

Creative Giftedness

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An ideal definition of giftedness should be optimally specific and operational. It should be optimal in the sense that it is not too general or too specific. It should not be too general because there are differences between mathematical giftedness and musical giftedness, and further differences between those two and verbal giftedness. There are, in short, clear-cut domain differences. The mathematical, musical, and verbal domains are just examples; there are numerous others in which an individual can excel. Yet a useful definition of giftedness should be general enough to capture critical commonalities. There must be commonality or else we should probably not refer to these individuals all the same way, as “gifted.” The theory described in this chapter suggests that all expressions of giftedness share the potential for creative work. The gifted child may have domain-specific knowledge and be motivated to invest in only one particular domain; but whichever domain it is, the gifted individual will have the capacity for original work. Creative potential is one of the most critical commonalities among the various domains of giftedness.

The other requirement for the ideal definition – that it is operational – implies that reliable judgments can be made about gifted individuals. It implies that giftedness can be measured, quantified, and predicted. Without this requirement, a definition would be untenable and potentially unfair. One objective of this chapter is to demonstrate how creative giftedness can be operationalized such that it can be reliably assessed. This may sound like a psychometric focus for this chapter, but actually the theory presented herein offers a moderate number of suggestions for educators and anyone else who wishes to identify, understand, or enhance creative potential.

CREATIVE GIFTEDNESS

The specificity mentioned in the first paragraph of this chapter applies to definitions of giftedness in the sense of *domains* (e.g., verbal versus

mathematical or musical) but also in the sense of explanatory power. Such explanatory power requires that we pinpoint what Jay and Perkins (1998) described as the *mechanism* underlying creative behavior and creative action. Mere indicators, correlates, and descriptions of creativity and giftedness are not enough. Educators will only be able to fulfill creative behavior if the underlying mechanism is identified and carefully targeted. The mechanism underlying creative efforts should allow for development, at least in the sense that it can describe how a child can become an adult who applies his or her creative talents in a mature and productive fashion. It is not tenable to view the creative activities of children as resulting from a process that is different from that used by a creative adult. If the creative child and the creative adult use different processes, it is probably best to view one as creative and one as something other than creative.

Consider divergent thinking in this regard. Tests of divergent thinking are highly reliable and correlated with certain forms of creative performance (Hocevar, 1981; Milgram, 1976; Runco, 1986; Runco et al., 2000). Yet, it is often difficult or even impossible to find how the ideational skills that are used by the young participants in this research have been employed by Picasso, Einstein, or Mozart. In fact, even though tests of divergent thinking are reliable indicators of originality on presented tasks (i.e., those presented in a controlled setting), there is no guarantee that persons who earn high scores on a paper-and-pencil test of divergent thinking will use those exact same skills in the natural environment. Divergent thinking is one example of a skill we have identified but that is associated with only certain forms of original behavior. It may help us to understand children's potential for creative problem solving, but to date, it has done little if anything to forward our understanding of mature creative accomplishment.

This chapter outlines a view of creativity that pinpoints a mechanism that underlies all creative work, including that of children and adults, and that allows objective study and assessment. It is grounded in existing theories of lifespan development, and it translates easily to practice. Examples of such practices are discussed throughout this chapter. This chapter also compares this theory of creative giftedness with other existing theories. We will see that there are both points of agreement and points of disagreement. First, the mechanism underlying original and creative activity is described.

PERSONAL CREATIVITY

The theory of creative giftedness described here was constructed in response to (a) theories of development that indicated that children have what it takes to be truly creative, and (b) theories that confuse creativity with fame and other social expressions of talent. The former includes Piaget's (1970, 1976) theory of development through adaptation. Piaget described how a child's adaptation is a result of the processes of *assimilation* and

accommodation. Assimilation is the cognitive process that allows the child to bring new information into his or her cognitive system – even though the child does not yet understand that new information. The only way to accomplish this is to assimilate, meaning that the information is altered or transformed. Once transformed, the information can fit into existing cognitive structures and be considered, even if not fully understood. A child may see a cloud with five extremities and label the cloud “doggie.” The extremities could in some way resemble a mammal’s arms, legs, and a head, but for the child to think that the cloud is a doggie, he or she needs to ignore the fact that the cloud is all white, floating, and lacks vital body parts (e.g., ears, mouth, and tail). This is a part of assimilation and transformation: The child ignores certain things (e.g., the fact that the cloud is all white and floating), selects certain things (e.g., the extremities), and may even misinterpret certain things (e.g., the head).

