A great vulnerability of the orthodox position on the Shakespeare authorship question is its inability to explain how William Shakspere of Stratford-on-Avon acquired the sophisticated knowledge revealed in the Shakespearean canon, ranging broadly from the law to seamanship, from courtly mores to the geography of northern Italy. In the absence of evidence for the requisite education or experience, orthodox commentators typically characterize William of Stratford as a genius with an innate talent for the creation of imagined realities, rendering education and experience unnecessary. But this rhetorical strategy is little more than a pseudo explanation that impedes our understanding of the actual sources of creative eminence.

Conceptualizing genius as innate talent fails on several counts. First of all, it suggests an ineffable quality of mind regarded as ultimately unknowable, a point of view that substitutes one mystery for another while excluding the possibility of further inquiry. In addition, the notion of innate talent would seem to imply the operation of genetic influences, but the exact nature of these influences or evidence for their heritability are left unspecified. Finally, the term lends itself to a circular argument in which innate talent is said to explain creative accomplishment, while the accomplishment is taken as evidence of innate talent. In sum, we learn nothing about the sources of eminent creativity by invoking the notion of genius as innate talent.

A far more defensible conceptualization of genius is as a public accolade bestowed on an individual to acknowledge eminently creative accomplishment,
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most often in artistic or scientific domains. The accomplishment must be seen as both novel and unanticipated, shattering old paradigms and offering entirely new perspectives on the domain of endeavor in question. Because there is no metric for measuring degrees of creative accomplishment, the designation of genius necessarily depends on a social consensus regarding the impact of the creative product. Thus, a receptive audience is central to the accolade of genius (Csikszentmihalyi 533–545).

<table>
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<th>4 Psychological Factors Associated with Significant Creativity:</th>
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<td>1. Dedicated preparation</td>
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Regarding genius as a social consensus rather than as a mysterious quality of mind opens the way for investigating the developmental, cognitive, and personal factors associated with creative accomplishment. In the following exposition I discuss four psychological factors associated with significant creativity that are pertinent to the Shakespeare authorship question: dedicated preparation, convergent versus divergent thinking, openness to experience, and bipolar disorder. I also point out their correspondence or lack thereof to the biographies of Edward de Vere and William Shakspere. My aim is to demonstrate that the psychology of creativity provides strong circumstantial evidence in favor of de Vere as the author of the Shakespeare canon. Wider discussions of the creative process can be found in Dean Keith Simonton’s Origins of Genius (1999) and his edited Wiley Handbook of Genius (2014).

Dedicated Preparation

Many of those we have dubbed geniuses have protested that their creative accomplishments were not the result of the unfolding of innate talent but rather the outcome of a long period of dedicated engagement with their field of endeavor. Consider the cases of Mozart and Michelangelo.

In a letter to his father the adult Mozart wrote: “People make a great mistake who think that my art has come easily to me. Nobody has devoted so much...
Mozart began his study of music under his father's tutelage at about the age of five. His first seven piano concertos, written between the ages of 11 to 16, were primarily modifications or arrangements of the works of other composers. Musicologists consider his Piano Concerto #9, written at age 21 after some 15 years of study, to be his first masterpiece (Howe 3).

Michelangelo’s 1499 Pietà of the seated Mary holding the crucified Jesus across her lap was immediately acclaimed a masterpiece. But the sculptor himself was more circumspect: “If people knew how hard I had to work to gain my mastery, it would not seem so wonderful at all” (Shenk 57). Michelangelo was apprenticed to a painter at age 13 and subsequently studied sculpture under the patronage of Lorenzo de Medici. While still in his teens he produced a number of promising sculptures on commission. But it was not until age 24, fully 11 years after beginning his apprenticeship, that he produced his first masterpiece (Coyle 65).

