

Cognition and Emotions *in the Creative Process* NICOLE M. GNEZDA

Art teachers are most successful when they teach the whole child, with an awareness of the student inside as well as the work that is being produced outside. Therefore, when teaching our students about their own creativity and that of artists they study, it is helpful to understand complex neurological and emotional operations that are active during creative processes. In this article I will explain these operations in order to help art teachers more fully understand what happens inside their students as they create, and I will suggest ways teachers can effectively foster their students' creativity.

The Experience of Creativity

Creativity is a cognitive-emotional-manipulative experience that is accessible to all people. Creativity is cognitive because it is about innovating and developing ideas and occurs via specialized mental processes. It is emotional because emotions are integral (Clark, 1992) and "loom large" (Roe, 1963, p. 172) in the creative process. Self-reports and empirical research about creativity show a rather predictable sequence of emotional sensations that tend to occur as the process evolves. Creativity is manipulative because idea

above
Figure 1. *Giving of Self*,
Kevin Pfefferle, Grade
3, Westerville Ohio City
Schools.

development happens not only internally but also through interaction with a medium as an idea is being implemented.

Why individuals differ in the quantity of creative output and the ease with which they engage in creative processes is unclear. One school of thought is that creativity is a natural human ability but is suppressed in most people by social mores and educational practices. Highly creative people are the exceptions who resist socialization pressures (Epstein, 2009). Other scholars believe that some people are gifted with higher levels of creative ability (Haier & Jung, 2008; Martindale & Hasenfuls, 1978; Mednick, 1962; Torrence, 1961). Self-reports of creative experiences, brain scans, and comparisons between highly creative and less creative people have begun to reveal that specialized cognitive functions and a spectrum of emotions are associated with creative work.

Creativity and Cognitive Functions

Research suggests that creative thinking involves mental work that is different in style and brain activity than that used during other modes of thinking, such as logic or analysis (Heilman, 2005). While creative processes utilize a variety of neural areas and brain functions, the aspects of creative thinking that result in innovation may derive from work in particular neurological areas and through variations in neurological arousal.

There is indication of a connection between novelty of ideas and right hemisphere processing (Haier & Jung, 2008; Heilman, 2005; Andersen & Milbrandt, 2005). Holistic/global perspectives, understanding and producing metaphors, identifying relationships between pieces of information, experiencing and expressing emotions, and perhaps even controlling arousal levels are characteristic of both creative thinking and the right hemisphere's specialized style of cognitive functioning (Heilman, 2005).

Association—making connections between disparate ideas—is often cited as the primary mental operation of creative thinking (Andersen & Milbrandt, 2005; Heilman, 2005; Koestler, 1976; Rothenberg & Hausman, 1976; Mednick, 1962). Findings from brain-mapping studies support this, showing high activation in brains' associative

cortices during creative ideation (Andreasen, 2009; Haier & Jung, 2008; Heilman, 2005). Instead of focusing on a single subject, creative thinkers seem to unconsciously contemplate many pieces of information and trains of thought at the same time. Researchers believe that thought patterns scatter to search a wide scope of ideas and then coalesce into relationships between what might otherwise have remained unrelated concepts. These combinations of thoughts form new and unusual ideas.

Effects of right-hemisphere, multi-directional, associative thinking are many and may manifest as traits common to highly creative people. Such people tend to see big pictures or underlying structures. They think metaphorically and transfer knowledge from one situation to another. They recognize patterns and are frequently described as intuitive because they often understand situations in ways not apparent to others (Myers & Myers, 1990; Barron, 1969a; MacKinnon, 1965; C. J. Jung, 1923).

