

The Roles of Creativity in Society

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According to an emerging consensus among psychologists, creativity is defined as a novel yet appropriate solution to a problem or response to a situation (e.g., Amabile, 1996; Campbell, 1960; Feldman, Csikszentmihalyi, & Gardner, 1994; Runco, 2004). Creativity also includes the proactive devising, formulating, or framing of problems themselves (Getzels & Csikszentmihalyi, 1976; Kaufmann, 2003; Runco & Chand, 1994). Examples of creativity are ubiquitous. We see creativity in

- everyday cleverness, especially among children;
- the arts and sciences, with an abundant stream of paintings, dramas, theories, and concepts;
- business, with innovative products such as Federal Express's overnight delivery, 3M's Post-It Note, and Google;

Howard Gardner has helped me to develop these ideas, particularly as regards the potential of creativity to be put to constructive or destructive use. I thank him for his help – he barely escaped being a coauthor.

- social interaction, most recently with Web sites like MySpace and Twitter;
- education as charter schools and non-school venues, such as children's museums, arise around the world; and
- public policy as countries try to govern and promote their cultural assets and intellectual capital in more systematic ways, such as England's cultural industries initiatives.

As technology takes care of most routine tasks, we increasingly hear a clarion call for creativity in current and future generations of workers and citizens (e.g., Chen, Moran & Gardner, 2009; Florida, 2002; Friedman, 2005; Tepper, 2002).

Psychological research on creativity can be categorized according to cognitive, personality, developmental, and social sources (e.g., Gardner, 1988; Sawyer, 2006; Simonson, 2000); along Wallas's (1926) "four P's" of creative person, process, product, and press (e.g., Moran, 2009a); by methodologies such as psychometric, psychodynamic, and experimental paradigms (Feldhusen & Goh, 1995; Mumford, 2003; Plucker & Runco,

1998); and by the potential for creativity versus the performance of creativity (e.g., Runco & Charles, 1993). Several handbooks attest to the breadth and diversity of scholarly approaches (e.g., Rickards, Runco, & Moger, 2009; Runco, 1997; Sternberg, 1999).

Despite all of this creativity-related discourse and activity among practitioners, policymakers, and scholars, surprisingly little attention has been paid to the question of *why*. Why value creativity? What is the role of creativity in society? This line of questioning views creativity as a *cause* in social and intellectual endeavors, not just as an effect of individual differences, social support, or cognitive processes.

The Definition of Role

Role is a “part played.” It describes a relationship that sets up “shoulds,” or expectations for behavior (Biddle, 1986). The more common uses of the term might describe interpersonal responsibilities between two people, as in marriage or friendship, or the term might indicate how a person should perform on the job in the relationship between a person and organization. Yet a role could set up expectations between any two entities. In this chapter, I use this term to describe the relationship that obtains between an activity (creativity) and its environment writ large (society). This relationship defines what the activity is for.

A role can be thought of as having three interrelated dimensions. First, a role involves a *position* within a social network that links it to other positions. It provides connection. For example, there are the interconnected positions of dancer, choreographer, and lighting technician in a troupe stage production. The dancer position is more visible than the other two, and it often enjoys more fame. However, the choreographer is often considered the creative force of the troupe and is accorded considerable power and influence. The lighting technician usually is considered secondary in terms of influence and necessity.

Second, a role involves a *function* that has an effect on the wider community. It serves or contributes in some way to a greater system. A choreographer conceives and maps the bodily movement and spatial arrangement of a dance composition for the dancer to perform and the audience to enjoy. Without a dancer, the choreographer’s work cannot be demonstrated. Without lighting, the choreographer’s and dancer’s work cannot be seen.

Third, a role involves a *purpose* that incorporates values, orients goals, and drives behavior. It provides meaning and direction. A choreographer’s purpose may be to display the ways a body can make art through three-dimensional space; or it may be to highlight the athleticism and energy of movement. A dancer may dance for fun, for exercise, or for conveyance of emotion. A lighting technician aims to make visible to the audience a dancer’s movements and mood.

Many creativity scholars, as well as the public, implicitly have relied primarily on the positional dimension. For example, many researchers focus on the roles of artist or scientist as “special” or “genius” parts played in society. Creativity is set aside in these roles, which are often considered marginal positions away from the mainstream of daily life (Bourdieu, 1993). “Gifted” individuals with “potential” are found to take on these special positions, and they are studied for their unusual qualities. (See Barron & Harrington, 1981; Feldhusen & Treffinger, 1980; Park, Lubinski, & Benbow, 2007; Milgram, 1999; Runco, 1999, 2003; Simonton, 1994; Torrance, 1972, for examples.)

In fact, individuals can be creative or non-creative in any domain. There are creative lighting experts, and plenty of artists (even prima donnas) who are not creative. Indeed, creativity can be seen as a possibility in any domain that allows novelty and has mechanisms for evaluating that novelty relative to the domain’s current state and, ideally, the wider society in which the domain operates (Csikszentmihalyi, 1988; Gardner, Csikszentmihalyi & Damon, 2001). Creativity is

perhaps more likely to arise when the activity has a purpose of difference, change, or cultural evolution. Then it is intentional and proactive (Kaufmann, 2003). Gruber (1989), in particular, focused on purpose as a key aspect of creativity.

In this chapter, I focus on the functional and, especially, purposeful dimensions of the role of creativity. What does creativity *do* for society? Why should society *care* about creativity? What does creativity *gain* us? I argue that creativity can assume two apparently different roles in society. One, which I call the improvement role, emphasizes the large-scale societal consequences of a creation. The other, which I term the expression role, focuses on the significance of the activity for the individual creator. In the end, I suggest a framework in which these two roles interact, emphasizing how individual and societal creative purposes are more complementary than competitive.

The Value of Creativity

Purpose is based in values. Values signify the relative importance of goals or ideals. A focus on purpose is both timely and revealing since people tend to exhibit ambivalence about creativity. On the one hand, creative persons, institutions, and inventions are touted by politicians, leaders, educators, and the media as “saviors” for the ills of society. In addition, people often say they would like the opportunity to be more creative on the job or in leisure. Yet studies of creativity and values over the past 40 years show that American adults, including teachers, do not value creativity very highly (Hitt, 1975; Kasof, Chen, Himsel, & Greenberger, 2007; Moran, 2010a; Sternberg & Lubart, 1995; Torrance, 2003). Creativity is often associated with deviance, rebelliousness, daring, and independence (see also Cropley, 1996; Keniston, 1960; Moran, 2010a; Sternberg & Lubart, 1995): Creators “go their own way” and may not be dependable or reliable. They hold different values (Dollinger, Burke, & Gump, 2007).

Creativity involves moving beyond what exists now, using resources brought from the past to devise potentially better options for the future (e.g., Craft, 2003). Creativity is perceived to create a disjunct between present and future – it makes tomorrow less predictable. Our relationship with the future can be a key indicator of our attitudes toward creativity. Torrance’s (1991, 1993, 2004) 30-year longitudinal study of “beyonders” found that a person’s image of the future, and the role of oneself in that future, is more predictive of later creative achievements than are past achievements or traits such as intelligence.

