

Transformational Creative Genius:
Four Wise Considerations of Three Definitions

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Abstract

This chapter discusses whether transformational creativity can adopt the form of transformational creative genius. The discussion begins with three interconnected definitions: genius, creative genius, and transformational creative genius. The definitions then lead to four considerations regarding how various guises of genius contribute to the common good, the presumed criterion for transformational creativity. These considerations suggest that society is best served by a diversified portfolio of geniuses, some strictly transformational and others less so. The critical role of transformational leaders is also suggested.

Keywords: transformational creativity; creative genius; common good; definitions

Albert Einstein is often taken as a prototypical creative genius. Certainly his equation $E = mc^2$ is not only one of the most famous in world history, but also one of the most potent as the theoretical basis for the atomic bomb and nuclear energy. After appearing on the cover of *Time Magazine* more than once, he was decisively named “Person of the Century” on the magazine’s cover that closed out the millennium. Yet can Einstein also be considered a *transformational* creative genius? If not, why not? What was he missing?

These specific questions lead to more general issues. What does it take to display transformational creativity? Can such creativity appear at everyday levels or does it require genius of some kind? Is creative genius a necessary but not sufficient foundation for transformational creativity? These questions drive this chapter. The chapter begins with three overlapping definitions and then (wisely) considers four implications of those definitions.

Three Definitions

The three definitions are presented below go from the conceptually general and historically most ancient to the most specific and contemporary: genius, creative genius, and transformational creative genius.

Genius

The term genius boasts an etymology that dates back to ancient Roman mythology. Each male was born with a protective spirit or guardian angel called his *genius* (whereas each female was born with a corresponding *juno*). Over the centuries this concept broadened to assume more naturalistic meanings. For instance, a distinctive talent might be referred to as a person’s genius, such as having a genius for conversation (plus becoming generic rather than gender specific). This talent connection eventually evolved into a meaning closer to today’s conception. For example, in 1790 the philosopher Immanuel Kant defined genius as an individual with the innate

talent for generating products that were both original and exemplary, where the latter requirement meant that the products provided models worthy of imitation by others – highly admired, in a word.

Kant's definition is echoed in the first monograph specifically dedicated to the scientific study of genius, namely, Francis Galton's 1869 *Hereditary Genius*. Here genius is conceived in terms of an enduring reputation as assessed by "the opinion of contemporaries, revised by posterity ... the reputation of a leader of opinion, of an originator, of a man [or woman] to whom the world deliberately acknowledges itself largely indebted" (Galton, 1892/1972, p. 77). Moreover, Galton incorporated the notion of talent into his conception, but substituted the term "natural ability." In his view, those "who achieve eminence, and those who are naturally capable, are, to a large extent, identical" (p. 78). The Kant-Galton take on genius shows up in the standard dictionaries. To illustrate, one dictionary defines genius as "Native intellectual power of an exalted type, such as is attributed to those who are esteemed greatest in any department of art, speculation, or practice; instinctive and extraordinary capacity for imaginative creation, original thought, invention, or discovery" (*American Heritage Electronic Dictionary*, 1992). This definition's opening phrase appears to endorse Galton's position that high natural ability constitutes an essential part of genius. But does it? This assumed equivalence has two problems.

First, this position takes as a given what should be considered an empirical question: Is genius born or made? Use of terms like "talent," "natural," "native" and "instinctive" all imply the former. Yet even Galton (1874) was later obliged to admit that "nurture" may play a big role alongside "nature," that is, various environmental factors may also influence the development of genius. Hence, it may be better to leave this assumption out of a scientific definition. The impact of nature on genius should be investigated, not presumed, by bringing modern behavioral genetics to bear on the issue (see, e.g., Lykken, 1998; Simonton, 2008).

Second, the above dictionary definition also posits that genius must exhibit extremely high intelligence. This presumption shows up even more explicitly in an alternative definition found in the same dictionary, where a genius is “a person who has an exceptionally high intelligence quotient, typically above 140” (*American Heritage Electronic Dictionary*, 1992). Again, it’s better to omit this feature of the definition, leaving it as an empirical question needing research rather than an a priori stipulation. That said, it must be recognized that genius is most commonly associated with achievement domains that require a considerable amount of intellectual power. Although Galton (1869) included exceptional athletes among his “geniuses,” that inclusion was a carryover from his earlier use of the term “talent” (Galton, 1865). His lists of “genius” wrestlers and rowers look misplaced next to his lists of high-impact scientists, artists, politicians, and commanders. In the latter domains, appreciable intelligence is required to acquire the requisite knowledge and skills – the domain-specific expertise – for exceptional achievement. Even so, the necessary intelligence may not be equate to IQ 140 or higher and hence not count as “genius level” according to the second dictionary definition (see, e.g., Cox, 1926; Roe, 1953; Simonton, 2008). Indeed, eminent military leaders often have IQs below that threshold (Simonton & Song, 2009).

