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The creative writer: an examination of early childhood environment, psychopathology, and personality traits

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The Creative Writer: An Examination of Early Childhood Environment, Psychopathology, and Personality Traits.

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Abstract

The early childhood environment, the pathology, and the personality traits of non-eminent creative writers were compared to those of non-creative artists. The stated issues were examined using a thirty-item, forced choice questionaire. The results indicated that the non-creative writer group experienced more early childhood trauma than did the non-creative artist group. The findings are congruent with previous research and supports the position that early childhood environment plays a significant role in the development of creativity.

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The Creative Writer: An Examination of Early Childhood Environment, Psychopathology, and Personality Traits

During the last thirty years, creativity researchers have been nearly unanimous in their definition of the concept (Feist, 1998; Williams, 1999; Eisenberger, Armeli, & Pretz, 1998; Neihart, 1998; Gelade, 1997). Creative behavior must meet two basic criteria, it must be both original and adaptive. The element of adaptiveness, however, is not meant merely in the pragmatic sense. Behavior, product, and thought can be judged useful on purely intellectual or aesthetic criteria.

The identification of creative individuals has concentrated primarily on tests, behaviors, and personality traits. There has also been a growing interest in documenting the cognitive, social psychological, and personality characteristics associated with the phenomenon of creativity. Cognitive theorists attribute differences in creativity to differences in cognitive styles and intellectual capacity (Cropley, 1999). Cognitive assessments of creativity most often tap divergent thinking. Divergent thinking requires producing varied responses to a problem or question that has multiple alternative solutions (Eisenberger, Armeli, & Pretz, 1998). Critics advocate that these tests, on the other hand, simply measure intelligence, not creativity (Williams, 1999).

Personality theorists have been interested in identifying creative persons through conceptualization, description, and measurement of cognitive, affective, and motivational structures (Feist, 1998; Helson, 1999; Runco, Nemiro, & Walberg, 1998; Steptoe, 1998). Studies that focus on the personality traits of creative individuals follow one of two paths (Ryhammar & Brolin, 1999). The first path involves the study of the relationship between personality traits and creative activity in the various fields, including the biographical research of prominent creative persons. The second path involves a more narrow approach, concentrating on one or more personality traits or dispositions that are taken to be negatively or positively associated with creativity.

In general, creative persons have broad interests, independence of judgement, a sense of autonomy, and good intuition (Kolvin, 1999). The creative are more introverted, norm doubting, ambitious, and open to new experiences (Feist, 1998.) The person is often a perfectionist, setting high and unattainable goals. Allied to these characteristics are traits such as self-confidence, dominance, risk taking, and the ability to persist in the face of failure. Another identifying trait of creative individuals is a seemingly high correlation of mental illness and substance abuse as compared to non-creative groups (Durrenberger, 1999; Neihart, 1998)

Mood disorders such as depression, dysthymia, and bipolar have been observed most frequently. Frantom and Sherman (1999) noted significant correlations between creativity and affective instability. Ludwig (1998) found that persons in professions that require more logical, objective, and formal forms of expression tend to be more emotionally stable than those in professions that require more intuitive, subjective, and emotive forms.

Substance abuse and dependence have been linked to creativity due to the fact that many eminent creators have been documented as heavy users. Ludwig (1994) found that 26% of the creative individuals experienced alcohol related problems during their lifetime. The study further concluded that alcohol related disorders occurred in only in 3% to 10% of the population composed of natural scientists, soldiers, social scientists, social activists, and other social figures. Higher rates of alcoholism among creative individuals, especially writers, have been found in several other studies (Durrenberger, 1999; Pritzker, 1999). According to Pritzker, there is little research investigating the prevalence of less common drugs (cocaine, hallucinogens) and less harmful drugs (caffeine) in the creative community.