Very importantly, the child does not see the cloud as “a cloud that looks like a doggie.” The child imagines the cloud to *be* a doggie – not a cloud that looks like a doggie, but an actual doggie. This is most likely at about 4 years of age (Piaget, 1970, 1976), when the child’s imaginary world is his or her reality. At this point, the child’s assimilatory power is at its peak; the child will pretend regularly and often not distinguish between pretending and reality. For Piaget, pretending is the epitome of assimilation. In the theory of personal creativity outlined here, assimilation gives the child the cognitive potential to construct meaningful and original interpretations of his or her experience. That is one important part of creativity – and one that is used by all creative persons of all ages. It is also one that is easy to encourage. Children do need to learn the difference between fantasy and reality, but they also benefit to the extreme when they are allowed to pretend and play in an imaginary world. It may be difficult to entirely understand how a child equates a cloud with a doggie, but clearly parents and teachers should support rather than discourage imaginary play. It might be best to say “Yes, that does look like a doggie” instead of “But doggies don’t float.” It would even make sense to direct children to clouds and ask what they see in them.

The mechanism mentioned previously is, then, assimilation – the construction of original and meaningful interpretations. This is the process that produces the originality that is necessary for creative thinking. Interestingly, there are theories of creativity that emphasize accommodation rather than assimilation. These tend to focus on insightful thinking, however, like that which occurs when an individual has a sudden “aha!” experience. Such sudden insights are apparently not really all that sudden, but are instead protracted – they are developed over time (Gruber, 1981, 1988). They do, however, feel sudden. The insight itself may reflect accommodation in the sense that the individual finds a solution – the insight – by changing his or her understanding of the problem or

situation. This is accommodation precisely because it is the individual (or more precisely, his or her cognitive structures) that change. Assimilation, in contrast, occurs when the individual changes experience by altering or reinterpreting it. The individual does not change when assimilating, only the information does. The emphasis in the theory presented herein is assimilation, but insightful problem solving also seems to be involved in some creative problem solving (Gruber, 1985). Gifted children often excel at insightful problem solving, but apparently there are several things adults can do to facilitate insight (Davidson & Sternberg, 1986).

Assimilation and interpretation are virtually universal. The implication is that the capacity for creative performance is widely distributed – as widely as assimilatory processes, which for Piaget (1970, 1976) meant just about everyone had them. This claim about the wide distribution of creative potential may be controversial. Sometimes creativity is reserved for those who achieve great things. It could be that assimilatory efficiency is not universal in the sense of being equal in everyone; it could be normally distributed instead. In that light, everyone would have the capacity, just as they have vision or some other basic capacity, but people would have it in varying degrees. This idea of a normal distribution is important for a theory of creative giftedness because it implies that creatively gifted persons may have a kind of assimilatory efficiency. They may be inordinately and exceptionally capable of constructing original interpretations of experience. Then again, they may have a normal level of assimilatory capacity but use it more frequently than others. That possibility is addressed when the other features of personal creativity are described below. These other features are probably not normally distributed, and that may help us to understand exceptionality and therefore giftedness.

TO UNDERSTAND IS TO INVENT

Before turning to the other two features of the creative process, something more should be said about assimilation. You might have noticed that when assimilation was defined previously it was described using the terms *interpretation* and *transformation*. Think about what occurs when someone forms an interpretation: They are constructing a personal understanding. Piaget (1976) said, “To understand is to invent,” and he emphasized that the individual must invent the understanding for himself or herself. That is why assimilation leads to originality. This is also one reason I refer to the capacity discussed in this chapter as “personal creativity” (Runco, 1996). The other reason I do that is because, as noted previously, this theory was developed in response to theories that define creativity in social (rather than personal) ways. More on that follows.

The originality of interpretations is obvious when you think about how they differ from one person to another. Two people can have the exact same

experience and yet walk away with different interpretations. This occurs because the meaning each person finds in the experience is not really found *in* the experience but is instead assigned to it. So again, each individual has his or her own unique interpretation, and that means each is constructing an original understanding. This is a crucial point because originality is a prerequisite for creativity. Creativity always involves originality. Originality does not guarantee creativity, but it is necessary for it. Note also the implications: If we realize that interpretations of experience are always personally constructed, we might better understand why people do not always agree. They have constructed different interpretations. This may help you understand other adults, but it is especially useful to keep this in mind when you are around children. They are “cognitive aliens” and will very frequently have different interpretations. Because those are indicative of the assimilatory process, which underlies their capacity for original and creative thought, parents and teachers should at least some of the time appreciate the unique interpretations offered by their students or their own children.