These and many similar anecdotes have recently led to a good deal of research on the so-called ten year rule, which holds that highly creative accomplishment requires a decade or more of prior intense immersion in one's area of endeavor. This generalization stems from the work of J. R. Hayes (135–145), who examined the biographies of a large number of acclaimed painters, composers, and poets to determine the amount of elapsed time between the beginning of their careers and the production of their first masterpiece. He found that regardless of the area of endeavor, these artists required ten or
more years of sustained, effortful engagement in their profession before produc- 
ing their first celebrated work. Similar studies have found the same to be 
true of the developmental history of highly creative individuals in a variety 
of domains, including writers, sculptors, mathematicians, scientists and chess 
players, among others (Weisberg 139–165).

The investigations initiated by Hayes are particularly significant because they 
do not concern creative individuals in general, but rather only those who are 
regarded as geniuses because of the impact of their contributions. The data 
show that even members of this rarefied group require many years of ded-
icated apprenticeship in order to develop the skills underlying their mature 
work. Eminently creative accomplishment emerges out of years of applica-
tion and perfection of skills rather than in a flash of inspiration.

Upon his return from Italy in 1576, Edward de Vere became engaged in 
writing and producing entertainments for a courtly audience (Anderson 
123-25); he also published eight poems in the anthology, The Paradise of 
Dainty Devices, in 1576 under the initials E.O. Thus, it is interesting to note 
that knowledgeable commentators first took public notice of his poetry and 
entertainments approximately ten years later. In 1586, William Webbe in 
his Discourse of English Poetry, extolled de Vere’s skill in what he called “the 
devices of poetry.” This sentiment was repeated three years later by George 
Puttenham in The Art of English Poesy, who in addition explicitly praised 
de Vere’s interludes and comedies. However, de Vere’s apprenticeship may 
well have begun many years prior to his first productions at court. Ramon 
Jiménez (2018) makes the compelling case that five anonymous plays outside 
the Shakespeare canon were written as early as de Vere’s adolescence and 
later rewritten by him as the canonical 1 Henry IV, 2 Henry IV, Henry V, 
Richard III, King John, The Taming of the Shrew, and The Tragedy of King Lear. 
Such a lengthy apprenticeship would be consistent with the high degree of 
dedicated preparation required to produce the masterpieces of the Shake-
peare canon.

Mr. Shakspere’s biography gives no hint of a corresponding period of dedi-
cated apprenticeship. Rather, traditional Shakespeare experts would have us 
believe that he appeared in London in the late 1580s and immediately began 
to produce fully formed plays and epic poems starting in 1590, apparently 
arising ex nihilo. This theory contradicts all we have discovered about the 
long incubation of creative accomplishment and illustrates the circularity 
of attributing the canon to Mr. Shakspere’s supposed innate talent and then 
explaining this innate talent by referencing to the canon.

Convergent and Divergent Thinking

Convergent thinking is the process by which we retrieve information from 
long term memory to provide correct answers to factual questions, e.g,
What is the distance between New York and London? What is the name of the country formerly known as East Pakistan? This information is acquired both through personal experience and the more formal means of didactic education. Individual differences in convergent thinking ability are reliably measured with I.Q. tests, which can be regarded as assessments of differences in the knowledge and cognitive skills underlying academic achievement. In addition to their use in predicting school and college grades, intelligence tests are also moderately helpful in predicting real world outcomes, such as workplace achievement and occupational leadership.

The development of intelligence tests in the early twentieth century led psychologists to speculate that eminently creative accomplishment could be accounted for in terms of very high intellectual ability. However, this hypothesis was convincingly laid to rest in a multi-decade longitudinal study of 1,500 adolescents selected on the basis of unusually high IQ test scores. Although most of this group went on to lead successful, often exemplary, lives, few if any scaled the heights of creative eminence (Terman). Ironically, two candidates from the original group who were excluded from the study on the grounds of having insufficiently high IQs went on to win Nobel prizes.

We now understand that highly creative people typically have high IQs but having a high IQ does not fully explain their creativity. For example, the average IQ of research scientists, mathematicians, and architects place them above 98% of the general population. Within each group, however, there is no difference in average IQ between its most and least creative members (Steptoe 123). Thus, eminently creative individuals tend to be highly intelligent, but only a subset of highly intelligent people are eminently creative. High level creative accomplishment requires a cognitive ability in addition to intelligence, that is, divergent thinking.

