	.23	.47	.73	1.15
	Aesthetics	-.72*	.22	.32	.49	.74
	Ideas	-1.11*	.37	.16	.33	.68
	Constant	3.34	2.52		28.24	

Note. * $p < .05$.

Discussion

The purpose of this study was to examine potential personality differences between aspiring creative writers and nonwriters. Some of the personality differences that were predicted based on past theoretical and empirical work were replicated, whereas others were not. Consistent with the hypothesis, writers scored higher on trait openness. Because individuals high in openness tend to express their creativity and intellectual curiosity across media and are often verbally fluent (McCrae & Sutin, 2009), it made sense for the group of aspiring creative writers to be high in this trait. No differences were observed for the other traits in the sample, including

emotional stability and extraversion, despite the fact that past work has found differences for these two traits (Barron, 1968; Drevdahl & Cattell, 1958; Mohan & Tiwana, 1987). There are several reasons why results in this study may have diverged from these previous studies. Past investigations focused on professional or eminent writers, whereas our sample was composed of amateur or aspiring writers. Additionally, this study employed a larger sample than past investigations.

Examining writers at different levels of the personality hierarchy demonstrated how this approach revealed unique types of information about the personality of aspiring writers. With respect to the higher-order

factors, writers exhibited higher levels of plasticity, which was consistent with the hypothesis. Plasticity describes a tendency toward experience-seeking behaviors and the tendency to flexibly explore the world cognitively, perceptually, and emotionally. Creative writing may be an outlet for these exploratory tendencies, with imagined settings and characters used to experiment with perceptions, sensations, and new thoughts and ideas. Lower levels of stability were also observed in the sample of writers. Lower levels of stability describe a difficulty with maintaining goals, relationships, and emotional states. What was interesting and unique about this higher-order analysis was that these difficulties were not observable at the level of the individual Big Five traits, but only emerged when broader tendencies to maintain stability across these various domains were considered.

Like the higher-order factors, analyzing personality at a more highly differentiated level of the personality hierarchy, the facet-level, also revealed unique information about the personality of aspiring writers. This was particularly true of trait *extraversion*. Although no differences were observed for this trait at the Big Five level, writers reported greater scores on the activity facet but not the assertiveness facet. In fact, once unique associations were examined using regression, assertiveness became a negative predictor of being a writer. This illustrates that the writers were extraverted, but only in a very specific way. Higher scores on activity, indicating higher levels of energy and enthusiasm (Soto & John, 2009), likely relate to a tendency toward curiosity and exploration, helping to explain the greater levels of Plasticity observed at the higher-order level. This finding also provides some unique insight into why creative writers should not be characterized as introverted, per se. More accurately, they are active but not assertive. The facet-level analysis yielded some additional insights regarding writers and trait *emotional stability*. Although writers scored higher on the depression facet, in line with previous research on affective disorders in creative writers (Andreasen & Glick, 1988; Ludwig, 1995), no such associations were observed for the anxiety facet. This explains why no differences were observed at the trait-level for emotional stability and provides direction for a more refined characterization of the emotional life of writers. Further research is required to better elucidate how anxiety and depression differentially relate to creative writers and other creative individuals.

The analyses conducted at each level of the personality hierarchy provided a unique and novel insight into the personality of writers, and so it is difficult to point to one level as providing the best characterization of writers and their trait personality. Although the facet-level analysis accounted for greatest amount of variance in group membership (28%), this was barely more than

the variance explained by the Big Five analysis (27%). What is encouraging is that trait personality, along with gender and age, were able to account for so much of the variance in group membership.

Also interesting to note is that gender and age predicted group membership even after controlling for personality. Females were more likely to be aspiring writers, but this was only observed when personality was analyzed at the higher-order level. In contrast, age was a negative predictor of being an aspiring writer, controlling for gender and for the Big Five and facet-levels of the personality hierarchy. Previous research has found that the older one gets, the less likely one is to engage in creative writing (Hansen, Dik, & Zhou, 2008), which might speak to the difficulties of pursuing a creative hobby as responsibilities accumulate with age and independence.