By examining the “why” of creativity, I bring to the fore the relationship of creativity to the future. This relationship is often described in terms of the hopes and the risks of creativity. Hope signifies a desired future state. It involves optimism, thriving, and anticipated positive change. Hope instills balance, providing a more psychologically stable path toward the future. Creativity breeds both hope and benefits from hope because it provides a way to realize that hope. With creativity, a person can become more agentic in bringing the desired state into being. He or she is more self-directed.

Risk signifies the possibility of loss or hazard. It involves uncertainty, consequences, and trust. Risk upsets balance, bringing to mind unknowns that are like potholes in the path toward the future. Creativity involves uncertainty because it is difficult to know the consequences of something truly new. Dr. Faust, for example, discovered to his horror that creations cannot always be controlled. The belief is that novelty makes a situation more uncertain for the rest of us, which gives rise to anxiety (Jaques, 1990; Stacey, 1996). Anxiety is fear without an explicit object. It’s being afraid of something but not knowing quite what we fear. To some extent, we must trust that creations are benevolent for them to be allowed to come into existence.

Gardner (1993) has argued that creativity is amoral: Novel, useful ideas or products

could bring benefits or wreak havoc. Devastating examples are Nazi scientific experiments, superior technology in warfare that “improves” the ability to kill, agitprop propaganda masquerading as art, and in the 2000s the no-documentation ninja mortgages, credit default swaps, and other “creative products” in financial markets. At the time a novel product is introduced, we don’t know its rippling effects. This is why, in recent work, Gardner and colleagues (2007; Gardner et al., 2001) have sought to yoke the realm of creativity with the imperative of responsibility (see also Moran, 2010b). As Winston Churchill said, “The price of greatness is responsibility.”

The root of the word “responsibility” means to respond or to answer. To whom does the creator or creative product answer to? Whom or what does his or her work impact? There seems to be a critical time when a potential creator’s passions and concerns hook in with society’s goals and momentum to make a difference not only to the self but to society (Moran & Gardner, 2006). Responsibility shows that what we do matters, that we are all interconnected and affect each other. Creativity is a particularly visible way of impacting others in our communities because it changes the status quo for individuals and sometimes for the entire group.

Thus, creativity creates a bumpier ride: The result is more unpredictable than if the situation is stable and we can count on tomorrow to be much like today was. Our optimism holds that new will be better, but the law of unintended consequences says we might want to hedge our bets. Still, creativity is often considered good because it invents and perhaps controls the future. With creativity, the future becomes an opportunity, not a threat – at least for the creators. Opportunities are favorable circumstances for success. Whether we can recognize a situation as an opportunity may depend in part on what our purpose is. Through our activities, we position ourselves in our future. Purpose can enable or constrain our ability to re-cognize – that is,

think again and perhaps differently – about a situation. And that re-cognition is often where opportunity lays – in the ability to transform a crisis into a learning experience, an obstacle into a challenge, a support into an asset (Moran, 2008).

The Roles of Society in Creativity

Before delving into the roles of creativity in society, it may be helpful to describe the reciprocal perspective: What roles does society play in creativity? Creativity’s impact depends in part on power: Who gets to say what its role in society is? And who gets to decide who can be creative? Power entails the differential relationships among positional roles within society: Who can control the flow of resources, including information, social influence, and funding? Under the sway of scholarly paradigms that assumed creativity was the sole result of individuals (e.g., psychometric, psychodynamic, and early cognitive models), the societal influence on creativity was ignored. In the past 30 years, the interactive, contextualized nature of how creativity arises has become of more interest (e.g., Becker, 1982; Bourdieu, 1993; Csikszentmihalyi, 1988; Gardner, 1993; Hunter, Bedell, & Mumford, 2007; Zuckerman, 1977).

Csikszentmihalyi (1996), Gardner (1993), and Simonton (2003) discuss particular societies and historical time periods where creativity flourished and floundered. Ancient Greece, Renaissance Italy, and late twentieth-century America are examples of thriving creative societies, whereas Stalinist Russia and Maoist China are considered creativity-thwarting environments (except perhaps in domains that advanced a political or military agenda). Creativity needs a society that values novelty and appropriateness concurrently. If creativity is not allowed to exist or be recognized, then its role in society is moot. Thus, the role of creativity in society depends in part on the society in which a potential for creativity exists.

In general, society's impact can be parsed among three roles: benefactor, regulator, and consumer. These roles come into play at different times in the process of a novel idea's or product's creation. They are like ripples that the novel idea or product must pass through to become successful.

Creativity benefactors, such as funders, venture capitalists, incubators, and suppliers, influence the beginning of creativity. They provide resources enabling creativity to occur. Gardner (1993) and Becker (1982), for example, both show how the artist – far from being a “lone genius” – requires a network of emotional, financial, and material supports to create. Similarly, Zuckerman (1977) shows how science arises from beneficial relationships. Benefactors help stimulate the “novel” aspect of creativity. They create a space for creativity to have the possibility to arise.

Creativity regulators are the bottleneck of creativity. These powerful individuals are responsible for selecting, from among the myriad potential new ideas and products in their fields, which ideas and products are worthy of support, development, and dissemination. Csikszentmihalyi (1988), Amabile (1982), Bourdieu (1993), and Sosa and Gero (2004) have put forth theories and methods to assess how these “gatekeeping” decisions are made. These theories suggest that individuals are socialized into the field to produce works similar to what is already in use. Because practitioners are initially taught to think in similar ways, evaluations of products, even if they are subjective, are often reliable indicators of creativity (Amabile, 1982; Kaufman, Lee, Baer, & Lee, 2007). That is, experts tend to agree on what is creative. However, gatekeeping is imprecise (e.g., Delmestri, Montanari, & Usai, 2005; Licuanan, Dailey, & Mumford, 2007; Marsh, Jayasinghe, & Bond, 2008). The more novel the product, the harder it is for gatekeepers to evaluate and the more the creator must devise a way for the product to be seen as acceptable to others (Bourdieu, 1993; Gardner & Nemirovsky, 1991). Thus, creative work and creative fields include considerable political skill – either by the

creator or by a benefactor – to persuade others to overcome their anxieties and value something unfamiliar (Kasof, 1995; Runco, 1995).

Regulators also help manage the risk of creativity. They provide a safety check by weeding out products or producers that may potentially harm the field or the consumers the field serves. This function is more visible in products and services to the public, such as inspections in transportation or food, and clinical trials in pharmaceuticals. But it also operates in professional fields where the consumers are other professionals, such as peer review in academia and the bar exam in law (e.g., Johnson, 2008). Regulators take care of the “appropriate” aspect of creativity. To be appropriate means the environment, both other people and the symbolic body of knowledge practitioners work with, is taken into consideration (Runco & Chand, 1994; Runco & Charles, 1993). The issue is whether and how field members and the public can trust gatekeepers (Gardner, Benjamin, & Pettingill, 2006).