Divergent thinking is the process of generating novel solutions to problems lacking answers. For example, how can we design an aircraft to fly from New York to London in less than one hour? How can we write an engaging musical about Alexander Hamilton? Such questions require associating ideas or images in novel ways that provide a useful solution to the problem at hand. As succinctly expressed by the French mathematician Poincaré a century ago: “To create consists of making new combinations of associated elements which are useful” (286).

The process of generating novel ideas can be illustrated with a hypothetical word association test in which a subject is asked to respond to the word *foot* with as many related words as come to mind. The subject might begin with a few high probability, or strong, associations, e.g., *toe, leg, walk*, which are simultaneously predictable and uninteresting. As the number of responses increase, they become more divergent, that is, weaker and more remotely related to the stimulus word, as with *print, bridge, and inch*. A final series of
even more highly divergent responses such as bed, mouth, bill, and big are increasingly novel, idiosyncratic, and thought provoking. Thus, as the associations to foot become weaker, they become less predictable and increasingly novel.

To summarize, the distinction between convergent and divergent thinking provides a model for describing the cognitive basis of novelty generation. Convergent thinking ability, or intelligence, provides an extensive mental store of ideas and images that divergent thinking draws upon to uncover low probability associations. Novel ideas can of course be merely odd or even bizarre. Novelty must be deemed useful to some purpose to be considered truly creative.

Abundant evidence testifies to Edward de Vere’s educational attainment and intellectual acumen. As a ward of the court he was tutored by leading scholars of the day, had multi-year access to Lord Burghley’s vast library, and studied at Cambridge and the Inns of Court. He read, wrote, and spoke Latin and French, most likely read Greek, and at a minimum read both Italian and Spanish (Fox 95). During his early years at court he became a favorite of the Queen due to his multiple talents (Anderson 67) and was later described in a play by fellow dramatist George Chapman as … “of spirit passing great/ Valiant and learn’d, and liberal as the sun.” (Chapman III.4.84). His equally astute divergent thinking ability is confirmed by the published acclaim of his peers for both his poetry and his court comedies; 27 books published by admirers were dedicated to him (Whittemore 97–99). In sum, de Vere was undeniably a man of vast learning and artistic accomplishment.

In stark contrast, we have no records testifying to William Shakspere’s education or quality of mind. He may or may not have attended grammar school, which in any case would not have provided him with a classical education. His biography is absent a single document written in his hand, and his last will contains no mention of books, manuscripts, publications, or correspondence, nor any reference to musical instruments, paintings, or art of any kind. Six extant signatures do survive, but their unsteady quality suggests he may have been illiterate, as were his parents and his children. Mr. Shakspere was clearly devoid of intellectual or artistic inclinations, although orthodox commentators often employ the circular argument that his genius explains the Shakespeare canon, while the cannon is taken as evidence of his genius. (Crider Brief Chronicles 201-212).

Openness to Experience

Eminently creative individuals typically display a deep interest in a variety of undertakings outside of their central domain of accomplishment. Thus Benjamin Franklin, often regarded as America’s first genius, was renowned...
as a printer, publisher, author, inventor, scientist, civic leader, statesman, and diplomat. Thomas Jefferson, in addition to his eminence as a statesman, was a student of philosophy, religion, architecture, agriculture, and archeology (McCrae and Greenberg). Such polymaths are said to be *Open to Experience*, a disposition to seek novelty and complexity and to pursue associations between apparently disparate domains of endeavor. As William James colorfully described the flow of divergent thinking among the highly creative:

> Instead of thoughts of concrete things patiently following one another in a beaten track of habitual suggestion, we have the most abrupt cross-cuts and transitions from one idea to another, the most rarefied abstractions and discriminations, the most unheard of combinations of elements… (Simonton 28).

In addition to unusually wide interests and talents, open individuals are intellectually curious, lead active fantasy lives, and are drawn to poetry, music, and art. Not surprisingly, self-report questionnaires or peer ratings of openness predict individual differences in divergent thinking ability, as well as differences in creative accomplishment *per se* (McCrae and Greenberg 222–243). In contrast, a low degree of openness is associated with affective restraint, pragmatic interests, and traditional values (Widiger and Costa).