Highly creative thinkers are sometimes stereotyped as daydreamers or absent-minded-professor types who struggle with deadlines and the completion of projects. Though perceived as negative by a society that emphasizes productivity and work ethic, these behaviors may be, instead, the outward expressions of low levels of neural activity that are essential to creative processes. Studies suggest that low brain arousal seems necessary for the ideation stage of a creative process, especially for those who are considered highly creative (Haier & Jung, 2008; Martindale & Hasenfuls, 1978). Low levels of neural arousal during creative ideation (Fink & Neubauer, 2006; Haier & Jung, 2008; Molle et al., 1996) permit the scattered, multi-directionally distributed thinking necessary for innovative ideas. In their research, Jausovec (2000) and Martindale and Hasenfuls (1978) compared highly creative people to more average ones and found highly creative individuals were more likely than their more typical counterparts to exhibit low cortical energy levels during creative problem solving.

The reverse, high arousal, is associated with stereotypical, unoriginal responses (Martindale & Armstrong, 1974). Perhaps high arousal causes the brain to zero-in too quickly on a common thought and end the

idea search before an innovative association occurs. Longer idea searches are important to creativity because, according to Guilford (1967), a larger quantity of ideas produces more opportunity for unusual associations. So, though it may seem to observers that a creative person in the early stages of the process is idle or not on task, the person may be working hard internally, scanning his or her brain and environment for as many high quality ideas as possible.

Low arousal levels do not persist throughout an entire creative process. Later in the process, when the person is settling on a new combination of thoughts (i.e. perceiving the insight of a creative idea) his or her brain will turn up the activation (Martindale & Hasenfuls, 1978). The creator experiences an energy surge that may produce the excitement of inspiration, also called illumination (Wallas, 1926) or an "aha moment."

In order to, then, put the new idea into action (construct it or communicate it), cortical arousal is needed. At this point, left hemisphere modes—linguistic, critical, organizational, sequential, and logical—kick in and remain active in order to express and construct the new creation. Einstein (1929), for instance, "saw" the inspirations for his creative theories as mental images when they first occurred to him, then later had to figure out how to translate them into written mathematical notations. During this implementation stage, creative processes do not progress smoothly. Creators have to move back and forth between creative and critical thinking modes and vary their arousal levels as they manipulate their media and solve ideational and construction problems.

Highly creative people tend to be prolific in the number of ideas they originate (Guilford, 1967) but may have trouble implementing them (Myers & Myers, 1990). Because creative ideation is their forte and because pleasurable energy peaks occur at the time of inspiration, highly creative individuals find it easy and fun to come up with ideas. However, the hard work and left-hemisphere-style thinking involved in carrying out their ideas are often more difficult and less satisfying. In addition, just about the time a highly creative person is in the middle of implementing an idea, exciting new ideas

New ideas bring with them the need for new skills and the solutions to new problems.

Creators struggle, start over, reconsider, become exasperated, and question their abilities.

present themselves, tempting the creator to quit working on the first idea in order to jump into new, more seductive ones.

Deadlines can be particularly challenging for highly creative people because of the fluctuations in energy levels. Since average thinkers tend to start at high arousal levels and select ideas sooner, they often have lengthy periods of time to spend on implementation. The brains of more creative people, however, function at low arousal for a long time, delaying idea selection until an innovative idea appears. Though the neural energy rises to facilitate implementation of the idea, time to complete the process has become short. This may underlie the difficulty many highly creative individuals have finishing products in time to meet deadlines.

Contemporary neuro-science is uncovering evidence of differences between the neural functioning that is active during creative thinking and that which is active during linear, analytical thought. The manifestations of these differences affect many aspects of individuals' cognition, ideation, and work processes.

Creativity and Emotions

A range of emotions tends to accompany the varying neural actions involved in creativity, making creativity a rich affective experience. As ideation begins, energy levels drop, and a creator enters an indolent, dreamlike state of defocused attention (Haier & Jung, 2008) that is governed by alpha waves in the brain (R. E. Jung, 2009). An alpha state produces pleasant, wakeful rest. In Gnezda-Smith's 1994 study of internal aspects of creative processes, a participant described periods of defocused attention during the early stages of his song-writing process. He said there is "a fallow period in which, to the outside world, I am not being very productive. I'm sleeping a lot, I'm reading a lot, I'm doing a lot of nothing—to the outside world" (p. 141). Similarly, psychologist Carl Jung described a withdrawal of conscious energy that leads to "apathetic inactivity" (1923, p. 123) during the ideation phase of a creative process. At this time, thinking is turned inward to accumulate sensory and intellectual information and seek associations.