In contrast, one aspect of the first dictionary definition should be rendered more explicit: Individuals merit the designation “genius” only if they contribute to a domain that is valued by the culture in which they reside. A domain’s positive cultural value is manifested in major awards, honors, commemoratives, grants, patronage, appointments, archives, museums, conservatories, and other forms of societal support and recognition. On the other side, a domain is deprecated when it is condemned by laws and social norms. That’s why creators and leaders can be styled geniuses, but not assassins, terrorists, serial killers, and drug lords. The impact of the latter group is destructive rather than constructive with respect to the larger society in which these persons live. Thus, the phrase “evil genius” is an oxymoron.

Taking the above discussion under consideration, this chapter will adopt the following definition: *A genius is a person who makes original, exemplary, and enduring contributions to domains of achievement that are both intellectually demanding and culturally valued.* Here the three requisite

qualities of the contributions depends on Galton's "opinion of contemporaries, revised by posterity" involving colleagues, connoisseurs, consumers, critics, scholars, historians, etc. Naturally, the specific judges involved in these evaluations differs according to the achievement domain.

It should be noted that genius is implicitly a quantitative rather than qualitative characteristic because all of the components of the definition are necessarily quantitative rather than qualitative. Certainly the degree to which any given contribution is original, exemplary, or enduring varies immensely, as does the number of contributions that any given genius might make. Likewise, the extent to which a given domain is intellectually demanding or culturally valued also varies greatly. To provide one example of the latter variation, calligraphy as an art form is far more highly esteemed in Islamic and Far Eastern civilizations than it is in Western civilization.

Needless to say, any given genius might manifest a different mix of these various components, implying that genius is by no means homogeneous. That implication harks back to the ancient meaning of the word insofar as each person's genius was then considered to be highly individualized. In this sense, genius is *sui generis*. Einstein's genius differed not only from that of Pablo Picasso, Igor Stravinsky, Martha Graham, and other comparably illustrious contemporaries, but also from his fellow Nobel Laureates in Physics, like Niels Bohr or Marie Curie.

Creative Genius

Unlike genius, creativity is a far more recent term. For instance, according to Google Ngram, "creativity" didn't begin to appear until the mid-20th century, becoming ever more frequent in the 1960s. In fact, Guilford (1950) is often credited with initiating research interest in this topic. Perhaps because of this relative newness, definitions of creativity remain all over the place (Plucker, Beghetto, & Dow, 2004). Although many researchers might give lip service to the "standard definition," which says that creative ideas are both original and effective in some way (Runco & Jaeger, 2012), in practice the field lacks consensus about who is judging an idea's originality and effectiveness (e.g., Csikszentmihalyi, 2014; Simonton, 2018). Do the creators

themselves make a personal assessment or is some social consensus required, perhaps rendering the Eureka or Ah-hah experience meaningless? And if the latter, how extensive and coherent must that consensus be? In judging cinematic creativity, for example, the available assessors are not only diverse – film critics, moviegoers, industry professionals, and motion picture historians – but also often disagree regarding the masterworks, the humdrum, and the bombs (Simonton, 2011). Any avid consumer can easily come up with their own favorite examples of where they contest critic reviews, film awards, and perhaps cinema historians. Think *Citizen Kane*!