It is also useful to view assimilation as transformation. Piaget (1976) described why “thinking cannot be reduced to speaking, to classifying objects into categories, nor even to abstracting. To think is to act on the object and to transform it” (p. 90). Guilford (1983) underscored the role of transformations in his last publication before his death. He stated, “From an exploratory study . . . it could be concluded that transformation abilities are more important than divergent-production abilities in creative thinking” (p. 75). Hofstadter (1985), O’Quin and Besemer (1989), Bachelor and Michael (1991), Jackson and Messick (1967), and Puccio, Treffinger, and Talbot (1995) all included some sort of transformational index in their empirical work on creativity. Each of these can be viewed as assimilatory.

Parents and teachers should encourage assimilation and transformations, as well as the obvious manifestations of them such as imaginary play, pretending, and personal interpretations. They should keep in mind that these things are each related to one another and each related to the potential for creative thinking. But although there is value in personally constructed interpretations of experience, conventional interpretations should also be considered. Again, originality is necessary but not sufficient for creativity. That is why discretion is important for creativity.

DISCRETION FOR PERSONAL CREATIVITY

Creativity involves the construction of original and meaningful interpretations of experience, as well as the discretion to know when it is useful to be original and when it is not wise to be original. Discretion in this context is much like the discretion that “is the better part of valor”; it is a kind of decision making, a judgment. Without this kind of discretion, the

individual might live entirely in a fantasy world! Indeed, it is discretion and the control over one's original interpretations that separates creative talent from psychosis. That may sound like a huge claim, but psychotic persons have been found to earn high scores on tests of originality (Eysenck, 1993). Apparently, they share with creative persons a tendency to construct original meanings and idiosyncratic interpretations. Sadly, the psychotic individual does not know when to rely on those and when to conform to rote or conventional interpretations. They lack discretion and control.

Most likely, the discretion that plays a role in creative thinking falls along a continuum, with some people exercising too much control and rarely risking an original interpretation and others (the psychotics) treating all of their original interpretations as reality. Somewhere in between those extremes are people who most of the time control their interpretative processes and their originality, but sometimes surprise their peers or family with bizarre, child like, or eccentric behavior (Weeks & James, 1995). Most of the time, they may fit in just fine, but once in a while they are notably unconventional. This may be because they misjudge the opportunity for originality or at least misjudge it according to conventional standards. Of course, eccentrics can be quite creative. Many other unconventional tendencies of creative persons can be explained in the same fashion: The creative person once in a while, perhaps out of excitement over a topic or problem, relies a bit too heavily on an original interpretation instead of a conventional one. It is for precisely this reason that they may be labeled eccentric, unconventional, child like, contrarian, or nonconformist.

Actually, this part of personal creativity is quite amenable. There is much that can be done to help children exercise their discretion and thereby fulfill their creative potentials. There are, for example, many educational programs already in place that focus on children's decision making. The DARE program and school slogan "just say no" assume that children can exercise discretion and "make good choices." Other existent programs are designed to help children make moral and ethical decisions (Kohlberg, 1987), and because their focus is decision making, they too might be adapted to enhance the kind of discretion that should monitor and direct originality. Just as children might sometimes need to "just say no" to peer pressure to experiment with alcohol or cigarettes, so too might they learn to resist peer pressure and think for themselves and follow an original line of thought. Langer's (1999) work on mindfulness would also be useful in this regard, for it forces individuals to think for themselves rather than relying on rote "mindless" thinking.

MOTIVATION AND INTENTIONS

Granted, a child will not choose to put the effort into constructing an original interpretation unless he or she is motivated to do so. This is why Piaget's

theory is often described as a theory of capacity or potential. He described what children are capable of doing, but that does not guarantee that children will actually do it. There is a big difference between capacity and actual performance. This difference characterizes the cognitive skills Piaget described (e.g., conservation, seriation, hypothetico-deductive thinking) and the discretionary and original interpretations that are central to personal creativity. In both cases, individuals must be motivated to use their skills.

Many theories of creativity and giftedness include motivation (Amabile, 1990; Eisenberger, 2003; Renzulli, 1978; Runco, 1993); typically, it is intrinsic motivation rather than extrinsic, although realistically both may be involved (Rubenson & Runco, 1992, 1995). The intriguing thing is that motivation may depend on cognition, and in particular on *cognitive appraisals*. There is some controversy here, but it does make a great deal of sense that individuals are not motivated about things they do not understand and that understanding therefore requires a cognitive appraisal (Lazarus, 1991; Zajonc, 1980). Piaget's (1970, 1976) view can again be cited; he felt that children will adapt because they are intrinsically motivated to understand. In that case, the motivation precedes and initiates the cognitive effort. Applying this to the role of assimilation in creative work outlined previously, it may be that certain situations attract the attention of the creative person and, as a result he or she thinks about it and perhaps continues to explore it and put effort into constructing meaningful interpretations and reinterpretations. This perspective is entirely consistent with the research showing that creatively gifted children often appear to be "on fire" and hugely interested in the domain that has attracted their attention. Creatively gifted children tend to be highly persistent, and sometimes they are so interested in a domain or problem that they invest all of their discretionary time into it. The result: a huge knowledge base and the domain-specific skills that may allow them to become productive and creative adults.