Curiosity concerning the origins of creative behavior has led biographers and scholars to investigate the role of family characteristics and dynamics in creative

accomplishment. Kerr and Chopp (1999) found that the majority of research concerning this subject has focused on family history, family climate, and parenting styles. The studies of Piinto (1998) concluded that successful creative individuals experience higher instances of orphanhood, parental disability, neglect, frequent moving, parental alcoholism, and suicide of family members. Low emotional intensity of parent-child relationship, parental fostering of autonomy, and parental-intellectual stimulation are more prevalent among creative people (Feist, 1998). Studies addressing the socioeconomic status of creative individuals have produced mixed results (Dudek and Strobel, 1993; Steptoe, 1998). Dudek and Strobel (1993) found that children coming from a monetarily deprived environment tend to score poorly on measures that assess the potential of creative thinking. Biographical studies concluded that an unbalanced percentage of eminent creators were raised in poverty. The tendency of creative individuals to be firstborn is a frequently observed phenomenon (Kerr & Chopp, 1999). Boling & Boling (1993) found that while first born males are associated with higher levels of creativity, the finding is reverse for females (Boling & Boling, 1993).

A substantial amount of creative research within the past decade has focused on persons working in art, literature, music, science, and technology (Brolin & Ryhammer, 1999). There is considerable debate concerning what constitutes creativity within the realms of science and technology. One indisputable fact is that non-creative art does not survive (Feist, 1998). The creative artist is defined as, "a creator such as a poet, painter or composer who produces novel artifacts that are accepted as whole works of art" (Martinsdale, 1999 p 115). A large portion of research pertaining to behaviors, personality characteristics, and environmental antecedents of creative artists has targeted primarily eminent creators. Eminent creators are those who have achieved great acclaim and notoriety (Simonton, 1999). Investigations into the less eminent creator may aid future researchers in the development of new insights and widen common knowledge of

the phenomenon of creativity. The purpose of this study is to identify the differences between non-eminent creative artists and non-creative individuals in the general population. The hypotheses are:

H_0: The early childhood environment, the pathology, and the personality traits of non-eminent creative artists are not significantly different from those of the general population.

H_1: The early childhood environment of non-eminent creative artists is significantly different from those of the general population.

H_2: The pathology of non-eminent creative artists is significantly different from those of the general population.

H_3: The personality traits of non-eminent creative artists is significantly different from those of the general population.

H_4: Life history is a significant predictor of future creative achievment.

Method

Participants

Sixty individuals were randomly selected from Sothern West Virginia and assigned to either the non-eminent creative artist group or the non-creative group. Thirty subjects comprised the non-eminent creative artist group. Thirty individuals comprised the non-creative artist group. The non-eminent creative artist group consisted of fiction writers whose works have received social acceptablility as determined by the stated criteria. The non-creative group consisted of those individuals who do not actively participate in the creative arts as a painter, graphic artist, poet, fiction writer, composer of music, or choreographer.

Materials

Subjects completed a self-report questionaire that addressed the issues of early childhood environment, pathology, and personality traits. The questionaire was

composed of thirty items. The questionaire used a forced choice technique (see Appendix C). If the subject marked both responses on an item or left an item blank, the subject was eliminated from the study. Test-retest reliability was .96.

Results

The independent variables were creativity and non-creativity. The dependent variables were early childhood environment, pathology, and personality traits. An ANOVA was used to analyze the data. Alpha was set at .05. The null hypothesis was rejected. As a whole, the early childhood environment, pathology, and personality traits of non-eminent creative writers are significantly different from those of the general population F (1, 331) = 25.54 $p < .05$, (see Table 1). H1 was accepted. The early childhood environment of non-eminent creative artists is significantly different from the general population, (see Table 2). According to this study, non-eminent creative writers were more likely to experience early childhood trauma, and be raised in non-conventional homes. H2 was rejected. The pathology of non-eminent creative artists is not significantly different than those of the general populaton (see Table 3). This study found that non-eminent creative writers were no more likely to have a family history of mental illness, receive outpatient psychological treatment, take psychotherapeutic medications, or abuse substances than their non-creative counterparts. H3 was accepted. The personality traits of non-eminent creative artists is significantly different from those of the general population, F (1,96) = 37.30, $p < .05$, (see table 4). The non-eminent creative writers and non-creative artists displayed significant differences in personality characteristics such as introverism, perfectionism, impulsivity, and assertivness. H4 was accepted. Life history was found to be a significant indicator of future creative achievement, F (1, 29) = 7.00, $p < .05$, (see table 1).