Making matters even worse, not all creativity researchers agree on the two core criteria. On the one hand, some would drop the effectiveness requirement, however defined (whether utility, meaningfulness, value, effectiveness, relevance, etc.; e.g., Weisberg, 2015). On the other hand, some would add another criterion to the first two, such as surprise or nonobviousness (i.e. the idea cannot be easily assimilated by existing knowledge but rather requires a more thorough accommodation via new knowledge structures; cf. Boden, 2004; Shogenji, 2021; Simonton, 2012; Tsao, Ting, & Johnson, 2019). Although some might pretend that a precise definition is not necessary for research to proceed, that belief cannot be valid. As a case in point, adding the third criterion of surprise renders Campbell's (1960) blind-variation and selective-retention theory (BVSR) not only more empirically plausible but also more logically necessary (Simonton, 2023). Moreover, whether or not BVSR theory holds then determines the researcher's expectations regarding the cognitive, personality, developmental, and social factors underlying creativity. Indeed, one striking implication is that there's no such thing as a creative process or procedure (see also Baer, 2022). Instead there exist a multitude of mechanisms that generate possibilities which must then undergo evaluation for their relative utilities. Yet these generating mechanisms may not even appear "creative," such as simple trial and error (see also Weisberg,

2014, who argues for the creativity of “ordinary thinking”). Accordingly, the neuroscience of creativity constitutes a dead-end enterprise without first developing a comprehensive typology of variation processes and procedures (e.g., Dietrich, 2019). In sum, creativity researchers have totally ignored Voltaire’s famous admonition that before a meaningful conversation is even possible it is first necessary to “define your terms.” Consequently, for several decades such researchers have been talking past each other without advancing the scientific status of their field.

As if all that were not complicated enough, creativity researchers have conceived the phenomenon from multiple perspectives, and even those perspectives are multiply conceived (e.g., Glăveanu, 2013; Rhodes, 1961; Sternberg & Karami, 2022). A classic example is the distinction between little-c or “everyday” creativity and Big-C or “genius” creativity (Luckenbach, 1986; Simonton, 2013), to which has been added mini-c and pro-c (Kaufman & Beghetto, 2009). Happily, because our interest here concerns genius-grade creativity, the required definition can just modify the earlier definition, inserting the adjective “creative” in the two most appropriate places: *A creative genius is a person who makes original, exemplary, and enduring contributions to domains of creative achievement that are both intellectually demanding and culturally valued.* Although creative domains have been traditionally defined in line with the Greek Muses, modern civilizations have added new domains to the list, such as cinema – the “seventh art.”

Once more, the various components of this definition are implicitly quantitative in nature. This feature is shown in Table 1. The variation in each component is phenomenal. It must also be repeated that the variation is largely independent across the components. Any given creative genius may exhibit a distinctive profile, such as making supremely original contributions that are less exemplary or enduring (e.g., “shock artists”). Or the contributions may be made to an intellectually demanding domain that is not necessarily culturally valued – perhaps because the contributions are less accessible to a large audience.

Avant-garde music or indie cinema certainly enjoy fewer aficionados than pop music or big-studio blockbusters.

One final issue must be addressed before continuing: What happened to the second criterion for creativity in the standard definition? The answer is that it is subsumed by the exemplary component. In fact, the exemplary stipulation also incorporates the surprise criterion, so the definition really encompasses a three-criterion creativity definition. What's different is that we're now talking about creativity assessed at a consensual level, leaving personal experience aside (e.g., colleagues or consumers don't care whether the idea was "inspired" but rather whether the idea inspires them). Hence, to count as a work of creative genius, a contribution must satisfy a host of stipulations regarding what makes a work exemplary, and these entail both utility and surprise. The contribution has to work as well as impel evaluators to think about ideas in a new way by a process of collective accommodation rather than assimilation (cf. Kirton, 1976; Kuhn's 1970; Sternberg, 1999). Once Copernicus had demonstrated that the sun rather than the earth can more easily be viewed as the center of planetary motions, suddenly the whole cosmos looked different and the underlying physical laws had to radically change. Even the sun no longer "set" but rather the earth rotates the observer away from the motionless sun until the rising horizon totally blocks the view! That's what made the heliocentric system exemplary. It was not just original but also useful and surprising, paving the way for Galileo's revolutionary challenges to Aristotelian physics and Ptolemaic astronomy.

Transformational Creative Genius

For millennia the creative genius has carried the major workload for the main contributions that have marked the evolution of human civilizations throughout the world (Murray, 2014). Although humanity could always use more creative geniuses, at least in certain times and places, only recently has it been suggested that something more is needed, namely, more *transformational* creativity. This suggestion has been persuasively argued by Robert J. Sternberg (2021). He defines this form of creativity as "creativity deployed to make the world a

better place – to make a positive, meaningful, and potentially enduring difference to the world” (p. 6). Sternberg contrasts this guise of creativity with that which “is exhibited primarily as an exchange. The individual is motivated by a reward” where the “reward might be extrinsic – money, awards, fame; or it might be intrinsic – the feeling of a job well done” (p. 5). Although he admits that “People who are transformationally creative often also are transactionally creative – they have paying jobs, like most other people, and they care about their work” the transformationally creative “go beyond transaction – they use their creativity to affect positive change that seeks a common good” (p. 6). Now to some comparisons and caveats.