High openness is typically associated with a relentless determination to prevail in one’s creative endeavors despite the costs involved. When asked for his advice about painting, William Turner replied: “The only secret I have got is damned hard work.” Newton, Darwin, and Einstein all testified to the mentally draining exertion required to achieve their scientific breakthroughs (Howe 186). Such anecdotes are consistent with the ten-year rule of dedicated preparation prerequisite to creative eminence: Whereas the ten-year rule speaks to the development of skills over many years, the notion of relentless determination addresses the effortful cognitive activity required to transform these skills into creative outcomes.

Edward de Vere epitomized the open personality. In addition to his lifelong commitment to music, poetry and all things theatrical, his interests included athletics, dancing, jousting, foreign travel, seamanship, military service, the law; and a lifestyle both courtly and bohemian, all of which echo throughout the Shakespeare canon. The acclaim of his contemporaries for both his poetry and theatrical productions additionally testify to his wit and creativity. Although we have no documentation of a possible determination to succeed at all costs, we can at a minimum acknowledge de Vere’s intense commitment to his art that prevailed from adolescence, through his years at court and among his bohemian friends, and during his reclusive last decade coinciding with the advent of “Shake-speare”.
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We have no evidence of openness or creative accomplishment on the part of William Shakspere. Rather, he pursued a business career to become a wealthy member of the Stratford gentry through judicious investments in an acting company, the Globe theater, real estate in Stratford and London, and income-producing land in the environs of Stratford. This life trajectory suggests considerable deliberate planning and long-term persistence, but these are not characteristics of openness, nor do they speak to a literary career. One searches in vain for signs of wide interests or artistic inclination in Mr. Shakspere’s biography. Indeed, his career can be read as a successful endeavor to acquire sufficient wealth in order to settle, at an early age, into a conventional and comfortable bourgeois existence in Stratford (Crider 19–22).

Bipolar Disorder

Bipolar disorder takes two forms. In bipolar I disorder, the individual experiences episodes of both clinical depression and mania, in no predictable sequence and with no predictable length of remission between episodes. Clinical depression is diagnosed by such symptoms as negative mood, low energy, diminished ability to think or concentrate, feelings of worthlessness, and thoughts of death and dying. Symptoms of mania include an expansive positive mood that can abruptly turn irritable, high energy, decreased need for sleep, grandiosity, verbosity, racing thoughts, and impulsive, reckless behavior. A diagnosis of bipolar I disorder is made when manic symptoms are severe enough to cause impairments in social or occupational functioning. In bipolar II disorder the individual experiences episodes of clinical depression and episodes of hypomania, in which the manic symptoms are attenuated and do not entail any impairment in social or occupational functioning.

Over the past thirty years numerous studies have consistently found that eminently creative individuals, as well as those in creative occupations, have disproportionately high rates of bipolar disorder, particularly when milder hypomanic symptoms are considered. This research was initiated by two frequently cited small scale studies. The first, a study of writers attending the University of Iowa Writer’s Workshop, found that 43% of this group, as compared with 10% of a control group, had a history of bipolar disorder, particularly bipolar II disorder. Those with a history of unipolar depression without manic episodes did not differ from the control group (Andreasen 1288–92). In the second study Kay Redfield Jamison interviewed a group of distinguished artists, writers and poets, finding that a large percentage of them experienced hypomanic symptoms during periods of creative endeavor (Jamison 125–134). A more recent large-scale study, involving 300,000 individuals, employed Swedish population records to examine the likelihood of holding a creative occupation, such as writer, artist, or scientist, among those with a history of bipolar disorder, unipolar depression, or schizophrenia.
Compared with a control group, those who had experienced some form of bipolar disorder were overrepresented in the more creative occupations. No such overrepresentation was found among those with a history of unipolar depression or schizophrenia (Kyaga 373–79). It is now evident that there is a relationship between bipolar disorder, particularly bipolar II disorder, and creative endeavor but no such relationship with other major psychiatric conditions.