Creativity consumers are the end game of creativity. In esoteric or difficult-to-master fields, the consumers may be a tiny group. For example, Einstein's theory of relativity had to be accepted only by the dozen leading physicists of the day. More commonly, however, judgments of creativity are made over time by a much larger cohort. When a creative idea or product captures the hearts, minds, and/or wallets of a critical mass of people, it “wins” the game of acceptance and adoption, which can bring fame and even fortune to the creator or promoter (Sternberg & Lubart, 1995). Consumers can range from early adopters who pick up the “latest, greatest” items to laggards who won't buy an item until it's already out of fashion (Rogers, 1995). The balance of a product's novelty and appropriateness helps determine how many people will want it: too much novelty and only the early adopters partake; too much appropriateness and consumers may not even notice it since there probably are already many other similar products available.

Eventually, the benefits to early adopters with “cultural capital,” who are not afraid of a little risk in trying something new, reach the majority of consumers. The product is no longer a luxury, but becomes a necessity: indoor lights, telephones, refrigerators, cars, televisions, computers, cell phones, and credit cards, to name a few. The idea or product becomes part of the mainstream, part of the social fabric. It has become accepted, standardized, or appropriate. Enough time has passed since its introduction that people who are risk averse can read reviews or talk to others who have used the product so they can know in advance what they are buying. Thus, creativity signifies a state or period in a temporal process when an idea or product, which holds promise of being beneficial, is introduced. However, an idea or product does not remain creative indefinitely because it eventually becomes the standard for later ideas or products.

A Dichotomy of Purposes Based on Differing Perspectives

Given ambivalent values about creativity and the societal roles of benefactor, regulator, and consumer in creativity, I propose two overarching roles that creativity, in turn, plays in society. I focus on modern, primarily European and American society. One role – improvement – is usually championed by creativity regulators, as trustees for a group, or more democratically by creativity consumers. The other role – expression – is usually championed by creativity benefactors and often creators themselves. Thus, roles are related to perspectives. Whose view should we privilege – the group’s or the individual’s?

The societal perspective of the group emphasizes an “objective” account of the functions and purposes of creativity. This account is based implicitly on intersubjective agreement and common understanding (Rogoff, 1990), usually as promoted by those in powerful positions. It emphasizes novelty at the group level with appropriate-

ness yoked to group goals. This perspective is interested in finding the select individuals who can “make history” through great contributions – “big-C” creativity. The psychometric (e.g., Wilson, Guilford, & Christensen, 1953), personality (e.g., Barron & Harrington, 1981), historiometric (Simonton, 1994), cognitive (e.g., Gardner, 1993; Perkins, 1981), and management (e.g., Agars & Kaufman, 2005; Amabile, 1996; Stonehouse & Minocha, 2008) approaches depict creativity as an individual ability or trait to be assessed and harnessed by society (or the group) to make great leaps forward in productivity, technology, and innovation.

The individual perspective emphasizes a “subjective” account of the functions and purposes of creativity. This account is based on the idiosyncratic meanings a person derives from particular experiences (Feldman, 1994; Vygotsky, 1978), with little credence given to external evaluations. It emphasizes novelty and appropriateness for the individual but not necessarily for the group. This perspective is interested in “making a mark” in the world through personal contributions – “little-c” creativity. Humanistic (e.g., Maslow, 1970), educational (e.g., Craft, 2003; Feldman, 1994; Runco, 2003), and health (e.g., Davis, 1987; Mirowsky & Ross, 2007; Richards, 2007; Runco & Richards, 1998) researchers show a growing appreciation for creativity as expression in general problem solving and self-development that is less norm-comparative and more inclusive. The psychoanalytic (e.g., Rothenberg, 1990) and sociological (e.g., Becker, 1963; Stebbins, 1971) approaches seem mostly interested in the individual perspective, but in relation to the societal perspective. However, their emphasis is on how the two perspectives differ. They focus on self-expression, but often in terms of pathology or deviance from a norm.

I explore these two perspectives as dichotomous influences on creativity’s role in society. From the societal perspective, creativity’s role is improvement; from the individual perspective, creativity’s role is expression.

Creativity's Role Is Improvement

"We need new ideas to solve our country's pressing problems."

"We need workers who can 'think outside the box' – especially in science and technology – to be competitive in today's global economy."

"What drives the world today is change."

From the societal perspective, often voiced by political and business leaders, the function of creativity is to improve society. The purpose or intention is competitive advantage: The business, state, or nation will compare favorably to others if new ideas are implemented (e.g., Prajogo, 2006; Stonehouse & Minocha, 2008). The belief is that a novel, appropriate solution will create a positive spiral of productivity and achievement. For example, several government leaders have argued that modern societies live or die depending on their nurturing and valuing of creativity. Thus, they have established plans to stimulate creativity in education and economics (e.g., the New England Council in Boston [2001], the National Advisory Committee on Creative and Cultural Education [1999] in the United Kingdom, and the National Program of Educational Reform and Development in China [see Shen, 1996]). The Matthew effect (Merton, 1968), where those with the most get more and those with the least get even less, will commence, and the society will be on the more privileged path. The underlying value assumption is that if workers and citizens come up with new ideas, life will be better.

In general, Western cultures are considered more product oriented and tend to take this perspective (Lubart, 1999). However, most cultures aim to improve. Within a particular culture, "improve" might translate into different manifestations. Some link improvement to carrying on tradition, whereas others link it to change. Chinese students, for example, improve their artistic skill by better imitating the classics, whereas American students improve their artistic

skill by darting forth in unexpected directions (Gardner, 1989).

The societal perspective reinforces beliefs that power is hierarchical and a society should strive to be on top. Central control of societal resources by experts and authorities can be more thoughtfully and strategically allocated and coordinated toward desired ends. Opportunities should be carefully evaluated, and the optimum ones implemented. Outcomes of successful opportunities should be preserved for current and future generations to further build on. This approach calls for educational programs that select for and nurture individuals with the highest potential to be innovative in various domains (see also Chen, Moran, & Gardner, 2009; Moran, 2009b).

Over the course of time, societies parse into fields of expertise – professions, industries, and the like – who oversee a particular domain of culture. Practitioners jostle for power and influence over policy, standards, and the valuation of work products. For efficiency, practitioners develop procedures and norms to reinforce conformity. Thus, creativity eventually gives way to standardization. Creativity pulls society forward to a new stable state. Regulators and consumers come to depend on the resulting consistency. For example, a new painting style spawns imitators, and a "school of art" arises (e.g., Martindale, 1990). A new category of technology – for example, cell phones – eventually settles on standardized cables and protocols and makes usage easier and cheaper. A scientific method – for example, genetic blueprinting – is developed, equipment is built, and one or a few labs ascend to be the standard-setters.

Creativity's role as improver brings to the fore the evaluation aspect of creativity. In recent years scholars have devoted considerable attention to evaluation (e.g., Elsbach & Kramer, 2003; Paletz & Peng, 2008; Runco & Charles, 1993). Evaluation is the mechanism that gatekeepers use to determine appropriateness. Evaluation is external to the product and creator, imposed by others in the field (i.e., experts, colleagues) or outside the field (i.e., government,

consumers). Creators and creative products should expect to be subjected to feedback from others.