Comparisons. The question now is how Sternberg’s (2021) conception compares with the earlier definition of creative genius. Close comparison reveals both similarities and differences. First of all, it’s obvious that both the creative genius and the transformational creator must generate original ideas, albeit that requirement is only implicit in the latter case: Creativity is impossible without originality, the one attribute shared by virtually all creativity definitions (Runco & Jaeger, 2012). It is also clear that the enduring nature of the contribution is a factor even if that quality is potential rather than actual in the case of the transformational creator. The latter individual seeks to produce something enduring but cannot guarantee that will happen because of the shorter time frame in which the creativity is evaluated. Nonetheless, one would hope that potential enduringness would be a necessary but not sufficient basis for actual enduringness.

Even if the stipulation of a “positive and meaningful difference” is not explicit in the definition of creative genius, nothing prevents that stipulation from being incorporated into what counts as exemplary. More importantly, both positive and meaningful are implicit in the requirement that the creative genius contribute to a culturally valued domain of creative

achievement. It's difficult to imagine any sociocultural system placing a value on the negative and meaningless (cf. the transient "cynical sensate" cultural mentality in Sorokin, 1937-1941). Has any stable and productive society ever integrated absolute nihilism into its cultural mores? If so, creative genius couldn't exist, and transformational creativity would likely be impossible as well. Nobody can make contributions to the common good when there's no prevalent consensus on the common good – or perhaps no agreement that such a desideratum even exists.

The concept of the common good might constitute the key demarcation between the creative genius and the transformational creator. The former makes original, exemplary, and enduring contributions to a culturally valued domain, whereas the latter makes positive, meaningful, and potentially enduring contributions to the common good. Yet some culturally valued domains do contribute directly to the common good or at least enjoy a high probability of doing so. Certain specialties in medicine and technology provide obvious instances. Surely Pasteur's discoveries and Edison's inventions improved immensely the everyday lives of millions of people throughout the world. Anyone who has gotten a vaccination, drunk pasteurized milk or beer, turned on a light bulb, watched a motion picture, or listened to music on a phonograph (or functional equivalent) has directly experienced the enduring creativity of those two creative geniuses. As a consequence, a *prima facie* case can be made that transformational creative genius represents a special case of creative genius in general. That leads to the following definition: *The transformational creative genius is a creative genius who also satisfies the requirements for transformational creativity by contributing to domains most likely to enhance the common good.* Although Sternberg (2021) recognizes the difficulty of defining the common good, at the very minimum it presumably encompasses universal human

health and happiness as the ultimate criteria – the “greatest good for the greatest number” standard of utilitarian ethics. That’s implied by Sternberg’s examples.

Caveats. Some precautions are due however: The common good can sometimes constitute a highly unstable criterion for judging contributions. Two examples follow.

1. Despite the horrors of war, wartime necessities have promoted many inventions that were later judged as beneficial under peacetime conditions. These include ballpoint pens, bug spray, cargo pants, computers, daylight savings time, digital cameras, duct tape, EpiPens, freeze drying, global positioning systems, jerry cans, jeeps, jet engines, paper tissues, penicillin, radar, sanitary napkins, portable X-rays, stainless steel, sun lamps, superglue, trench coats, vegetarian sausages, water purification tablets, and zippers. Sometimes a peacetime invention didn’t become a commonplace item until war facilitated its widespread adoption. Thus, wrist watches were not worn by men until World War I made soldiers realize that they were something more than a woman’s accessory. Only then could everyone conveniently “synchronize their watches.”