Discussion

This study was intended to identify differences in the early childhood environment, pathology, and personality traits among non-eminent creative writers and non-creative artists. In previous studies based on eminent creative writers and artists in general, these factors were found to differ significantly from the general population. The results of this study further validate a significant difference in the proposed factors: early childhood environment and personality traits. When combined, the early childhood environment, pathology, and personality traits of non-eminent creative writers and non-creative artists were significantly different. When examined seperately, the pathology and the of non-eminent creative writers and non-creative artists were not significantly different.

Previous studies concerning the early childhood environment, the pathology, and the personality characteristics of creative artists focused heavily on the eminent creative artist. Eminent creators are those who have achieved great acclaim. Eminent creators comprise a very small percentage of the creative artist community. It is likely that research findings based on the eminent creator can not be generalized to encompass all creative artists. However, this study supports previous findings which identifed a significant difference in the early childhood environment and personalilty traits of creative artists and non-creative artists.

According to the results of this study, the creative writer group was more likely to experience childhood trauma than their non-creative counterparts. Creative writers were frequently raised in unstable home environments, had divorced parents, moved often, and spent very little time with their parents. Creative writers commonly described their childhood as unhappy, and felt as if they were abused or neglected as children.

Personality traits are established early in life. They remain constant over time and are often the cause of subjective distress. The results of this study indicate that creative writers are more introverted, impulsive, sensitive to criticism, and open to new

experiences than their non-creative counterparts. Creative writers are often perfectionists, setting high and unattainable goals. They were also found to be self-confident and possessed the ability to persist in the face of failure.

These findings may lend insight into the coping mechanisms and personality formation of children who experience trauma and the subsequent development of creativity. In theory, children are more likely than adults to use fantasy as a coping strategy. Recurrent trauma during childhood would require that this technique be used more frequently. The repeated use of such fantasy may result in the superior and complex development of creative skills.

Investigations into the coping strategies of traumatized children may aid in the understanding of the development of creativity. Future researchers should also consider the examination of the less eminent creator so that the results could better lend themselves to generalization. Creativity could also be further examined through the investigation and comparison of seperate creative genres such as poetry, the visual arts, music composition, and choreography. Research into these areas may aid in the development of new insights and widen common knowledge of the phenomenon of creativity.

Table 1

Total Scores

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	331.350	1	331.350	25.546	.000
Within Groups	752.300	58	12.971		
Total	1083.650	59			

Table 2

Early Childhood Environment

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	29.400	1	29.400	7.008	.010
Within Groups	243.333	58	4.195		
Total	272.733	59			

Table 3

Pathology

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	7.350	1	7.350	2.248	.139
Within Groups	189.633	58	3.270		
Total	196.983	59			

Table 4

Personality Traits

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	96.267	1	96.267	37.306	.000
Within Groups	149.667	58	2.580		
Total	245.933	59			

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Appendix A

Literature Review

The History of Creativity

The earliest explanation regarding creativity is largely inferred from the writings of Homer and the authors of the Bible. (Dacey, 1999) It was theorized that the mind was composed of two separate chambers. The first scholarly investigation of this theory stemmed from Jaynes, as cited in Dacey 1999, when he termed the phenomenon, "bicameral mind." From prehistory well into the medieval period, creativity was considered a mysterious, supernatural process (Ryhammer & Brolin, 1999) that took place in a separate chamber of the mind. The chamber of thought in which novel ideas were produced was theorized as controlled by the gods. It was widely believed that the gods projected their ideas from Mount Olympus by inspiring the first chamber. Early civilizations thought that all creativity derived from the gods, usually through the meditation of the muse, a spiritual intermediary. A person who felt creatively inspired would invoke the appropriate muse for assistance. The second chamber of the mind was used to express concrete and specific thoughts such as hunger, heat, and cold. By the end of the medieval period and throughout the Renaissance period, speech, writing, and other mental operations grew more complex (Steptoe, 1998). As a result, it was recognized that thought could actually originate within a person's mind, and the notion of creativity as a mysterious, supernatural process gave way to self-awareness.