Evaluation is necessary because creativity requires the use of often scarce resources. Therefore, leaders need to allocate resources to those most likely to do well with them. In the past (and continuing in the present), criteria for resource allocation have included intelligence, giftedness, and talent as assessed through various measures (e.g., Park et al., 2007; Terman et al., 1925; Torrance, 2003; Wilson et al., 1953). These instruments sort people. People have potential that can be realized (e.g., Runco, 2003). Exemplars are those select individuals whose potential is more fully realized; they have gone further to turn their potential into achievements (Csikszentmihalyi, 1996; Gardner, 1993; John-Steiner, 1985). Evaluation sorts creativity by amount; for example, children are often assessed based on how much creative potential or creative achievement they have as depicted in a score (Runco, 2003). But eventually, if a person reaches a threshold, evaluation sorts creativity by kind; eminent creators who transform a domain – such as Shakespeare in theater, or Newton in physics, or the Wright brothers in aviation – are considered a different *kind* of person than people who devise personal or small-scale innovations or inventions.

With creativity's role as improver, the important thing is the goal and what counts as progress toward it. Because most fields do not have clear criteria for evaluating truly novel products, what counts as "good" can vary across individuals. What field practitioners or experts consider good may differ significantly from what consumers or novices think is good (Caroff & Besancon, 2008; Kaufman, Baer, Cole, & Sexton, 2009). This discrepancy is often seen in the divergent opinions of awards committees and viewers in the film, television, and advertising industries (e.g., Delmestri et al., 2005). What some field members consider good may vary from other field members. This discrepancy is often seen in peer review of academic publications (Marsh et al., 2008).

These various constituents have different values that underlie their evaluations and their conceptions of improvement.

People who believe that improvement is the role of creativity may have difficulty with the moral and responsibility aspects of creativity; creativity cannot be coincident with improvement, on the one hand, and yet concurrently moral-free. Agreeing with Gardner's earlier work, I argue that creativity cannot and is not automatically associated with benevolence. Creators issue new acts and products for all kinds of reasons. Many do not care about their social consequences, and even those that do often have little or no control over how their creations are used. Did Einstein anticipate the use of his equation to create nuclear weapons? Did Watson and Crick anticipate genetic engineering?

However, the essential amorality of creativity does not relieve individuals or societies of the obligation to attempt to direct or regulate the uses of innovations. The innovation is one step; its publication and application is a separate step. Einstein did not have to write President Roosevelt about the potential uses of nuclear fission; nor did he have to join various organizations devoted to peace and disarmament. These are morally guided choices that he made – either in his role as a scientist or in his role as a citizen. James Watson did not have to join the human genome project; nor did he have to propose that 3–5% of the budget be devoted to ethical issues.

I argue that if people want to affect the course of history, if they take the societal perspective of creativity-as-improvement, then they assume the attendant responsibility. Those who steal the fire from the gods have a moral obligation to attend to its uses and, where possible, direct those uses to noble ends (Gardner et al., 2001; Gardner, 2007).

Creativity's Role Is Expression

"I stretch myself in my work, see what happens."

"My art reveals a side of me I didn't know I had."

"I throw out my ideas, my experiences, and hope others can understand who I am."

From the individual perspective, often voiced by creative practitioners and laypeople (e.g., Sternberg, 1985), the function of creativity is to manifest latent aspects of the self. Because individuals are assumed to be unique, this function leads to variation, a complex buzz of concurrent possibilities (Campbell, 1960). The purpose or intention is to make meaning. The individual understands something in a personally significant way and shares that meaning through some type of product. The belief is that a novel idea or product validates a person's existence in that he or she has "made a mark" on the world. The person has contributed to his or her immediate environment. The underlying value assumption is that difference is important: If individuals express what is "inside" them – their potential – then they will feel better. Creativity is positive surprise.

Within a particular culture, "express" might translate into different manifestations. Some cultures are more tolerant of individuality and self-expression, especially if the self is expressing something beyond the cultural norm. The value of freedom of speech in the United States tends to protect a wide variety of expressions, whereas many traditional cultures severely limit the content and timing of expressions. Even within America there are differences: San Francisco tends to allow wider latitude of self-expression than Peoria. Although conventional wisdom states that Western cultures are generally more oriented to the individual, Eastern cultures tend also to take this perspective and see creativity's role as that of self-expression (Lubart, 1999).

The underlying belief of this perspective is that creativity should not be limited to unequivocally domain-transforming geniuses, such as Einstein, Picasso, or T.S. Eliot (as in, e.g., Gardner, 1993). Rather,

almost anyone can come up with new ways to address a common life problem or think in terms of possibilities rather than only perceiving and reacting to "what is." Self-expression relates to externalization, or how one shows the world his or her interpretations of cultural meanings (Engestrom, 1999; see also Moran & John-Steiner, 2003). In this vein, Maslow (1970) included creativity as part of self-actualization in his theory of motivation, Runco (1996) promotes the notion of "personal creativity," Richards (2007) emphasizes "everyday creativity," and Craft (2003) advocates for "little-c" creativity. Although this emphasis on self-expression aims to make creativity less elitist than the improvement role, it also makes creativity more solipsistic than contributory. It disconnects individuals from responsibility to a greater good.

The individual perspective reinforces more egalitarian beliefs: We're all different, but we can coexist. It's better if we're connected in a positive way, so long as we don't constrain each other's expression. We need not seek a common goal. What is important is experience – who we are, what we're doing now, what it feels like, where it takes us existentially. Power is not hierarchical, but networked. We don't have to be better than each other; our differences can be complementary. Collaborations are viewed in terms of their internal benefits and not their external accomplishments. People self-expressing together can catalyze and enhance the expressions, motivation, and identities of their partners (John-Steiner, 2000; Moran & John-Steiner, 2004).

With creativity's role as expression, what is important is the self – what are the qualities being expressed? Society is viewed as a nurturer of individuality. Societies offer education and training, support, and "safe spaces" for people to explore their interests, preferences, and experiences. This role of creativity-as-expression has been a particular emphasis in educational circles. In many countries, the purpose of education has become more about releasing children's

creative capacities than in training them in the dominant culture (e.g., Chen et al., 2009; Craft, 2003; Moran, 2009b). Evaluation, if it is done, should be based on subjective criteria that take into account the process of becoming, not just the end product of achievement. Thus, sometimes this role of creativity-as-expression mixes the concepts of learning and creativity (see Moran, 2010a).

Of particular note is how this creativity role is more often called on when focusing on “special populations” – that is, individuals from groups that are assumed not to be able to contribute to the “common good” through normal channels. These individuals include children (who are too young and may lack the expertise and judgment to contribute; Moran, 2007) and the sick or disabled (who are too feeble to contribute). It also used to include women (Kirschenbaum & Reis, 1997). Can children be active cultural agents or is their “creativity” an error or misunderstanding (Craft, 2003)? Can cancer patients create meaning for their experiences (Visser & Op’t Hoog, 2008)? Can employees with lower autonomy stay healthier through creativity (Mirowsky & Ross, 2007)?