At some point, a significant coalescence of thought occurs and enters consciousness (Lowell, 1930, p. 109; C. J. Jung, 1923). It is revealed to the creator as an inspiration, "flash of insight" (Ghiselin, 1952, p. 26), "illumination" (Wallas, 1926, p. 70), or an

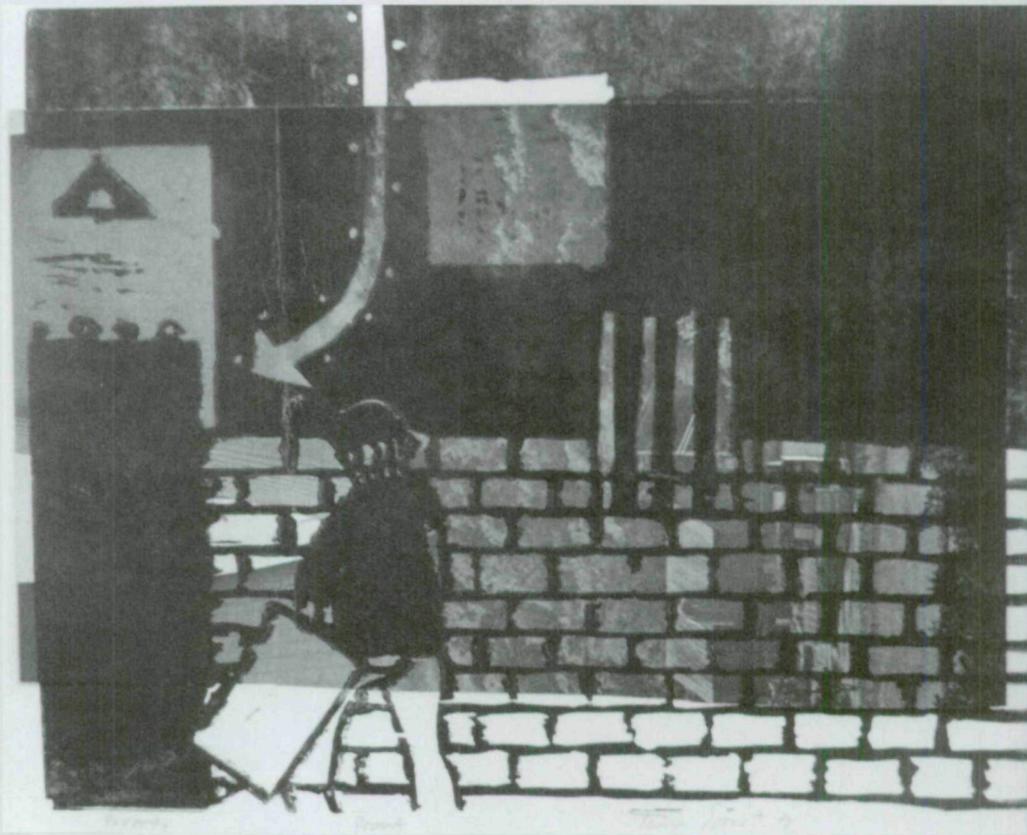


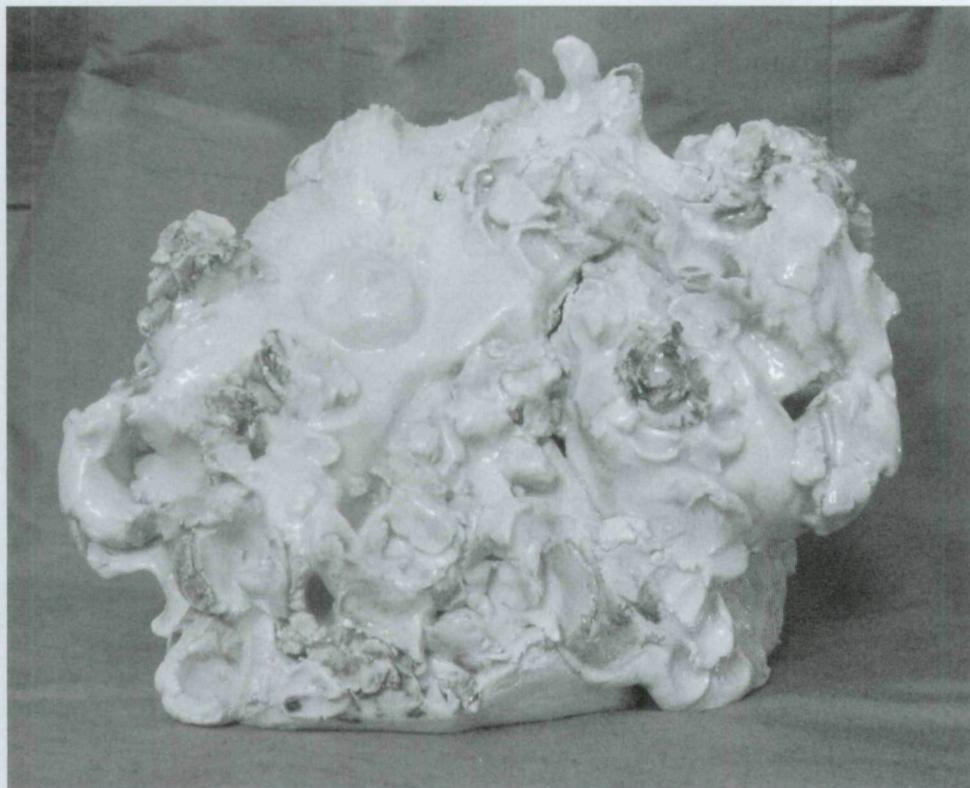
Figure 2. *Poverty*, Anthony Smith, Grade 7, Worthington Ohio City Schools.

"envisioned impulse toward a certain goal" (Sessions, 1941, p. 47). It is the peak emotional experience of the creative process and has been described as "wholly inexplicable satisfaction or excitement" (Ghiselin, p. 24-25). Canfield (1920) cited "a strong thrill of intense feeling" (p. 169). Carl Jung called it "a divine frenzy" (1923, p. 122). Arieti said, "the artist feels almost as if he had touched the universal" (1976, p. 186).

Composer Sessions stated that the exhilaration of the inspiration is the "energy that keeps [creation] going" (1941, p. 47). Though this energy pushes the creator forward, it is short lived. Now, an individual must contrive ways of constructing or communicating a new idea. This is the implementation stage, characterized by alternating periods of intense, productive concentration that seems like "automatic functioning" (Ghiselin, 1952, p. 17) and frustrating encounters with problems that require great perseverance. When implementation of an idea is progressing smoothly, the creator experiences a heightened emotional state, a loss of self-awareness, and a sense of productivity that Csikszentmihalyi labeled "flow" (1996). Ghiselin (1952) and Lowell (1930) compared this deep engagement with one's creative medium to a trance-like state.

Much of the implementation stage of the creative process, however, is marked not with joy but with hard work, frustration, and self-doubt. New ideas bring with them the need for new skills and the solutions to new problems. Creators struggle, start over, reconsider, become exasperated, and question their abilities. For instance, Virginia Woolf abandoned initial attempts at writing *Mrs. Dalloway* because she felt unable to create the book of her inspiration (Ghiselin, 1952). A stereotypical view of writers that appears frequently in the media shows a writer throwing away page after page because of continual failed attempts at an opening sentence. This image and Woolf's experience illustrate the discouragement creators can feel as they try to actualize what seemed at the moment of inspiration to be extraordinary ideas.