PERSONAL CREATIVITY VERSUS SOCIAL IMPACT

How does the theory of personal creativity fit with existing theories? As noted previously, the theory of personal creativity was in part developed in response to social theories of creativity. These defined creativity in terms of some product or social recognition. Goleman, Kaufman, and Ray (1992), for example, claimed that "an important dimension of creativity . . . is the audience. There is a crucial social dimension to the creative act" (p. 25). Houtz (2003) defined creativity as "a person's capacity to produce new or original ideas, insights, restructuring, inventions, or artistic objects, which are accepted by experts as being of scientific, aesthetic, social, or technological value" (p. 136). Both of these definitions require a "social dimension" or expert judgment. Simonton (1995, p. 4) put it this way: "A leader or creator is a Person to whom Others attribute leadership or creativity. The

greater the intensity, frequency, duration, and universality of this attribution, the more exceptional the influence exhibited." Given the need for an attribution, Simonton seems to have been discussing "influence." He mentions creativity, but it depends on other people and their attributions. Amabile (1995) added this: "It is trivially obvious that there would be *no* creativity whatsoever without the person and his or her cognitive abilities, personality dispositions, and other personal resources, *nor* would there be any creativity whatsoever without a context in which to create – a context of resources, education, exposure, encouragement, stimulation, and appreciation (pp. 423–426)." My only concern here is with "appreciation," for that assumes expression and social acknowledgment.

Sometimes this troubling social requirement is tied to a second concern, namely, a requirement of productivity. Kasof (1995), for instance, claimed that "the creative product must be unusually original, rare, novel, statistically infrequent, and . . . it must be approved, accepted, valued, considered 'appropriate' or 'good' (pp. 311–366)." Perhaps it is now obvious why I prefer the term *personal creativity*: It relegates social judgments. (Earlier I considered the terms *inherent creativity* and *attributed creativity*, as well as options in the literature. Stein [1953] previously distinguished between *subjective* and *objective creativity*, for example, and Maslow [1971] differentiated *primary* from *secondary creativity*. The term *personal* seems to keep the focus where it belongs, especially if we are interested in encouraging children with creative potential. The best labels, it seems to me, are personal creativity and social creativity.)

It is possible to distinguish personal from social (and productive) processes by standing back and considering stages of creativity and influence. In this light, personal creativity comes first and social attributions later. Consider Csikszentmihalyi's (in press) description of the creative process:

In my opinion, it is impossible to understand creativity focusing on the person alone. Every creative process or product is co-constituted by a matrix of information (or domain), a group of experts (or field), and a person who produces a novel change in the domain's structure of information, which the field accepts as viable, and adds to the domain (pp. 60–61).

The theory of personal creativity suggests that individuals sometimes – but not always – fulfill their potentials. They may also develop expertise within a domain. They may even produce something that changes a field. But it starts with the individual, and it would seem to be the most parsimonious to describe "changing a field" as impact, fame, or reputation rather than creativity. Separating creative insight from impact also makes sense because fame and the like may result from creative work, but they sometimes result from noncreative activity. Obnoxious people sometimes attract attention, as do the infamous.

The definitions of creativity that look to products rather than individuals have their advantages. Products are, for example, certainly easy to study, for they can be counted, stored, and reexamined. It is easy to quantify products and thus easy to defend judgments or decisions (e.g., inclusion in a gifted educational program) when we have quantities and numbers to cite. Yet, that would leave us in a position in which we must infer what kind of person created the product. Counting products tells us mostly about products. Another concern with product views of creativity and giftedness is that they assume that a domain has useful products, and this assumption may not apply well to *everyday creativity* (Richards, 1998; Runco & Richards, 1998). Along the same lines, children may be creative in their play and self-expression, and neither of these can be easily treated as a product. Even more problematic is the failure of product views of creativity to recognize creative potential and inchoate forms of talent.