2. The passage of time can convert an advantageous discovery or invention into one with decidedly adverse consequences. To illustrate, the physician Dr. Paul Janssen may be easily identified as a transformational creator. After all, he founded a 20,000-employee pharmaceutical company dedicated to advancing modern medicine. The company is now a subsidiary of Johnson and Johnson, where it developed the Janssen COVID-19 vaccine. Among its early products were (a) a drug to reduce menstrual pain, (b) an anti-diarrheal medication, (c) an anti-psychotic drug that was considered a leap forward in the treatment of schizophrenia, and (d) a potent analgesic that would help those patients for whom even morphine did not work (e.g., “breakthrough” pain suffered by many with terminal cancer). All told, Janssen helped produce dozens of new medications, several belonging in the inventory of essential pharmaceuticals. Not surprisingly, he

received many honors, including the Canada Gairdner International Award for exceptional contributions to medical science (often a forerunner to the Nobel Prize for Medicine). The King of Belgium even elevated him to the nobility, granting Janssen the title of Baron. Yet after Janssen passed away, that powerful painkiller became the agent for the ongoing opioid crisis that has already killed tens of thousands. He never knew nor could anticipate the havoc that would be caused by fentanyl. Instead, foremost was the aim to allow dying patients to die in peace.

Four Wise Considerations

As Sternberg (2021) observed, wisdom entails the capacity to recognize the balance between contrary interests. Given that we necessarily live in a world where nobody can satisfy all of their wants, the wise find the sweet spot between one person's needs and another's. The same principle is applicable here. Paradoxically, it may be possible to maximize transformational creativity at the expense of creative genius in a manner that's detrimental to the wellbeing of the larger society. However good transformational creativity may be, there still can be too much of a good thing. Furthermore, other considerations must put transformational creativity in its proper place in the bigger picture of human welfare. Consider the following four points.

First, although creative contributions to culturally valued domains may not enhance the common good in any strict sense, they do enhance the lives of numerous people living within the same sociocultural system. For example, Einstein's $E = mc^2$, Darwin's evolutionary theory, Beethoven's *Fifth Symphony*, Michelangelo's Sistine Chapel frescoes, or Shakespeare's *Hamlet* may not contribute to the common good as would a cure for cancer, the eradication of poverty, the reversing of climate change, or the outlawing of war, but civilization would still prove a far more impoverished place to live without those and other valued achievements to keep people intellectually stimulated, happily entertained, and deeply moved. Moreover, pleasing one subset

of humanity does not necessarily lead to the displeasure of another subset of humanity. For instance, music is appreciated by a very large percentage of human beings, but with tremendous heterogeneity in specific tastes. Yet one person's preference for rap or country doesn't have to interfere with another person's preference for opera or jazz. It's not a zero-sum game (even for roommates, courtesy of headphones or earbuds). The world remains better off with music, however diverse and hence unshared, than no music at all. And Muzak, the "elevator music" supposedly directed at the common good, may represent nobody's favorite genre.

Second, throwing more creative geniuses at the world's shared problems doesn't guarantee solutions. Despite Edison's undeniable technological prowess, and his pronounced goal to enhance human welfare, many of his attempted inventions proved outright failures (Simonton, 2015). Perhaps the most dramatic example was his endeavor to extract high-quality iron from low-grade ore: That failure cost him all of the money he had earned from inventing the incandescent light bulb! Often a given problem lacks a solution because the requisite knowledge base is not yet available. Edison's hard work trying to create a commercially successful electric automobile went to naught because lithium batteries were well into the future – by almost a century. Edison thus wasted considerable time and money developing storage batteries that were doomed to fail. Needless to say, some discoveries or inventions may prove impossible not only now but forever. The missing component doesn't yet exist because it can't ever exist. For example, controlled nuclear fusion has long been investigated as a virtually unlimited source of energy that would mitigate climate change and perhaps even reduce poverty and war. And yet after more than a half century of development in multiple countries – developments that have attracted some of the best physicists and engineers in the world – a reactor that reliably generates more energy than it consumes remains far from sight. That invention may prove as impossible as

the perpetual motion machine. If so, would-be creative geniuses or transformational creators working on that problem are just throwing away their creativity for nothing.

Third, in line with what was noted earlier, creativity is by no means a generic ability that can be applied to any given problem (Baer, 2022; Simonton, 2018, 2023). On the contrary, creativity relies on a very large inventory of potential processes and procedures which vary greatly regarding the kinds of problems for which they are best suited (Boden, 2004; Ness, 2013; Roe, 1953). Hence, those whose talents concentrate on creating original, exemplary, and enduring poetry, art, or music are not denying their sociocultural world contributions more directly connected to the common good, such as alleviating cancer, poverty, climate change, or war. The latter problems are best left to those who are better equipped to provide potential solutions – if any such knowledge or skills actually exist. The world is probably a better place letting a sensitive soul write poetry in some remote mountain cabin than having them unhappily labor away in a sterile biomedical lab in the fruitless quest for a cancer cure. They might even compose a poem that helps console someone who just lost a loved one to incurable cancer (Moffat, 1992).