As individuals eventually complete their projects, their emotional frustrations lessen and their moods may elevate. However, they usually do not return to the elation of the inspiration. In fact, as creative products are finished, people often and surprisingly feel a sense of disappointment with their work. After repeated touch-ups, rewrites, critiques, and revisions, the excitement of the illumination has long since faded. In



top
Figure 3. *Human Coral*, Y. Smith, Grade 9, Worthington Ohio City Schools.

bottom
Detail of Figure 3.

addition, the final product, executed by “an imperfect person with imperfect abilities” (Gnezda-Smith, 1994, p. 142), does not measure up to the more thrilling image of the original inspiration. Dorothy Canfield described her emotional reaction to reading her completed manuscript for *Flint and Fire*: “I felt fall over me the black shadow of that intolerable reaction... by the time I had reached the end, the full misery was there” (1920, p. 175). The execution of a project is driven by goal-oriented behavior that might cause one to expect an emotional climax at the finish of the project. However, since the peak emotional experience of creative processes is inspiration, the end of the project may be much less gratifying than expected.

Probably glad to be done with the work, creative people also express both self-doubt and longing to be re-immersed in the creative process (Gnezda-Smith, 1994). For instance, installation artist Karen Frey Snouffer (personal communication, October 27, 2009) expressed concern about losing her “creative rhythm” and described an “underlying tension between excitement and anxiety” that is present as she is “gearing up to face” her next project. In his 2009 interview on *The Tavis Smiley Show*, writer Nick Hornby described periods of absence from creative work as “uncomfortable” and compared his need to write to “an itch you have to scratch.” Ray Bradbury (1992) commented that after even one day of not writing he “grows uneasy” and after four he “senses lunacy” (p. xiii). During what may seem like a challenging and empty post-project period, a creator may already be starting the process anew (Arieti, 1976), unconsciously scattering thoughts along thousands of neural pathways in search of the next significant idea.

Recommendations for Art Educators

Creativity involves more than just making something, even something new. It is a process of knowledge construction that emerges from within a person and provides an experience rich with thought, emotion, challenge, insight, and hard work. According to Booth, “rather than the things you make, it is... the experience [that is] a particularly powerful act” (2001, p. 20). As art educators, we have an opportunity and responsibility to make creativity an integral part of all our students’ learning. We do this by employing teaching methods that foster our students’ creativity and by advocating within the school at large for creativity and the needs of highly creative students.

Teaching

In our classes, students should experience all the stages of creative processes, especially the low energy idea-search and the subsequent joy of illumination. Unfortunately, teachers commonly assign already developed project ideas and tightly structured lessons that relegate to students only the much harder and frustrating task of constructing what the teacher has already envisioned. "Much of the creative decision making [is] controlled by the teacher" (Szekely, 1988, p. 3) and students miss the essence of the creative process: innovating ideas.

Instead, lessons can be designed to engage students in their own ideation processes and experience their own inspirations. Open-ended assignments based on themes, problems, or personal experience work well. For example, students could study current events and social commentary in art then create a work of art that expresses their responses to a contemporary social issue of their choosing (Figures 1 and 2). Another example would be a study of identity and imagery that results in expressionistic portraits of self, a parent, a friend, or a pop-culture icon (Figures 3 and 4).

Pedagogy matters, too. Creativity is enhanced when we coach students as they develop their own processes. We need to resist the impulse to pre-plan subject matter and procedures for the assignments we make, and we need to let go of preconceived notions of what the student artwork will turn out to be. We can become comfortable watching and guiding our students' ideas and artworks as they emerge. Our rewards will be the pleasure of experiencing with our students their many illuminations and creative processes. We will also need to individualize teaching methods because different students will work through their creative processes in different ways. Some will be able to proceed rather independently while others will need us to work more closely with them. Coaching students means staying in contact with each of them every day, perceiving what each needs, tailoring instruction to specific students and their projects, and providing encouragement as they progress through the stages of their full creative processes.

Understanding our students' emotional waves is important, too. Students need us to understand the scattered and low energy periods when they ponder and imagine. They need us to labor with them as they look deeper within themselves for ideas. They

need us to share their enthusiasm as they stretch toward original ideas. They need us to enjoy the emotional rush of their creative insights. Then, our students need us to stay engaged with them as they face the challenges of constructing their art. We can facilitate their creative work by arranging quiet places and blocks of time to allow flow experiences to occur. When our students encounter problems that make them feel inadequate or want to quit, we can teach them that all artists get discouraged as they tackle the hard work of translating ideas into form.