Ignoring creative potential – and children’s creative skills – is a bit like claiming that the destination is all-important when traveling and that the route and steps along the way are unimportant. If educators were to define creativity only in terms of products, they would not recognize the child who has great talent but needs a bit of encouragement or needs to develop a tactic for finalizing his or her work. Educators looking only to productive children will not see the potential (e.g., interpretive or assimilatory efficiency) in nonproductive children. With a focus on products, educators will not be able to help the children who need help the most – those with potential who could be productive but are not yet quite ready.

DEFINING CREATIVE GIFTEDNESS AND WHAT CAN BE DONE ABOUT IT

Now it can be simply stated: Giftedness can be defined as (a) an exceptional level of interpretive capacity; (b) the discretion to use that capacity to construct meaningful and original ideas, options, and solutions; and (c) the motivation to apply, maintain, and develop the interpretive capacity and discretion. Giftedness, in this light, requires creativity, but it does not require that the child have all of the skills that would allow him or her to produce socially impressive artifacts. If the creatively gifted child develops those skills, we can view him or her as creatively gifted *and* productive.

A number of things can be done to support personal creativity. Because interest, intentions, and motivation are important, parents and educators can do their best to ensure that children are exposed to different domains and perspectives. If children do not know about a domain, they may not know what is available to them. Without broad exposure, they may not find the one domain that grabs them. Exposure to diverse domains and experiences increases the likelihood that a child will find something that is

intrinsically motivating. Children can also be protected from overjustification, which is the loss of intrinsic motivation. Amabile (1990) demonstrated how this kind of *immunization* can be accomplished via role playing and modeling.

The discretionary part of personal creativity can also be exercised. It would be important for children to recognize that they can make choices and that their choices are important and under their control. As previously mentioned, there are programs to help children with moral decisions (e.g., Kohlberg, 1987), and these might be adapted to the kind of discretion that is vital for personal creativity. The difference would be in the values or criteria targeted by the exercise. If the focus is on moral reasoning, cultural values might be underscored when the children are allowed to make ethical decisions for themselves. For creativity, the emphasis should be on originality, self-expression, and creativity. The children could use their decision-making skills not to find a morally correct answer but one that allows them to express themselves and show their uniqueness.

Actually, it is possible that programs like Kohlberg's will help children to be creative, even if morality is emphasized instead of originality. This is because children may develop *postconventional thinking* skills when practicing moral reasoning, and these thinking skills are defined as taking conventions into account but making a decision for one's self. Postconventional thinking is, then, a kind of independent thought, and independent thinking will often lead to the expression of one's own ideas. In other words, postconventional thinking will very likely support originality and thereby creativity (Runco, 1996). Gruber (1993), Runco (1993), and McLaren (1993) each explored other parallels between moral reasoning and creative behavior.

Intrinsic motivation can be encouraged and protected, and discretion exercised, but what about the third part of personal creativity? What about assimilation? Earlier I offered suggestions about allowing pretending, but actually assimilation may require less from parents and teachers than motivation and discretion. That is because all children assimilate. It may be universal. All parents and teachers need to do is ensure that children maintain their tendency to control their interpretations and construct their own understandings. Parents and teachers should recognize that as children get older they will tend toward more conventional thinking. This is why there is a fourth-grade slump in originality (Runco, 1999b; Torrance, 1968). Many children at that age apparently realize that there are advantages to fitting in, going along with peer pressure, and conforming. When they do, their originality suffers. What parents and teachers should do is help children avoid the slump. This might be accomplished by protecting children from conformity. Indeed, creative potential will definitely benefit if we implement educational programs that allow children to stand up for themselves and resist conforming. Perhaps most important would be to

ensure that children have the ego strength and confidence they need to withstand pressures to conform. Ego strength should also be modeled, practiced, and reinforced.

Some conformity should be expected. In fact, we do not want complete rebels; some conformity is good! Children should conform if they receive a test in school that asks them to name the first president of the United States: That is not a good time to be original. Children need to conform when it is appropriate, but should express their own uniqueness when they can. This is why discretion is included in the theory of personal creativity. Recall here also the definition of postconventional thinking: taking conventions into account but thinking for oneself. It is not just a matter of thinking for oneself; the individual does consider conventional options.

Late in childhood and during preadolescence, the individual will acquire the capacity to benefit from tactical thinking. Tactics are techniques that can be used to find original ideas. Young children may not need them, and in fact they probably are incapable of using them, but anyone who has developed a respect for conventionality, who conforms some of the time, or who has acquired inhibitions or makes assumptions based on past experience (i.e., adolescents and adults) will benefit from tactical creativity. Tactical creativity may compensate for the loss of spontaneity and the reliance on routine and assumption that go along with aging. Tactics are often quite simple (e.g., "change your perspective," "question your assumptions"). The literature contains many examples showing how tactics can be communicated to children even as young as 8 or 9 years of age (Runco, 1986, 1999; Davidson & Sternberg, 1983).