In 1767, the first major inquiry into the creative process took place. Duff, as cited in Dacey, 1999, set himself apart as an important figure in the study of creativity when he first suspected the biopsychosocial aspects of the process. The biopsychosocial theory entails the belief "that all human acts are due to a complex interaction of biological, psychological, and social sources" (Dacey, 1999 p. 316). As the Renaissance led to humanism, the concept of inherited genius took over. During the period, individuals deemed to be creative were labeled genius. The debates of the era focused on the relative contributions of nature verses nurture (Steptoe, 1998). Systematic study of the concept

of inherited genius began with Galton's publication "Hereditary Genius" (Ryhammar & Brolin, 1999). Galton, as cited in Dacey, 1999, was convinced that mental capacities are inherited. He examined the hereditary nature of mental abilities in subjects recognized by society as "geniuses." Galton advocated that genius resided in persons whom were the beneficiaries of exceptional inheritance. According to the model, early experience, and immediate environment do not play a significant role in the creative act (Dacey, 1999).

New theories implicating the biological role in creativity evolved throughout the nineteenth century. The theories grew as medical science produced evidence of the heritability of physical traits (Steptoe, 1998), and research involving cerebral localization emerged (Dacey, 1999). Autopsies conducted by the French surgeon, Broca led to the discovery that regional brain lesions produced specific results. As cited in Dacey, 1999, Jackson, a British neurologist, further discovered that brain lesions, though equal in size and intensity, produced different amounts of disruption. The findings led to the theory that the left side of the brain could powerfully dictate mental processes in some individuals, and the right side could dictate the mental processes of others. Theories concerning interactions between the two hemispheres of the brain across the corpus collosum and how this contributed to creativity became a popular debate. Students of the brain-biology connection held the general position that genetics determined creative ability.

James, as cited in Dacey 1999, questioned this theory and was the first scientist to make a case for the interaction of the environment combined with genetic inheritance. He went a step further than Duff and argued that the environment is a more powerful influence than genetic inheritance when determining creative ability. James stated that the conditions of a person's upbringing, such as the philosophy of the parents, were more closely associated with the development of creativity than genes. The study of creativity was not without the insights of the psychoanalytic theory.

Freud, as cited in Dacey, 1999, proposed that creative ability is a personality trait that tends to become fixed by experiences that take place during the first five years of life. In general, he viewed creativity as the result of overcoming some traumatic experience, usually one that occurred in childhood. Freud's explanation of the creative process depended heavily on his ideas about defense mechanisms. According to the theory, compensation, regression, displacement, compartmentalization, and sublimation occasionally led to creative insight. Compensation involves attempting to compensate for perceived inadequacies by excelling in another area (Liebert & Spiegler, 1994). Regression entails reverting to a previously successful behavior when a current behavior is not successful. Displacement occurs when an individual expresses feelings to someone less powerful than the person they are actually upset with. Compartmentalization involves having two incompatible beliefs. He also believed that people are most motivated to be creative when they cannot directly fulfill their sexual needs. Therefore, sublimation was the primary cause of creativity.

Identifying Creativity

Modern creativity theorists are combining biological, social psychological, environmental, cognitive, and personality theories to further guide research and demystify the phenomenon of creativity (Ryhammar & Bronlin, 1999).