Fourth and last, care must be taken not to put all the burden of enhancing the common good on the backs of creative geniuses, transformational or otherwise. Genius takes other forms as well, such as political genius, where the original, exemplary, and enduring contributions are aimed at the world of politics. Too often the failure to augment the common good does not represent a failure of creativity but rather a failure of leadership. Transformational creators may have come up with solutions to major world problems only to see their solutions turned aside by transactional leaders – leaders who are shaping policy to ensure their popularity. Politicians who have opposed taking strong measures to reduce climate change provide a recent example. A lot

of impressive scientific creativity was of no avail. Instead climate scientists were accused of alarmism, even fraud. The irony, of course, is that scientists now are realizing that they probably have underestimated the rate of global warming, including how fast the oceans are expected to rise. Trying to do good science, their initial predictions were on the conservative side.

Given the above considerations, humanity's best bet is probably to encourage a diversified portfolio of creative investments. Some creative geniuses commit themselves to making original, exemplary, and eventually enduring contributions to culturally valued domains that are unlikely to improve the common good, while other creative geniuses specifically commit to domains that feature a much higher probability of making such improvements. Meanwhile, the big problem remains how to get political leaders behind the common good.

Conclusion

It's now possible to return to the questions raised at this chapter's outset. To begin with, it should be clear that transformational creativity does not require creative genius because the two constructs do not completely overlap. On the one hand, if a creator makes a *potentially* enduring contribution to the common good then they may qualify as transformational, whereas the creative genius must make a contribution that is *actually* enduring – survives the proverbial “test of time.” On the other hand, if a creator makes a contribution to a culturally valued domain then they may qualify as a genius even if the domain doesn't obviously contribute to the common good. Hence, creative genius is a necessary but not sufficient foundation for transformational creative genius. It follows that Einstein, for all his creative genius, cannot count as a transformational creator. Admittedly, any creator who manages to invent a practical nuclear fusion reactor will likely satisfy the requirements for a transformational creative genius – an invention theoretically predicated on Einstein's $E = mc^2$. Yet the latter dependence does not

suffice to make Einstein transformational. And how much of that argument is undermined by the atomic and thermonuclear weapons that are also connected to the same formula? Still, that should not detract one iota from Einstein's iconic status as the "Person of the Century."

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Table 1

Implicit Quantitative Variation in the Components of the Creative Genius Definition

Definition component	Very low	Very high
Creative genius	Epigones (e.g., Daniele da Volterra “the breeches maker”)	Progenitors (e.g., Michelangelo “the divine one”)
Original contribution	Most doctoral dissertations in the sciences (e.g., even Einstein’s)	Most Nobel Prize winners (e.g., Einstein’s photoelectric effect)
Exemplary contribution	Shakespeare’s <i>Timon of Athens</i> ; Beethoven’s <i>Wellington’s Victory</i>	Shakespeare’s <i>Hamlet</i> ; Beethoven’s <i>Fifth Symphony</i>
Enduring contribution	Darwin’s pangenesis theory of heredity (obsolete in his lifetime)	Darwin’s natural selection theory of evolution (still prevails today)
Number of contributions	The “one-hit wonders” (e.g., Pachelbel and his <i>Canon in D</i>)	The prolific: many masterpieces in multiple genres (e.g., Mozart)
Domain intellectually demanding	Limericks (e.g., Edward Lear’s <i>The Book of Nonsense</i>)	Philosophy (e.g., Wittgenstein’s <i>Philosophical Investigations</i>)
Domain culturally valued	Crafts (e.g., hand carved statuette as accent piece for home décor)	Monuments (e.g., the Statue of Liberty in New York Harbor)

Note. Creative genius is a quantitative variable that is a weighted function of the other quantitative definition components, which remain to be given operational definitions. The exact nature of that integrative function probably varies across cultures and through time. Domain contrasts are also likely (e.g., originality in the arts versus the sciences; Simonton, 2021).