Something can also be said about what parents and teachers should not encourage. If creative talent is defined in terms of socially acknowledged products, it would be tempting to target social judgment as part of a program to encourage creative work. This is no straw argument: Kasof (1995) suggested precisely this in his attributional theory of creativity. He concluded that creativity is dependent on social judgments (see previous quotation) and concluded that creative individuals would benefit from *impression management*. This would allow the individual to ensure that his or her work is socially acknowledged and appreciated. The problems with this perspective are numerous. A concern for social judgment could, for example, suggest that the individual conform to expectations rather than express himself or herself in an original fashion. Additionally, any time invested in impression management is time taken away from practice developing ego strength, tactics, and the decision making that will support creativity. Runco (1992) concluded that parents and teachers need to both (a) encourage certain behaviors, such as pretending, and (b) avoid certain things, such as conformity and impression management. He suggested (a) creating *opportunities* for children to pretend and be original, (b) *modeling* original behavior for children, and (c) *rewarding* authentic self-expressions

and spontaneous original actions. Much can be done to encourage children's creativity.

CONCLUSIONS

One premise in the theory of personal creativity (Runco, 1995, 1996) is that children have the capacity for personal creativity, and it is the same capacity that might be used by creative adults. The eminent creative genius uses his or her personal creativity just as the average child does. Obviously, they use personal creative talents to different ends, the adult often producing something tangible and perhaps socially impressive (e.g., a work of art, an invention) and the child often just creating a useful and original interpretation of his or her experience. There are differences between the adult and the child, of course, but not in their creative potential. These differences reflect knowledge, or even expertise, which the adult has accumulated and applied to his or her work.

The definition of creative giftedness used here may differ from most other conceptions of giftedness or creativity. There certainly is a difference between what I called the social and product views and my conception of personal creativity. The product view is apparent in the research on eminent adults, but also in the gifted literature, when assessments target products, achievements, and accomplishments. The conception of creative giftedness outlined here also differs from views that emphasize domain-specific skills. Actually, personal creativity is compatible with the idea of domain specificity – domain-specific skills may, for example, work with the interpretive skills reviewed previously and help an individual with potential to achieve his or her goals – but one premise of personal creativity is that the cognitive mechanism is nearly universally distributed. Personal creativity is a general tendency, and this is somewhat at odds with the trend toward domain specificity.

Personal creativity is more clearly compatible with theories that emphasize motivation. Intrinsic motivation in particular is an important part of personal creativity and important in numerous other definitions of talent. I actually prefer the term *intentions* over motivation. Intentions seem to mesh better with discretion and the pertinent decision making (Runco, 1993, 1996; Runco et al., 1999). Sometimes people do things without much thought (Langer, 1999). They may even be original without much effort! Originality can be an accident, or it can be serendipitous. What is most informative (and predictive of achievement) is originality that is intended. If we know what a person intends to do, we know they were motivated to do it and chose to do it. They have exercised their discretion and are likely to bring their talents to bear on the problem or topic.

The need to take motivation and intentions into account is not unique to the theory of personal creativity. As a matter of fact, there is one clear

parallel between this theory and just about every other view of giftedness, creativity, or talent of any sort, namely, the assumption about the use of potentials. Any time a paper-and-pencil test is used, it is assumed that the resulting test score predicts something important. There is no guarantee that the individual who scores well on the test will be interested in using his or her talents in the natural environment. The test is, in that sense, an estimate of potential. Predictions might be the safest when tests are avoided and indices of actual performance are used. That is one assumption of the product view of talent, the other assumption being that products are easy to measure in an objective fashion. These assumptions are held by various psychometricians who have suggested that portfolios and measures of extracurricular activity and achievement be used (e.g., Hocever, 1981; Holland, 1961; Milgram, 1976; Wallach & Wing, 1969). But even here there is uncertainty. Just because someone applied himself or herself in the past, there is no guarantee that he or she will continue to use those same talents in the future. Even indices of past performance, such as the activity and achievement measures, assume that the individual will be motivated and interested in the future, and this not so different from the assumption of personal creativity: The individual has the capacity (potential) to construct original interpretations, but he or she must be motivated to do so or that potential will not be fulfilled and it is unlikely that any notably creative behavior will be expressed. The point is that the assumption of potential found in the theory of personal creativity is not too different from the assumptions about the predictiveness of creative achievement that characterize other competing theories.