This raises the question of whether personality has a causal effect on creative writing. Correlational designs of the kind offered here can only suggest causal hypotheses. Djikic and Oatley (in press) argued that three factors are causally necessary for artistic creativity. These are (a) sensitivity, which corresponds to openness and plasticity; (b) artistic compulsion, a persistent emotional urge to express oneself in a particular domain; and (c) lack of self-deception in this domain. They postulate that, as a kind of side-effect, these factors can render the artist vulnerable to such disorders as depression or addictions without susceptibility to mental illness or certain traits (low stability or high neuroticism) having any direct causal effect on creativity. A further implication is that potential for success in a creative domain should not be assessed based on personality per se. Rather, individuals should consider their sensitivity, artistic compulsion, and lack of self-deception in a chosen artistic domain and, if they find themselves high in these traits, feel encouraged to strive further.

It is important to point out the limitations of this study. For one, a relatively short measure of personality, the BFI, was employed to test the hypotheses. Although the BFI is a well-validated measure, more nuances may have been obtained with a longer, more in-depth questionnaire, such as the NEO PI-R (240 items; Costa & McCrae, 1992) or the Big Five Aspect Scale (100 items; DeYoung et al., 2007). Because these data were collected in the context of other measures, however, the personality questionnaire was necessarily short. In addition, eligibility for the study and assignment into the two groups relied on self-reported verbal ability and writing behaviour. In the future, these self-reports should be supplemented with reports from close peers and perhaps relatives to provide convergent validation of the self-reports, and to provide a more detailed and accurate picture of individuals (Vazire & Mehl, 2008). A daily diary approach could also be employed to better

examine writing behavior in real-life. A final potential limitation of the study was in the characteristics of the sample. Participants were undergraduate psychology students and this study, therefore, differs from other investigations of creative writers, which typically focus on professional writers. The average age of aspiring creative writers in this study was 20.32 years, and according to a study by Kaufman and Kaufman (2007), this is well below the average age of a writer's first publication (32.8 years). Because writers typically reach an expert stage 10 years after their first publication (Kaufman & Kaufman, 2007), the creative writers studied here were approximately 20 years away from their artistic peak. Furthermore, the sample was not comprised of students actively studying in the creative writing field, necessarily, but individuals with a self-reported inclination and skill for creative writing. This is a limitation in the sense that these results may not generalize to a set of accomplished authors. This same limitation, however, adds novelty to the findings. Interestingly, these results demonstrate that personality differences for aspiring writers are already observable at this early stage of a person's ambition and personal interests. To explore this idea further, a follow-up study involving a longitudinal design would be advantageous. Tracking individuals with a self-reported inclination for creative writing over time would allow an observation of how personality predicts and interacts with creative writing experience.

Despite the limitations of this study, these findings build on an exciting avenue of research on individuals in creative occupations. The importance of examining the personality of aspiring creative writers at different levels of the personality hierarchy was also demonstrated. This approach has highlighted some unique correlates of creative writing that deserve more careful and systematic investigation, particularly with respect to the extraversion facets of activity and assertiveness, the agreeableness facet compliance, the emotional stability facet of depression, along with the higher higher-order factor of stability.

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APPENDIX: ENJOYMENT AND PREFERENCE ITEMS FOR RWH

Enjoyment

- I like to read fiction (novels, short stories).
- I like to write fiction (novels, short stories).
- I like to read poetry.
- I like to write poetry.
- I like to read nonfiction (biographies, business, philosophy).
- I like to write nonfiction (biographies, business, philosophy).

Preference

- I prefer to read poetry and fiction (novels, short stories) over nonfiction (biographies, business).
- I prefer to write poetry and fiction (novels, short stories) over nonfiction (biographies, business).
- I prefer to read nonfiction (biographies, business) over poetry and fiction (novels, short stories).
- I prefer to read nonfiction (biographies, business) over poetry and fiction (novels, short stories).