The relationship between bipolar disorder and creative endeavor is mediated at least in part by the elevated, expansive mood of hypomania. Everyday positive mood tends to disinhibit thoughts, feelings, and behavior that we otherwise expend mental effort to ignore or suppress, thereby broadening attention to both external events and mental activity. In addition, positive mood promotes divergent thinking by stimulating novel associations among ideas and images. When ordinary positive mood is elevated to hypomaniac excitement, these shifts towards creative thinking are greatly amplified (Johnson 1–12).

Of course, not all creative individuals will have experienced bipolar disorder, and not all those with a history of bipolar disorder are creative. Nevertheless, milder forms of mania often contribute to creative outcomes. Thus, it is not unreasonable to look for indications of both depression and hypomania in the life and work of Edward de Vere.

Depression. In an article originally published a half century ago and more recently reprinted in the 2016 Oxfordian, the distinguished British psychiatrist Eliot Slater asserted that the author of Shakespeare’s Sonnets had experienced an intense but transient episode of clinical depression (160–63). Slater examined the first 126 sonnets (excluding the Dark Lady sonnets) to determine if the intensity of the distress so clearly articulated by the poet was consistent with our contemporary understanding of depression. Slater found such evidence in a sizable number of the sonnets, which he discussed in terms of five frequently occurring symptoms:

1) Insomnia, e.g., When day’s oppression is not eased by night/ But day by night and night by day oppressed… (Sonnet 28)
2) Depressed Mood, e.g., Nor can thy shame give physic to my grief/ Though thou repent, yet I have still the loss… (Sonnet 34)
3) Diminished Ability to Think, e.g., Why is my verse so barren of new pride? So far from variation or quick change? (Sonnet 76)
4) Feelings of Worthlessness, e.g., When, in disgrace with Fortune and men’s eyes, I all alone beweep my outcast state… (Sonnet 29)
5) Thoughts of Death, e.g., No longer mourn for me when I am dead/ Than you shall hear the surly sullen bell/ Give warning to the world that I am fled/ From this vile world, with vilest worms to dwell. (Sonnet 71)
By my reading of the first 126 sonnets, three show evidence of insomnia, ten evidence of depressed mood, seven evidence of diminished ability to think, while feelings of worthlessness and thoughts of death are each seen in eleven sonnets.

Slater’s approach to the sonnets assumes that they are, at least in part, autobiographical. This supposition is bolstered by Slater’s further observation that the intensity of Shakespeare’s depression followed a predictable course, beginning with an abrupt onset at sonnets 28 and 29 with complaints of insomnia, then increasing in intensity until reaching a nadir at sonnet 71 (No longer mourn for me when I am dead…) and then gradually diminishing in fits and starts. By Sonnet 112, the poet was able to distance himself from his late illness: For what care I who calls me well or ill… At Sonnet 115 he proclaims: Those lines that I before have writ do lie… In sum, the despair so evident in the sonnets resolves into a depressive episode with many of the same symptoms and the same time course recognized today in the current Diagnostic and Statistical Manual of Mental Disorders (DSM-5). It is not plausible that Shakespeare intentionally planned a sonnet sequence to mimic our twenty-first century understanding of the time course of clinical depression. Slater’s astute observation in turn supports the case for an autobiographical approach to the sonnets.

The sonnets reveal that their author experienced at least one episode of clinical depression. It is likely that this was one of a series of such occurrences. That is, individuals who have experienced a depressive episode are likely to have had a prior history of depression and to be at high risk for subsequent such episodes. Assuming that Shakespeare is a pseudonym for Edward de Vere, there is good reason to believe that a psychiatric approach to de Vere’s biography will reveal further evidence of depressive episodes over the course of his lifetime.

Hypomania. Edward de Vere is often described as flamboyant, unconventional, extravagant, histrionic, impulsive, and reckless. These colloquial depictions are highly similar to the symptoms of hypomania (Whalen 125-29). The essential component of a hypomanic episode is the expansive mood, which often carries with it involvement in pleasurable activities with a high potential for painful consequences. The following well known events in de Vere’s biography are described in a manner that highlights the association of expansive mood with negative outcomes.