Creativity-as-expression is a way of coping with life’s challenges (Cropley, 1996). Traditionally, it provided a means for those without power to have some say in society. Scott’s (1990) study of mechanisms of resistance takes a sociological stance on the productive role that the creation of rumors, rituals, and so forth plays in helping people who cannot directly state their views. This purpose may still hold. Technology is changing how people can express themselves, especially for people formerly excluded from societal interaction, such as youth who have not reached majority age (see Moran, 2007).

Creativity here is seen as a separate side effect or outlet for people who are not allowed or don’t want to contribute directly to societal norms or goals. Consider the beatnik writers of mid twentieth-century America (see Moran, 2009c), the jester in medieval

courts, the joker in Shakespeare’s plays, or the coyote in Southwest Native American stories. Creativity here means “play” or “of no real consequence.” Of course, play has been linked to creativity both theoretically and empirically (e.g., Goldmintz & Schaefer, 2007; Moran & John-Steiner, 2003; Russ, Robins, & Christiano, 1999).

This role, taken to its extreme, is perhaps best seen in the phenomenon of the internet. What would it look like if everyone were creative? YouTube. MySpace. Facebook. Blogs. Wikis. There are no gatekeepers other than the sense of propriety, fairness, or other values that Internet users negotiate or force on each other. In such an environment, different mechanisms of trust must evolve. For example, eBay, yelp, Amazon, and similar retail and review sites have developed “reputations” for users to assess the validity of other people’s expressions. Thus, someone can put almost anything up on the Web, but it may or may not have much meaning to others depending on the creator’s reputation with other users. Responsibility pertains less to a norm or the future and more to policing each other in the present. The assumption is that, overall, the different expressions and opinions will coagulate into some type of coherence; but the process of development remains preeminent. For example, wiki pages are rarely considered “done” because people are expressing new ideas and perspectives daily. With creativity-as-expression, the point is motion and momentum, not a product that can be put on a pedestal as an exemplar.

Creativity, Society, Wisdom, and Further Possibilities

Two perspectives take the extremes of creativity’s role in society. The first perspective articulates a relatively linear society “center” marching toward greatness. The individual is a tool for historical development. The underlying metaphor is of transporting society across the “border” into a better future with the norm shifted to a “higher”

or “stronger” position. The political, business, and scientific headlines focus on improvement, progress, and making an aspect of society better. Leaders believe creativity drives that improvement. They want innovation and flexibility for competitive advantage. Products and services become more convenient, cheaper, faster, and better.

The second perspective articulates a subjective individual experiencing novelty and distinction from others. The culture is a tool for personal development. Statements of artists, educators, and workers focus on expression, variation, and potentially making a difference *in* society. The metaphor is that of blossoming. These individuals believe that creativity manifests the latent aspects of the self through work and play. They want authenticity, stimulation, and opportunities to be true to themselves.

From a dynamic-systems approach (see, e.g., Guastello, 2007), the two perspectives of creativity as improvement or expression are not extremes of one dimension. Rather, they are seen as different levels of analysis – individual and society interact over time to bring new ideas and products into the realm of culture (e.g., Campbell, 1960; Moran & John-Steiner, 2003). In a dynamic system, creative ideas, products, and solutions are creative only temporarily – when they are introduced and judged. But over time, they become seen as standard and conventional because they have been internalized by a majority of minds of cultural members. These ideas, products, or solutions are no longer new, even if they retain the label of having once been innovative. The challenge is for people who seek creativity – both improvement and expression – to have the foresight to consider the wider ramifications of these purposes on themselves, others, institutions, communities, and the environment.

Vygotsky argued that creativity is the construction and synthesis of experience-based meanings and cognitive symbols (the individual perspective) embodied in cultural artifacts (i.e., creative products) that endure over time to be appropriated by future

generations (the societal perspective) (see Moran & John-Steiner, 2003). Thus, from a time-sensitive, dynamic perspective, creativity is a temporary misalignment of society and individual as they learn from and develop each other (Gardner et al., 2001; Moran & John-Steiner, 2003; see also Moran, 2010b). That misalignment readjusts into a new alignment with the world more knowledgeable in some way than it was before.

The roles of creativity raise the issue of the relationship between creativity and wisdom. At first glance, these two perspectives seem to pull in somewhat different directions (Craft, Gardner, & Claxton, 2008; Sternberg, 2001). In creativity, novelty and acceptance are key – “defying” then “charming” the crowd to follow. Wisdom, on the other hand, seems to entail three features: 1) a broad, systemic view, usually based on considerable experience; 2) a recognition of both human possibilities and limitations, or a sense of awe and humility; and 3) an application or use that goes beyond individual or group advantage and seeks instead to do what is right in the situation, often for a “greater good” (Baltes & Smith, 2008; Craft et al., 2008; Connell & Moran, 2008; Sternberg, 2001).

Some scholars suggest that wisdom takes creativity a step further by recognizing the need for both change and stability in a social and symbolic system (e.g., Sternberg, 2001). This claim emphasizes the novelty aspect of creativity and relegates the acceptance aspect more to wisdom.

Yet both creativity and wisdom address problem solving, both can include a “twist” in thinking, and both tend to have a transformative effect, to some degree, on those involved. For example, the classic wisdom scenario in the Bible of King Solomon shows both creativity and wisdom. Two women both claimed to be the mother of a baby. Solomon looked at the issue in an unusual way and suggested cutting the baby in half to solve the dispute. The real mother, willing to give up custody rather than see the baby harmed, was revealed.

Another relevant story is when Jesus intervened in the imminent stoning of an

adulteress. Jesus basically conducted a “mirror test” (Gardner et al., 2001) on the men by pointing out that all of them, like the woman, were sinners. If she must die for her transgression, so too must they. Gandhi’s campaign to erode British power in India through nonviolence rather than through fighting is a nonreligious example of the same interplay of creativity and wisdom. Solomon, Jesus, and Gandhi challenged people’s assumptions and beliefs about the situation, and this challenge drove new actions. The creative product or service, or the wise decision or action, has psychological leverage – people’s understandings are different afterward (Simonton, 2008; Sternberg, 2001). The meaning of what creators do (in the present and the future), as well as the benevolence of those actions and their effects, is what can turn creativity into wisdom (Helson & Srivastava, 2002).

Recently, purpose has been conceived as a link between the individual and society. Purpose is an intention and a reason for activity that is both meaningful to the individual and that contributes positively to society (Damon, 2008). In this light, the improvement and expression roles of creativity are different purposes interacting to evolve possibilities into opportunities, opportunities into activity, and activity into cultural artifacts. Realized possibilities that positively affect the greater good are wise. Artifacts, in turn, can stimulate even further possibilities in a cycle of cultural progress. As Newton said, “I have stood on the shoulders of giants.” He recognized the function and purposes of prior generations’ creations on his work. They made his work possible; he took their foundation and added to the laws of physics in a transformative way. His equations later made possible Einstein’s equations, which allowed for relativity and not just absoluteness, as Newton’s equations implied.