We also need to be careful about our critical response to students' creative work. Rather than heavy-handedly scrutinizing student work for faults, we can design evaluation procedures that are growth experiences and that help students recognize their strengths and reflect on their creative processes. Criteria for evaluations may focus on how well the meaning of a student's idea is communicated, the student's perseverance through the process, and his or her skill development. Student self-evaluations can be enlightening for students and teacher alike and function well as a part of an assessment process.

Advocacy

Advocating for creativity and creative students is also an important role for the art educator. Advocacy occurs when art teachers encourage teachers of other subjects to incorporate creative activities in their classes and help colleagues to better understand their creative students. Our peers may become more educated about creativity when we speak up at staff meetings and team

conferences with parents, involve ourselves in decisions about disciplinary procedures, conduct in-services, and disseminate information about creativity.

Our knowledge can help our colleagues become more aware and accepting of the variant personality traits that are often characteristic of their highly creative students so that, instead of scolding or punishing, teachers can help creative students develop strategies for adapting their natural styles to school structures. For instance, we can advise colleagues that creative students may not be procrastinators, but people with prolonged idea searches whose energy kicks in late; that they may not be chronically tardy because of disrespect but because of periods of deep concentration and fluctuating energy that cause them difficulty in managing time; that they may not be scatter-brained and irresponsible but have brains that relish multi-directional thinking during periods of defocused alpha activity; that they may not be resistant to details, linear processes, and following directions, but excel instead at holistic, self-directed thinking. Because our advocacy will help colleagues relate to creative students in more enriching ways, it will lessen some of the negative socializing that Epstein (2009) implicates in the suppression of many people's creative capabilities.

Conclusion

Creativity is a specialized type of higher-level thinking, an emotional journey, a work process, and a high-quality human experience. Some students already function well creatively. They need more opportunities to actualize their creativity and be guided toward further development. Other students are limited in their creative development, perhaps by inhibiting forces in school, home, and society. These students need freedom to explore ideas and instruction in how to do so. The art room is where students can thrive creatively. And it is from the art room that creativity can spread into the larger school environment, broadening the educational experience for all students.

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Figure 4. *Female Identity*, Callie Herman, Grade 12, Worthington Ohio City Schools.