The next important assumption of this theory of personal creativity is that originality is the key to creative work. Assimilation, for instance, allows the individual to construct spontaneous and meaningful interpretations of experience, which are relevant because those will be original for the individual. But, again, the assumption is that this originality is a part of creativity. This assumption is a tenable one. After all, originality is the only aspect of creative persons or products on which everyone agrees – even those definitions cited previously to exemplify the product view recognize originality. This is in part because originality is easier to operationalize (and study and identify) than creativity per se. Originality is a statistical characteristic. Original ideas and solutions are unusual or even unique. They are statistically infrequent. Unlike creativity per se, we can measure originality in a fairly simple and highly reliable manner. This is exemplified in the research on musical compositions (Simonton, 1988), solutions and ideas (Runco, 1991), and inventions (Weber, 1996).

Admittedly, we cannot rely on originality as an index of creativity. This is because bizarre behaviors, including psychotic behaviors, are often original, although not at all creative (Eysenck, 2003). They are original in the sense of being highly unusual, but they lack the effectiveness (Bruner, 1970),

appropriateness (Runco & Charles, 1993), or aesthetic appeal (Csikszentmihalyi & Getzels, 1971) of truly creative things. It is in that sense that originality is necessary but not sufficient for creativity. Effectiveness and appropriateness are satisfied in the personal creative process in that the interpretations constructed are meaningful. They are constructed precisely because they allow the individual to deal with an experience. In a sense, they are solutions, at least if we view experience as open-ended and filled with workaday hurdles. Recall that assimilation plays a role in the Piagetian (1970, 1976) view of cognitive development, and interpretations are constructed to allow the individual to adapt to experience.

This brings us to the last assumption. This is the assumption that personal creativity is tied to genius, eminence, achievement, and outstanding accomplishment, as well as giftedness. Personal creativity does rely on assimilative and interpretive processes, and these are involved in everyday adaptations. Yet they also play a role in exceptional performances in that those exceptional performances are often solutions to important problems. Surely, gifted children often do remarkable things, but those things must begin somewhere. The assumption is that they begin with the construction of a meaningful interpretation. An exceptional performance may very well involve much more than just an original interpretation. It may require elaboration or validation. The writer, for example, may construct an interpretation of perspective (see Wallace, 1991) and then explore that in a novel or other literary work. That literary work may require persistence and special knowledge for it to come to fruition, but it all begins with the original insight provided by the interpretive (cognitive) capacity of personal creativity.

Exceptional performances do often lead to socially acknowledged achievement, and it will only be socially acknowledged if it impresses other people. But it can be creative even if it does not impress an audience. If it impresses other people, it is "impressive," and it may have impact, but the creative part of the performance is a function of the originality and discretion of the individual.

References

- Amabile, T. M. (1990). Within you, without you: Toward a social psychology of creativity and beyond. In M. A. Runco & R. S. Albert (Eds.), *Theories of creativity* (pp. 61–91). Newbury Park, CA: Sage.
- Amabile, T. M. (1995). Attributions of creativity: What are the consequences? *Creativity Research Journal*, 8, 423–426.
- Bachelor, P., & Michael, W. B. (1991). Higher-order factors of creativity within Guilford's structure-of-intellect model: A re-analysis of a 53 variable data base. *Creativity Research Journal*, 4, 157–175.