In 1572 de Vere accompanied the Queen on a progress to Warwickshire, where he orchestrated a production of a mock battle in the courtyard of Warwick Castle. Two opposing forts were built, one commanded by de Vere and the second by a fellow courtier, each consisting of a large number of
soldiers. The choreographed battle consisted of raids by one fort on the other, often with the use of battering rams. Muskets were fired, as were mortars shooting firebombs in the air, all making for great drama, thundering noise, and much excitement. A commentator who witnessed the event wrote that the Queen took “great pleasure” in the spectacle, although some of the townspeople were terrified (Nelson 85). The performance might have ended when de Vere’s troops destroyed the opposing fort with a fireball. Yet he took it too far. Fireballs continued to be shot in the air, many flying over the castle walls to land on streets, yards, and houses in the adjacent town. One house burned to the ground and at least four others were set on fire. It was pure luck that nobody died. Thus, an extravagant entertainment degenerated into near tragedy due to de Vere’s inability or unwillingness to disengage from the excitement he had created (Nelson 85).

A similar event occurred in 1581 at a tilting competition in Westminster, also attended by the Queen. De Vere was positioned in an elaborately decorated tent standing next to a tree entirely painted in gold: trunk, branches, and leaves, with twelve gilt lances placed nearby. At the appointed moment, de Vere emerged from the tent clad in gilt armor and sat under the golden tree as a page read his prepared speech to the Queen. The speech explained that the tree was the *Tree of the Sun*, and de Vere was the *Knight of the Tree of the Sun*, and further implied that Elizabeth personified the tree’s majesty, while Oxford was the champion willing to live or die in her defense. De Vere thus converted an athletic contest into a grand drama with himself in the lead role. When he won the tournament by breaking all twelve gilt lances against his opponents, the excited crowd rushed to the tent and tree, tearing both of them in pieces for souvenirs. A section of the bleachers gave way, injuring many and killing several (Nelson 262–64). Again, de Vere’s flamboyant behavior had stirred an audience but produced chaos.

Then there is the Gads Hill caper, in which two of de Vere’s former servants—now employed as servants of the Lord Treasurer, William Cecil (de Vere’s father-in-law)—were accosted by three of de Vere’s men near Gravesend, southeast of London. As the two rode by, de Vere’s men leapt from a ditch and raced toward them, shouting and discharging their muskets. Fortunately, no one was injured, although one of the two fell from his horse. As de Vere’s men quickly headed back to London, the victims took refuge in Gravesend, where they wrote to Burghley to ask for protection. The escapade ended poorly when the three assailants were sent to prison. Clearly the attack was orchestrated by de Vere, and one wonders if he were not there observing the spectacle (Anderson 66).

Although further investigation of de Vere’s biography through the lens of bipolar disorder is indicated, these three examples of histrionic behavior
leading to painful consequences are consistent with hypomanic excitement. When these examples are considered along with the evidence for episodic depression in the Sonnets, a plausible case can be made for a diagnosis of bipolar II disorder.

**Final Comments**

The notion of genius considered as a social accolade is inherently vague, subject as it is to the vicissitudes of time and public opinion. But this lack of precision does not preclude the identification of eminently creative individuals via such operational criteria as frequency of mention in the literature of the relevant field, peer acclaim, or the receipt of honorific prizes. This approach has revealed associations of creative accomplishment with such personal and life history characteristics as a lengthy period of dedicated apprenticeship, high convergent and divergent thinking ability, an open disposition, and bipolar II disorder. These characteristics are amply apparent in Edward de Vere’s biography but noticeably absent in that of William Shakspere.

The coherence of de Vere’s biography with our understanding of the sources of eminent creativity adds to the vast amount of circumstantial evidence adduced by Oxfordians in favor of de Vere as the author of the Shakespeare canon. The quality of this evidence stands in stark contrast to the empty invocation of innate talent on the part of orthodox scholars to explain Mr. Shakspere’s supposed authorship. As Mark Anderson concludes in his definitive biography of de Vere: “In the final analysis, repatriating Edward de Vere’s life to the Shakespeare canon—replaces the incomprehensible mystery of a deified genius with a comprehensible—if still incomparable—man…” (380).
Works Cited


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