REFERENCES

- Andersen, T., & Milbrandt, M. (2005). *Art for life: Authentic instruction in art*. New York: McGraw Hill.
- Andreasen, N. (2009, May). Illuminating genius: Creativity perceived through science and art. Keynote address presented at *Learning and the Brain Conference*, Washington, DC.
- Arieti, S. (1976). *Creativity: The magic synthesis*. New York: Basic Books.
- Barron, F. (1969a). *Creative person and creative process*. New York: Holt, Rinehart, and Winston.
- Barron, F. (1969b). The psychology of creativity. In A. Rothenberg & C. R. Hausman (Eds.), *The creativity question* (pp. 108-103). Durham, NC: Duke University Press.
- Booth, E. (2001). The everyday work of art: Awakening the extraordinary in your daily life. Backinprint.com. Lincoln, NE: iUniverse.com, Inc.
- Bradbury, R. (1992). *Zen in the art of writing*. New York: Bantam.
- Clark, B. (1992). *Growing up gifted*. New York: Merrill.
- Canfield, D. (1920). How "Flint and Fire" started and grew. In B. Ghiselin (Ed.), *The creative process* (pp. 168-176). New York: The New American Library.
- Csikszentmihalyi, M. (1996). *Creativity: Flow and the psychology of discovery and invention*. New York: Harper Collins.
- Einstein, A. (1929). Letter to Jacques Hadamard. In B. Ghiselin (Ed.), *The creative process* (pp. 43-44). New York: The New American Library.
- Epstein, R. (2009, May). Unleashing creativity in children and adults. Presented at *Learning and the Brain Conference*, Washington, DC.
- Fink, A., & Neubauer, A. C. (2006). EEG alpha oscillations during the performance of verbal creativity tasks: Differential effects of sex and verbal intelligence. *International Journal of Psychophysiology*, 62(1), 46-53.
- Ghiselin, B. (Ed.). (1952). *The creative process*. New York: The New American Library.
- Gnezda-Smith, N. (1994). The internal forces of creativity: When hearts start to flutter. *Roepers Review*, 17(2), 138-143.
- Guilford, J. P. (1967). Factor analysis, intellect and creativity. In A. Rothenberg & C. R. Hausman (Eds.), *The creativity question* (pp. 200-208). Durham, NC: Duke University Press.
- Haier, R. J., & Jung, R. E. (2008). Brain imaging studies of intelligence and creativity: What is the picture for education? *Roepers Review*, 30(3), 171-180.
- Heilman, K. M. (2005). *Creativity and the brain*. New York: Psychology Press.
- Jausovec, N. (2000). Differences in cognitive processes between gifted, intelligent, creative, and average individuals while solving complex problems: An EEG study. *Intelligence*, 28(3), 229-240.
- Jung, C. G. (1923). On the relation of analytical psychology to poetic art. In A. Rothenberg & C. R. Hausman (Eds.), *The creativity question* (pp. 120-126). Durham, NC: Duke University Press.
- Jung, R. E. (2009, May). *Neuroscience of creativity and intelligence: Implications for education*. Presented at Learning and the Brain Conference, Washington, DC.
- King, S. (2000). *On writing: A memoir of the craft*. New York: Pocket Books.
- Koestler, A. (1976). Bisociation in creation. In A. Rothenberg & C. R. Hausman (Eds.), *The creativity question* (pp. 108-113). Durham, NC: Duke University Press.
- Lowell, A. (1930). The process of making poetry. In Ghiselin, B. (Ed.), *The creative process* (pp. 109-112). New York: The New American Library.
- MacKinnon, D. (1965). Architects, personality types, and creativity. In A. Rothenberg & C. R. Hausman (Eds.), *The creativity question* (pp. 175-189). Durham, NC: Duke University Press.
- Martindale, C., & Armstrong, J. (1974). The relationship of creativity to cortical activation and its operant control. *The Journal of Genetic Psychology*, 124, 311-320.
- Martindale, C., & Hasenbus, N. (1978). EEG Differences as a function of creativity, stage of the creative process, and effort to be original. *Biological Psychology*, 6(3), 157-167.
- Maslow, A. H. (1962). *Toward a psychology of being*. New York: D. Van Nostrand.
- Mednick, S. (1962). The associative basis of the creative process. In A. Rothenberg & C. R. Hausman (Eds.), *The creativity question* (pp. 227-237). Durham, NC: Duke University Press.
- Molle, M., Marshall, L., Lutzenberger, W., Pietrowsky, R., Fehm, H. L., & Born, J. (1996). Enhanced dynamic complexity in human EEG during creative thinking. *Neuroscience Letters*, 208(1), 61-64.
- Myers, I. B., & Myers, P. B. (1990). *Gifts differing*. Palo Alto, CA: Consulting Psychology Press.
- Roe, A. (1963). Psychological approaches to creativity in science. In A. Rothenberg & C. R. Hausman (Eds.), *The creativity question* (pp. 165-173). Durham, NC: Duke University Press.
- Rothenberg, A., & Hausman, C. R. (Eds.). (1976). *The creativity question*. Durham, NC: Duke University Press.
- Sessions, R. (1941). The composer and his message. In B. Ghiselin (Ed.), *The creative process*. New York: The New American Library.
- Szekely, G. (1988). Encouraging creativity in art lesson. New York: Teachers College Press.
- Torrence, E. P. (1961). Problems of highly creative children. *Gifted Child Quarterly*, 5(2), 31-34.
- Wallas, G. (1926). Stages in the creative process. In A. Rothenberg & C. R. Hausman (Eds.), *The creativity question* (pp. 69-73). Durham, NC: Duke University Press.

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