Feldman’s (1994) “transformational imperative” suggests that people have a need and desire to make something of themselves and to have an effect on the world. They seek resources, niches, and opportunities to do so. The variation that this imper-

ative creates eventually shifts the average, the norm. Csikszentmihalyi’s (1988) “where is creativity?” systems model, Bourdieu’s (1993) cultural production theory, and Feldman’s (1994) universal-to-unique continuum describe how those imperatives filter through larger “ripples” of social organization. Feldman’s continuum can be thought of in terms of the number of people who hold an idea, which can run from unique, when only one person knows, to universal, when everyone knows or should know the idea. Moving from the unique and idiosyncratic end toward the cultural and universal end represents a widening influence of a creation (i.e., a person’s variation) on others. His or her self-expression increasingly becomes an improvement among increasingly larger ripples of society.

Creativity results from a community. For it to arise, there must be a confluence of both individual and societal forces (Seitz, 2003). Cultural progress is not “full steam ahead.” Self expression is not “do whatever.” We need to recognize the checks and balances in social systems. There is a call for both openness and regulation. Too much openness can lead to chaos. Too much regulation can lead to stagnation. Neither scenario is conducive to creativity that is significant, meaningful, and responsible. Neither total freedom nor total security works.

We do not seek to control or mandate how the imagination works and what products it may fashion – whether ideas, objects, strategies, or experiences. Yet we must acknowledge that each of us lives within a particular society, as well as an increasingly interconnected global society. As citizens of these societies, we cannot close our eyes to the uses and interpretations that follow on creations, be they of individual or historical dimensions.

An act of self-expression, no less than a Nobel Prize-winning discovery, may have wide consequences. I suggest that, far from diminishing the province of creativity, this state of affairs actually enhances it. For yoked to the act of creativity is an additional challenge, namely, how to increase the likelihood that the creation is put to positive

ends. The function and purpose of creativity become more important than traits or positions. Rather than creativity diminished, we instead have creativity multiplied.

References

- Agars, M. D., & Kaufman, J. C. (2005). Creativity in the workplace: Introduction to the special issue. *Korean Journal of Thinking & Problem Solving*, 15(2), 5–6.
- Amabile, T. (1982). Social psychology of creativity: A consensual assessment technique. *Journal of Personality and Social Psychology*, 43, 997–1013.
- Amabile, T. (1996). *Creativity in context*. Boulder, CO: Westview Press.
- Baltes, P. B., & Smith, J. (2008). The fascination of wisdom: Its nature, ontogeny, and function. *Perspectives on Psychological Science*, 3(1), 56–64.
- Barron, F., & Harrington, D. (1981). Creativity, intelligence, and personality. *Annual Review of Psychology*, 32, 439–476.
- Becker, H. S. (1963). *Outsiders*. Glencoe, IL: The Free Press.
- Becker, H. S. (1982). *Art worlds*. Berkeley: University of California Press.
- Biddle, B. J. (1986). Recent developments in role theory. *Annual Review of Sociology*, 12, 67–92.
- Bourdieu, P. (1993). *The field of cultural production*. New York: Columbia University Press.
- Campbell, D. T. (1960). Blind variation and selective retention in creative thought as in other knowledge processes. *Psychological Review*, 67, 380–400.
- Caroff, X., & Besancon, M. (2008). Variability in creativity judgments. *Learning and Individual Differences*, 18, 367–371.
- Chen, J.-Q., Moran, S., & Gardner, H. (2009). *Multiple intelligences around the world*. San Francisco: Jossey-Bass.
- Connell, M., & Moran, S. (2008, August). "All the wiser": Wisdom from a systems perspective. Invited talk at the University of Chicago, Arete Initiative, Chicago, IL.
- Craft, A. (2003). The limits to creativity in education: Dilemmas for the educator. *British Journal of Educational Studies*, 51(2), 113–127.
- Craft, A., Gardner, H., & Claxton, G. (Eds.). (2008). *Creativity, wisdom, and trusteeship: Exploring the role of education*. Thousand Oaks, CA: Corwin Press.
- Cropley, A. J. (1996). Recognizing creative potential: An evaluation of the usefulness of creativity tests. *High Ability Studies*, 7(2), 203–219.
- Csikszentmihalyi, M. (1988). Society, culture, and person: A systems view of creativity. In R. J. Sternberg (Ed.), *The nature of creativity* (pp. 325–339). New York: Cambridge University Press.
- Csikszentmihalyi, M. (1996). *Creativity*. New York: HarperCollins.
- Damon, W. (2008). *The path to purpose*. New York: Free Press.
- Davis, B. W. (1987). Some roots and relatives of creative drama as an enrichment activity for older adults. *Educational Gerontology*, 13(4), 297–306.
- Delmestri, G., Montanari, F., & Usai, A. (2005). Reputation and strength of ties in predicting commercial success and artistic merit of independents in the Italian feature film industry. *Journal of Management Studies*, 42(5), 975–1002.
- Dollinger, S. J., Burke, P. A., & Gump, N. W. (2007). Creativity and values. *Creativity Research Journal*, 19(2–3), 91–103.
- Elsbach, K. D., & Kramer, R. M. (2003). Assessing creativity in Hollywood pitch meetings: Evidence for a dual-process model of creativity judgments. *Academy of Management Journal*, 46(1), 283–301.
- Engestrom, Y. (1999). Activity theory and individual and social transformation. In Y. Engestrom, R. Miettinen, & R.-L. Punamaki (Eds.), *Perspectives on activity theory* (pp. 19–38). Cambridge: Cambridge University Press.
- Feldhusen, J. F., & Goh, B. E. (1995). Assessing and accessing creativity: An integrative review of theory, research and development. *Creativity Research Journal*, 8, 231–247.
- Feldhusen, J. F., & Treffinger, D. J. (1980). *Creative thinking and problem solving in gifted education*. Dubuque, IA: Kendall/Hunt.
- Feldman, D. H. (1994). *Beyond the universals of cognitive development* (2nd Ed.). Norwood, NJ: Ablex.
- Feldman, D. H., Csikszentmihalyi, M., & Gardner, H. (1994). *Changing the world: A framework for the study of creativity*. Westport, CT: Praeger.
- Florida, R. (2002). *The rise of the creative class*. New York: Basic Books.
- Friedman, T. L. (2005). *The world is flat*. New York: Farrar, Straus, & Giroux.