To facilitate the study of creativity, researchers must first define creativity and then identify the trait within a given population. Strikingly, during the past thirty years, creativity researchers have been nearly unanimous in their definition of the concept (Feist, 1998: Williams, 1999; Eisenberger, Armeli & Pretz, 1998; Neihart, 1998; Gelade, 1997). Creative behavior must meet two basic criteria; it must be original and adaptive. Historically, creativity was conceptualized simply as a unique achievement (Dacey, 1999). The element of adaptiveness was incorporated into the definition of creativity as a means of distinguishing eccentric or schizophrenic thought from creative

thought. Adaptivness, however, is not meant merely in the pragmatic sense, behavior or thought can be judged as adaptive on purely intellectual or aesthetic criteria. The identification of creativity has concentrated primarily on psychometric tests, specific behavior, and personality traits.

Cognitive theorists of creativity attribute differences in creativity to cognitive style and intellectual capacity (Cropley, 1999). Guilford (1950) proposed the concept of measuring creativity through the measurement of divergent thinking. Divergent thinking involves producing varied responses to a problem or question that has multiple alternative solutions (Eisenberger, Armeli & Pretz, 1998). The Torrance Tests of Creative Thinking (TTCT) is the most widely used testing instrument in the measurement of divergent thinking (Rhyhammar & Brolin, 1999). The test was designed to challenge the central role played by IQ tests as predictors of high level adult productivity. The test was created in an effort to establish a connection between school age divergent thinking abilities and adult creative achievement (Subotnik & Arnold, 1999). However, divergent thinking assessments are easily affected by external circumstances and have been criticized for measuring intelligence related factors rather than creativity (Williams, 1999). Critics also maintain that such tests merely produce creativity on request and are not indicative of a person's daily creativity or the ability of a person to create on initiative. Williams stated that data collected involving the Torrance Test of Creative Thinking further validates that tests alone cannot predict creativity. Variables such as specific behaviors and personality characteristics are crucial to the identification of creative individuals.

Identification methods that target specific behaviors have been used by longitudinal researchers in order to identify creativity and predict future creative achievement (Subotnik & Arnold, 1999). Csikszentmihalyi, as cited in Subotnik and Arnold, conducted a five-year longitudinal study of teenagers who were selected on the basis of their creative product as well as their complete absorption into their chosen domains.

Evidence indicated that creativity was partially domain specific; an individual's creativity in one area of activity tends to be weakly but positively correlated to creativity in other areas (Lubart & Gentz, 1998). Research also indicated that creative individuals showed contradictory behavior patterns, and combine negatively correlated personality traits. For example, being classified as an introvert yet displaying extroverted tendencies such as dominance (Ryhammar& Brolin, 1999).

Personality theorists claim that creative individuals can be identified through their unique characteristics. Numerous studies focused on the personality traits of creative individuals and commonly follows one of two paths. The first of these paths involves the study of the relationship between personality traits and creative activity in various fields. The focus has been for the most part on persons working in art literature, music, science, and technology (Ryhammar & Brolin, 1999). Many researchers who seek generalizations about creativity by compiling statistical data from the biographies of eminent creators. The data is compared with information about other creative achievers and the general population in an attempt to identify any significant differences. Conclusions from the research may apply to creators as a group, but do not indicate the characteristics of any individual creator (Steptoe, 1998). The second path involves a more narrow type of study, concentrating on one or more personality traits or dispositions that are taken to be negatively or positively associated with creativity, such as conformity, dogmatism, frustration, narcissism, self-esteem, affect tolerance, resilience, elation, and hypomania (Ryhammar & Brolin, 1999 p.263).

Given the different methods for identifying creativity, tests, behaviors, and personality traits, few studies have attempted to devise an integrative, multimethod identifications framework. The Munich Longitudinal Study of Giftedness (Ryhammar & Brolin, 1999) began in 1986 with 25,000 German children and adolescents identified by teachers as exceptional in intelligence, creativity or social, artistic and psychomotor ability. Student

data included ability and personality measures, school and extracurricular performance indicators, and environmental conditions such as family, classroom climate, and critical life events. A central finding of the intensive study was that the profile of creatively gifted students differed dramatically from their academically talented peers (Subotnik & Arnold, 1999).