- Gardner, H. (1988). Creativity: An interdisciplinary perspective. *Creativity Research Journal*, 1, 8–26.
- Gardner, H. (1989). *To open minds: Chinese clues to the dilemma of contemporary education*. New York: Basic Books.
- Gardner, H. (1993). *Creating minds*. New York: Basic Books.
- Gardner, H. (Ed.). (2007). *Responsibility at work*. San Francisco: Jossey-Bass.
- Gardner, H., Csikszentmihalyi, M., & Damon, W. (2001). *Good work: When excellence and ethics meet*. New York: Basic Books.
- Gardner, H., Benjamin, J., & Pettingill, L. (2006). An examination of trust in contemporary American society. In B. Kellerman (Ed.), *Center for Public Leadership Working Papers*, Harvard University. Spring 2006.
- Gardner, H., & Nemirovsky, R. (1991). From private intuitions to public symbol systems: An examination of the creative process in Georg Cantor and Sigmund Freud. *Creativity Research Journal*, 4(1), 1–21.
- Getzels, J. W., & Csikszentmihalyi, M. (1976). *The creative vision: A longitudinal study of problem finding in art*. New York: John Wiley & Sons.
- Goldmintz, Y., & Schaefer, C. E. (2007). Why play matters to adults. *Psychology and Education: An Interdisciplinary Journal*, 44(1), 12–25.
- Gruber, H. E. (1974). *Darwin on man: A psychological study of scientific creativity*. New York: Dutton.
- Gruber, H. E. (1989). The evolving systems approach to creative work. In D. B. Wallace & H. E. Gruber (Eds.), *Creative people at work* (pp. 3–24). New York: Oxford University Press.
- Guastello, S. J. (2007). Non-linear dynamics and leadership emergence. *The Leadership Quarterly*, 18, 357–369.
- Helson, R., & Srivastava, S. (2002). Creative and wise people: Similarities, differences, and how they develop. *Personality and Social Psychology Bulletin*, 28, 1430–1440.
- Hitt, M. A. (1975). The creative organization: Tomorrow's survivor. *Journal of Creative Behavior*, 9(4), 283–290.
- Hunter, S. T., Bedell, K. F., & Mumford, M. D. (2007). Climate for creativity: A quantitative review. *Creativity Research Journal*, 19(1), 69–90.
- Jaques, E. (1990). *Creativity and work*. Madison, WI: International Universities Press.
- John-Steiner, V. (1985). *Notebooks of the mind: Explorations of thinking*. Albuquerque, NM: University of New Mexico Press.
- John-Steiner, V. (2000). *Creative collaboration*. New York: Oxford University Press.
- Johnson, V. E. (2008). Statistical analysis of the National Institutes of Health peer review system. *PNAS Proceedings of the National Academy of Sciences of the United States of America*, 105(32), 11076–11080.
- Kasof, J. (1995). Explaining creativity: The attributional perspective. *Creativity Research Journal*, 8(4), 311–366.
- Kasof, J., Chen, C., Himsel, A., & Greenberger, E. (2007). Values and creativity. *Creativity Research Journal*, 19(2–3), 105–122.
- Kaufman, J. C., Baer, J., Cole, J. C., & Sexton, J. D. (2009). A comparison of expert and nonexpert raters using the Consensual Assessment Technique. *Creativity Research Journal*, 20(2), 171–178.
- Kaufman, J. C., Lee, J., Baer, J., & Lee, S. (2007). Captions, consistency, creativity, and the Consensual Assessment Technique: New evidence of reliability. *Thinking Skills and Creativity*, 2(2), 96–106.
- Kaufmann, G. (2003). What to measure? A new look at the concept of creativity. *Scandinavian Journal of Educational Research*, 47(3), 235–252.
- Keniston, K. (1960). *The uncommitted*. New York: Dell.
- Kirschenbaum, R. J., & Reis, S. M. (1997). Conflicts in creativity: Talented female artists. *Creativity Research Journal*, 10(2–3), 251–263.
- Licuanan, B. F., Dailey, L. R., & Mumford, M. D. (2007). Idea evaluation: Error in evaluating highly original ideas. *Journal of Creative Behavior*, 41(1), 1–27.
- Lubart, T. I. (1999). Creativity across cultures. In R. J. Sternberg (Ed.), *Handbook of creativity* (pp. 339–350). New York: Cambridge University Press.
- Marsh, H. W., Jayasinghe, U. W., & Bond, N. W. (2008). Improving the peer-review process for grant applications: Reliability, validity, bias, and generalizability. *American Psychologist*, 63(3), 160–168.
- Martindale, C. (1990). *The clockwork muse: The predictability of artistic styles*. New York: Basic Books.
- Maslow, A. (1970). *Motivation and personality*. New York: Harper & Row.
- Merton, R. K. (1968). The Matthew effect in science. *Science*, 159, 56–63.

- Milgram, R. M. (1999). Creative out-of-school activities in intellectually gifted adolescents as predictors of their life accomplishments in young adults: A longitudinal study. *Creativity Research Journal*, 12, 77–88.
- Mirowsky, J., & Ross, C. E. (2007). Creative work and health. *Journal of Health and Social Behavior*, 48(4), 385–403.
- Moran, S. (2007, November). *Commitment and democracy: Are researchers capturing what young people commit to civically and politically?* Paper presented at the conference of the Association for Moral Education, New York, NY.
- Moran, S. (2008, November). Opportunity recognition. Invited talk at Babson College, Wellesley, MA.
- Moran, S. (2009a). Creativity: A systems perspective. In T. Richards, M. Runco, & S. Moger (Eds.), *The Routledge companion to creativity* (pp. 292–301). London: Routledge.
- Moran, S. (2009b). Why multiple intelligences? In J.-Q. Chen, S. Moran, & H. Gardner (Eds.), *Multiple intelligences around the world* (pp. 365–373). San Francisco: Jossey-Bass.
- Moran, S. (2009c). What role does commitment play among writers with different levels of creativity influence? *Creativity Research Journal*, 21(2–3), 243–257.
- Moran, S. (2010a). Creativity in school. In K. S. Littleton, C. Wood, & J. K. Staarman (Eds.), *International handbook of educational psychology: New perspective on learning and teaching*. Bingley, England: Emerald.
- Moran, S. (2010b). Returning to the GoodWork Project's roots: Can creative work be humane? In H. Gardner (Ed.), *GoodWork: Retrospectives and opportunities*. GoodWork Project working paper.
- Moran, S., & Gardner, H. (2006). Extraordinary cognitive achievements: A developmental and systems analysis. In W. Damon (Series Ed.) & D. Kuhn & R. S. Siegler (Vol. Eds.), *Handbook of child psychology: Vol. 2. Cognition, perception, and language* (6th ed., pp. 905–949). New York: Wiley.
- Moran, S., & John-Steiner, V. (2003). Creativity in the making: Vygotsky's contemporary contribution to the dialectic of development and creativity. In R. K. Sawyer, V. John-Steiner, S. Moran, R. J. Sternberg, D. H. Feldman, J. Nakamura et al. (Eds.), *Creativity and development* (pp. 61–90). New York: Oxford University Press.
- Moran, S., & John-Steiner, V. (2004). How collaboration in creative work impacts identity and motivation. In D. Miell & K. Littleton (Eds.), *Collaborative creativity: Contemporary perspectives* (pp. 11–25). London: Free Association Books.
- Mumford, M. D. (2003). Where have we been, where are we going? Taking stock in creativity research. *Creativity Research Journal*, 15, 107–120.
- National Advisory Committee on Creative and Cultural Education. (1999). *All our futures: Creativity, culture and education*. London: Department for Children, Schools, and Families.
- New England Council. (2001). *The creative economy initiative: A blueprint for investment in New England's creative economy*. Boston: Report of the New England Council.
- Paletz, S. B. F., & Peng, K. (2008). Implicit theories of creativity across cultures: Novelty and appropriateness in two product domains. *Journal of Cross-Cultural Psychology*, 39, 286–302.
- Park, G., Lubinski, D., & Benbow, C. P. (2007). Contrasting intellectual patterns predict creativity in the arts and sciences: Tracking intellectually precocious youth over 25 years. *Psychological Science*, 18(11), 948–952.
- Perkins, D. N. (1981). *The mind's best work*. Cambridge, MA: Harvard University Press.
- Plucker, J. A., & Runco, M. A. (1998). The death of creativity measurement has been greatly exaggerated: Current issues, recent advances, and future directions in creativity assessment. *Roeper Review*, 21, 36–39.
- Prajogo, D. I. (2006). The relationship between innovation and business performance: A comparative study between manufacturing and service firms. *Knowledge & Process Management*, 13(3), 218–225.
- Richards, R. (2007). *Everyday creativity and new views of human nature: Psychological, social, and spiritual perspectives*. Washington, DC: American Psychological Association.
- Rickards, T., Runco, M. A., & Moger, S. (Eds.). (2009). *The Routledge companion to creativity*. London: Routledge.
- Rogers, E. M. (1995). *Diffusion of innovations* (4th ed.). New York: Free Press.
- Rogoff, B. (1990). *Apprenticeship in thinking: Cognitive development in social context*. New York: Oxford University Press.
- Rothenberg, A. (1990). *Creativity and madness: New findings and old stereotypes*. Baltimore, MD: Johns Hopkins University Press.