The Creative Personality

In the study of creativity, personality psychologists have been interested in identifying creative persons through the conceptualization, description, and measurement of cognitive, affective, and motivational structures. Factors that affect the development of the creative personality, and how these traits vary from one field setting to another have been evaluated (Helson, 1999). Research consistently concludes that creative individuals' character traits differ from the general population (Feist, 1998; Runco, Nemiro, & Walberg, 1998, Ryhammar & Bolin, 1999).

Creative persons are found to have broad interests, independence of judgement, a sense of autonomy, good intuition, and the perception of oneself as creative (Kolvin, 1999). Creative people are more introverted, norm doubting, ambitious, and open to new experiences (Feist, 1998). The creative are often perfectionists who set high and unattainable goals. Allied to these traits are: self-confidence, dominance, independence, and, risk taking, and persistence in the face of failure. Creative individuals are often found to be relatively unconventional, and have a greater need for self-direction and autonomy. Creative persons are more assertive, forceful, and seemingly self-assured. Across fields, creative individuals show characteristic patterns of interests such as a cognitive flexibility, interest and accuracy in communication, intellectual curiosity, and lack of interest in policing their own interests or those of others (Helson, 1999).

Madness and Creativity

Creativity is defined as the production of something that is both novel and highly valued and madness is defined as "a self-destructive deviation in behavior" (Neihart, 1998 p. 47). In the last two decades, there have been numerous systematic investigations into the alleged relationship between creativity and madness (Durrenberger, 1999; Steptoe, 1998). The authors stated that observations from biographical and psychiatric studies suggest that three characteristics are common to both high creative production and mental illness: disturbance of mood, substance abuse and dependence, and the risk of suicidal behavior. Disturbance of mood has been observed most frequently.

Mental disorders in which the primary feature is mood disturbance include: major depression, dysthymia and bipolar disorder (Neihart, 1998). There is a statistically significant increased rate of mood disorders among eminent creative people, writers, and artists especially (Durrenberger, 1999). According to the authors, the cognitive processes associated with certain moods may be the link between creativity and mental illness. For example, manic individuals may write volumes, paint numerous canvases, or engage in activities simultaneously. The work of Jamison, as cited in Durrenberger, suggests that periods of creativity are frequently preceded by an elevated mood. She also stated that depression may have an important influence on the creative process as well. Depression may slow thoughts allowing for a clear perspective. Depression may eliminate irrelevant ideas, increase focus, and allow for the structure of novel ideas. Frantom and Sherman (1999) found significant correlations between creativity and affective instability. Jamison's research noted that many of the cognitive changes that characterize mania and hypomania are also typical of creativity. These similarities include restlessness, grandiosity, irritability, intensified sensory systems, quickening of thought processes, and intense feelings (Neihart, 1998). Rothenberg's (1990) research concluded that translogical thinking characterized both psychotics and highly creative persons.

Translogical thinking is a type of conceptualizing in which the thinking process transcends the common modes of ordinary logic. Andreason, Stevens, and Powers, as cited in Neihart, 1998, investigated conceptual overinclusiveness, "the tendency to combine things into categories that blur conceptual boundaries (Neihart, 1998 p. 49.) The study included people who were schizophrenic, manic-depressive (currently known as bipolar disorder), and writers. The researchers found that the conceptual styles of writers and manic-depressives were similar. Writers, however, had more control over their thought processes than did manic-depressives. Ludwig (1998) found that persons in professions that require more logical, objective, and formal forms of expression tend to be more emotionally stable than those in professions that require more intuitive, subjective, and emotive forms.