- for Child Development, 72, 3–30.
- Runco, M. A. (Ed.). (1997). *The creativity research handbook* (Vol. 1). Cresskill, NJ: Hampton.
- Runco, M. A. (1999). A longitudinal study of exceptional giftedness and creativity. *Creativity Research Journal*, 12(2), 161–164.
- Runco, M. A. (2003). Education for creative potential. *Scandinavian Journal of Educational Research*, 47(3), 317–324.
- Runco, M. A. (2004). Creativity. *Annual Review of Psychology*, 55, 657–687.
- Runco, M. A., & Chand, I. (1994). Problem finding, evaluative thinking, and creativity. In M. A. Runco (Ed.), *Problem finding, problem solving, and creativity* (pp. 40–68). Norwood, NJ: Ablex.
- Runco, M. A., & Charles, R. (1993). Judgments of originality and appropriateness as predictors of creativity. *Personality and Individual Differences*, 15, 537–546.
- Runco, M. A., & Nemiro, J. (1993). Problem finding and problem solving. *Roeper Review*, 16(4), 235–241.
- Runco, M. A., & Richards, R. (Eds.). (1998). *Emergent creativity, everyday creativity, and health*. Norwood, NJ: Ablex.
- Russ, S. W., Robins, D., & Christiano, B. (1999). Pretend play: Longitudinal prediction of creativity and affect and fantasy in children. *Creativity Research Journal*, 12, 129–139.
- Sawyer, R. K. (2006). *Explaining creativity: The science of human innovation*. New York: Oxford University Press.
- Scott, J. C. (1990). *Domination and the arts of resistance: Hidden transcripts*. New Haven, CT: Yale University Press.
- Seitz, J. A. (2003). A communitarian approach to creativity. *Mind, Culture, and Activity*, 10(3), 245–249.
- Shen, Z. L. (1996). Historical review of aesthetic education. *Researches in Higher Education of Light Industry*, 24, 3–7.
- Simonton, D. K. (1994). *Greatness: Who makes history and why*. New York: Guilford.
- Simonton, D. K. (2000). Creativity: Cognitive, personal, developmental, and social aspects. *American Psychologist*, 55(1), 151–158.
- Simonton, D. K. (2003). Creative cultures, nations, and civilizations: Strategies and
- larities, contrasts, integration, and application. In A. Craft, H. Gardner, & G. Claxton (Eds.), *Creativity, wisdom, and trusteeship: Exploring the role of education* (pp. 68–76). Thousand Oaks, CA: Corwin Press.
- Sosa, R., & Gero, J. S. (2004). Diffusion of creative design: Gatekeeping effects. *International Journal of Architectural Computing*, 2(4), 517–531.
- Stacey, R. D. (1996). *Complexity and creativity in organizations*. San Francisco: Berrett-Koehler.
- Stebbins, R. A. (1971). *Commitment to deviance*. Westport, CT: Greenwood.
- Sternberg, R. J. (1985). Implicit theories of intelligence, creativity, and wisdom. *Journal of Personality & Social Psychology*, 49(3), 607–627.
- Sternberg, R. J. (Ed.). (1999). *The handbook of creativity*. New York: Cambridge University Press.
- Sternberg, R. J. (2001). What is the common thread of creativity? Its dialectical relation to intelligence and wisdom. *American Psychologist*, 56(4), 360–362.
- Sternberg, R. J., & Lubart T. (1995). *Defying the crowd: Cultivating creativity in a culture of conformity*. New York: Free Press.
- Stonehouse, G., & Minocha, S. (2008). Strategic processes @ Nike – Making and doing knowledge management. *Knowledge and Process Management*, 15(1), 24–31.
- Terman, L. M. et al. (1925). *Mental and physical traits of a thousand gifted children* (Vol. 1 of *Genetic studies of genius*, L. M. Terman, Ed.). Stanford, CA: Stanford University Press.
- Tepper, S. J. (2002). Creative assets and the changing economy. *The Journal of Arts Management, Law, and Society*, 32(2), 159–168.
- Torrance, E. P. (1972). Career patterns and peak creative achievements: High school students twelve years later. *Gifted Child Quarterly*, 16, 15–88.
- Torrance, E. P. (1991). The beyonders and their characteristics. *Creative Child and Adult Quarterly*, 16, 69–79.
- Torrance, E. P. (1993). The beyonders in a thirty year longitudinal study of creative achievement. *Roeper Review*, 15, 131–134.

- Torrance, E. P. (2003). Reflection on emerging insights on the educational psychology of creativity. In J. C. Houtz (Ed.), *The educational psychology of creativity* (pp. 273-286). Cresskill, NJ: Hampton Press.
- Torrance, E. P. (2004). Great expectations: Creative achievements of the sociometric stars in a 30-year study. *The Journal of Secondary Gifted Education*, 26(1), 5-13.
- Visser, A., & Op't Hoog, M. (2008). Education of creative art therapy to cancer patients: Evaluation and effects. *Journal of Cancer Education*, 23(2), 80-84.
- Vygotsky, L. S. (1978). *Mind in society: The development of higher psychological processes* (M. Cole, V. John-Steiner, S. Scribner, & E. Souberman, Eds.). Cambridge, MA: Harvard University Press.
- Wallas, G. (1926). *The art of thought*. New York: Harcourt.
- Wilson, R. C., Guilford, J. P., & Christensen, P. R. (1953). The measurement of individual differences in originality. *Psychological Bulletin*, 50, 362-370.
- Zuckerman, H. (1977). *Scientific elite*. New York: Free Press.