Substance abuse and dependence has been well documented among eminent creative individuals (Durrenberger, 1999). Alcohol and creativity have been linked by the fact that many eminent creators have been heavy users. Ludwig (1995) reviewed the lives of 1,0004 eminent creative people who had a biography reviewed in *The New York Times Book Review* between 1960 and 1990. He assessed alcohol dependence or abuse on the criteria of physical problems, work interruption, personal and interpersonal problems, and arrests. He found that 26% experienced alcohol related problems during their lifetime. The study further concluded that alcohol related disorders occurred in only 3% to 10% of the population of natural scientists, soldiers, social scientists, social activists, and other social figures. There is little research investigating the prevalence of less common drugs (cocaine, hallucinogens) and less harmful drugs (caffeine) in the creative community.

Creativity has often been associated with a high risk of suicidal behavior (Lester, 1999). Estimates of the percentage of deaths from suicide among eminent creative individuals range from 0.3% to 13.3%, with a median of 2.9%. The percentage is higher among literary individuals. Theorists speculate that behaviors such as suicidal ideation,

suicide attempts, and suicidal threats among the creative population may be more closely related to the prevalence of mental illness and substance abuse rather than the specific creative process.

Early Environment and Creativity

Curiosity concerning the origin of creativity has often led biographers and scholars to investigate the role of family characteristics and dynamics in creative accomplishment. The majority of the research has focused on family history, family climate and parenting styles (Kerr & Chopp, 1999). Several researchers have found strong patterns of family trauma among creative men and women, in both historical and case studies (Csikszentmihalyi, 1996; Kerka, 1999; Piirto, 1998). Kerka (1999) investigated prevalent themes in the lives of successfully creative women writers. The results concluded that several subjects experienced orphanhood, parental disability, neglect, frequent moving, parental alcoholism and suicide of family members. Biographical studies indicate that eminent creators are also more likely to come from turbulent family backgrounds, be only children, grow up in poverty and homes that were described as very unhappy.

Low emotional intensity of parent-child relationship, parental fostering of autonomy, parental intellectual stimulation and apprenticeship were also found to be prevalent in the early environment of creative people (Feist, 1998). Kerr and Chopp (1999) studied the effects of parenting style on creative development. An authoritarian parenting style that demands conformity was found to restrain creative thought. Unusual parenting styles, or ones that are less conventional, have often been prevalent in the homes of creative individuals. These methods of instruction allow for flexibility, freedom of expression, independence, and originality of thought. Piirto's (1998) findings concerning parenting style and creativity were conflicted. She found that creative individuals grew up in homes that practiced both authoritarian and laissez-faire forms of discipline. Studies

concerning socioeconomic status have also produced mixed results (Kerr & Chopp, 1999). Much of the available research suggests that children coming from a monetarily deprived environment tend to score poorly on measures of the potential for creative thinking, compared with children raised in more affluent families (Dudek & Strobel, 1993). Dudek and Strobel (1993) found that children from middle and high socioeconomic status had higher scores on creativity tests. However, biographical studies found that an unbalanced percentage of eminent creators were raised in poverty (Steptoe, 1998).

The tendency of creative individuals to be firstborn is a frequently observed phenomenon. Among active scientists, more than half are firstborn, as well as nearly half of all creative mathematicians and creative writers (Kerr & Chopp, 1999). Previous studies have suggested that while firstborn males are associated with higher levels of creativity, the finding is reversed for females (Sulloway, 1999). Studies conducted by Boling and Boling (1993) reaffirmed these findings. The relationship, however, between birth order and creative achievement has not yet been studied with sufficient intensity and depth for many intellectual domains including music, art, and literature.

The Creative Artist

There is considerable debate concerning creativity in mathematics and science. One indisputable fact is that non-creative art does not survive. The creative artist is defined as "a creator such as a poet, painter or composer who produces novel artifacts that are accepted as whole works of art" (Martinsdale, 1999, pg. 115). Several studies have found environmental, psychosocial, and mental illness factors that set creative artists apart from other creators (Durrenberger, 1999; Feist, 1998; Lester, 1999; Pritzker, 1999; Simonton, 1999).

Personality differences have been noted between creative specialties. Creative artists compared to creative scientists were less cautious, conscientious, controlled, orderly, and

reliable. They were more aesthetic, curious, imaginative, sensitive and original. Creative artists were also distinguished by their emotional instability, coldness, and rejecting of group norms than were creative scientists (Feist, 1998). Artists have been described as more emotionally sensitive, tense, and impractical than scientists. Ludwig (1995) also found that creative artists were most likely to suffer from mental illness than any other group. Within this group are specific patterns as well. He found that musicians suffered more problems with substance abuse. Poets tended to have more mania and psychosis. Suicide was highest among poets, musicians, and fiction writers. The more precise fields of architecture and non-fiction writing suffered very little mental illness in comparison to their creative counterparts (Durrenberger, 1999). Findings such as these prompted further examination of studies that focused on the environmental antecedents of creative artists.

Baskin, as cited in Kerr and Chopp, 1999, studied 123 nineteenth century authors who were mentioned in at least half the standard histories of literature and compared them to 120 eminent scientists. After studying their biographies, she concluded that writers were more likely to come from poor homes, are prone toward depression and ill health, and died slightly earlier. The Goertzel's, as cited in Pritzker, 1999, studied the lives of 717 eminent personalities who had two or more biographies written about them since 1962. They compared 92 creative figures with other eminent personalities who lived during the twentieth century. The creative figures were more likely to be only children, come from homes described as very unhappy, and had alcoholic parents.

A criticism of previous research in the field of creativity remains that it has focused primarily on the eminent creator (Pritzker, 1999). Eminent creators are those who have achieved great acclaim and notoriety. They are creators who have entries in biographical dictionaries. These are the individuals whose works fill the libraries, concert halls, and art museums (Simonton, 1999). Investigations into the less eminent creator may aid

future researchers in the development of new insights and widen common knowledge of the phenomenon of creativity.

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Appendix B

Demographic Questionaire

Read the statements below and on the attached page. Fill in the blank or circle the appropriate response. Please choose only one answer and do not leave any questions blank. Thanks for participating.

Age _____

Sex _____

I actively participate in the following creative art _____

Have you ever entered your art in a competition? Y or N

Have you ever received money for your creative art? Y or N

Have you ever received positive feedback from an art instructor or comparable professional concerning your art? Y or N

Are you left-handed? Y or N

Are you: married, divorced, widowed, single? (circle one)

How many children do you have? _____

Highest educational level achieved (circle one): elementary, high school, undergraduate, graduate.

Appendix C

Early Childhood Environment, Personality, and Psychopathology Questionaire

Circle the appropriate response T or F. Thanks again for your participation.

1. There is a history of mental illness in my family. T or F
2. If I fail once at something, I am unlikely to try again. T or F
3. I feel as if I was abused as a child. T or F
4. My parents divorced before I was the age of thirteen. T or F
5. I have never been in inpatient psychiatric care. T or F
6. Growing up, my family was wealthy. T or F
7. I am sensitive to criticism. T or F
8. I am not outgoing. T or F
9. I am the oldest child. T or F
10. I feel as if I was neglected as a child T or F
11. I have been treated for substance abuse. T or F
12. A family member has committed suicide. T or F
13. I was raised by my biological parents. T or F
14. I am tense. T or F
15. I am not a perfectionist. T or F
16. I have never been prescribed medicine for depression. T or F
17. I often act without planning. T or F
18. When I was a child my father spent a lot of time with me. T or F
19. I would describe my childhood as happy. T or F
20. I have been prescribed medication for anxiety (nervous problems). T or F
21. One or both of my parents abused alcohol. T or F
22. I feel as if I have a substance abuse problem. T or F
23. I feel I am as intelligent and capable as most others. T or F
24. I have planned or attempted suicide. T or F
25. I do not like to try new things. T or F
26. I have never received outpatient psychological services (ex, counseling). T or F
27. When I was a child, our family moved a lot. T or F
28. As a child, my mother spent a lot of time with me. T or F
29. I do not like to be responsible of a situation. T or F
30. I will let people treat me unfairly and not complain. T or F