- Bruner, J. (1970). *Essays for the left hand*. New York: Norton.
- Csikszentmihalyi, M., & Getzels, J. W. (1971). Discovery-oriented behavior and the originality of creative products: A study with artists. *Journal of Personality and Social Psychology*, 19, 47–52.
- Csikszentmihalyi, M. (in press). The domain of creativity. In M. A. Runco & R. S. Albert (Eds.), *Theories of creativity* (rev. ed.). Cresskill, NJ: Hampton.
- Davidson, J. E., & Sternberg, R. J. (1983). The role of insight in intellectual giftedness. *Gifted Child Quarterly*, 28, 58–64.
- Eisenberger, R., & Shanock, L. (2003). Rewards, Intrinsic Motivation, and Creativity: A Case Study of Conceptual and Methodological Isolation. *Creativity Research Journal*, 15, 121–130.
- Eysenck, H. J. (2003). Creativity, personality, and the convergent-divergent continuum. In M. A. Runco (Ed.), *Critical creative processes* (pp. 195–214). Cresskill, NJ: Hampton.
- Goleman, D., Kaufman, P., & Ray, M. (1992). *The creative spirit*. New York: Penguin.
- Gruber, H. E. (1981). On the relation between “aha” experiences and the construction of ideas. *History of Science*, 19, 41–59.
- Gruber, H. E. (1988). The evolving systems approach to creative work. *Creativity Research Journal*, 1, 27–51.
- Gruber, H. E. (1993). Creativity in the moral domain: Ought implies can implies create. *Creativity Research Journal*, 6, 3–15.
- Guilford, J. P. (1983). Transformation abilities or functions. *Journal of Creative Behavior*, 17, 75–83.
- Hocevar, D. (1981). Measurement of creativity: Review and critique. *Journal of Personality Assessment*, 45, 450–464.
- Hofstadter, D. (1985). *Metamagical themas: Questing for the essence of mind and patterns*. New York: Bantam.
- Holland, J. L. (1961). Creative and academic achievement among talented adolescents. *Journal of Educational Psychology*, 52, 136–147.
- Houtz, J. (Ed.). (2003). *An educational psychology of creativity*. Cresskill, NJ: Hampton Press.
- Jackson, P. W., & Messick, S. (1967). The person, the product, and the response: Conceptual problems in the assessment of creativity. In J. Kagan (Ed.), *Creativity and learning* (pp. 1–19). Boston, MA: Beacon.
- Jay, E., & Perkins, D. (1998). Problem finding: The search for mechanism. In M. A. Runco (Ed.), *Creativity research handbook* (pp. 257–293). Cresskill, NJ: Hampton.
- Kasof, J. (1995). Explaining creativity: The attributional perspective. *Creativity Research Journal*, 8, 311–366.
- Kohlberg, L. (1987). The development of moral judgment and moral action. In L. Kohlberg (Ed.), *Child psychology and childhood education: A cognitive developmental view*. New York: Longman.
- Lazarus, R. S. (1991). Cognition and motivation in emotion. *American Psychologist*, 46, 352–367.
- Maslow, A. H. (1971). *The farther reaches of human nature*. New York: Viking.
- McLaren, R. (1993). The dark side of creativity. *Creativity Research Journal*, 6, 137–144.
- Milgram, R. M., & Milgram, N. (1976). Creative thinking and creative performance in Israeli students. *Journal of Educational Psychology*, 68, 255–258.

- Moldoveanu, M. C., & Langer, E. (1999). Mindfulness. In M. A. Runco & S. Pritzker (Eds.), *Encyclopedia of creativity*, pp. 221–234. New York: Academic.
- O'Quin, K., Bessemer, S. (1989). The development, reliability, and validity of the revised creative product semantic scale. *Creativity Research Journal*, 2, 268–278.
- Piaget, J. (1970). Piaget's theory. In P. H. Mussen (Ed.), *Carmichael's handbook of child psychology* (3rd ed., pp. 703–732). New York: Wiley.
- Piaget, J. (1976). *To understand is to invent*. New York: Penguin.
- Puccio, G. J., Treffinger, D. J., & Talbot, R. (1995). Exploratory examination of relations between creative styles and creative products. *Creativity Research Journal*, 8(2), 157–172.
- Renzulli, J. (1978). What makes giftedness? Re-examining a definition. *Phi Delta Kappan*, 60, 180–184.
- Richards, R. (1990). Everyday creativity, eminent creativity, and health. *Creativity Research Journal*, 3, 300–326.
- Rogers, C. R. (1961). *On becoming a person*. Boston, MA: Houghton Mifflin.
- Rubenson, D. L., & Runco, M. A. (1992). The psychoeconomic approach to creativity. *New Ideas in Psychology*, 10, 131–147.
- Rubenson, D. L., & Runco, M. A. (1995). The psychoeconomic view of creative work in groups and organizations. *Creativity and Innovation Management*, 4, 232–241.
- Runco, M. A. (1986). Divergent thinking and creative performance in gifted and nongifted children. *Educational and Psychological Measurement*, 46, 375–384.
- Runco, M. A. (Ed.). (1991). *Divergent thinking*. Norwood, NJ: Ablex Publishing Corporation.
- Runco, M. A. (1992). *Creativity as an educational objective for disadvantaged students*. Storrs, CT: National Research Center on the Gifted and Talented.
- Runco, M. A. (1993). Creative morality: Intentional and unconventional. *Creativity Research Journal*, 6, 17–28.
- Runco, M. A. (1995). Insight for creativity, expression for impact. *Creativity Research Journal*, 8, 377–390.
- Runco, M. A. (1996, Summer). Personal creativity: Definition and developmental issues. *New Directions for Child Development*, 72, 3–30.
- Runco, M. A. (1999a). Tactics and strategies for creativity. In M. A. Runco & Steven Pritzker (Eds.), *Encyclopedia of creativity* (pp. 611–615). New York: Academic.
- Runco, M. A. (1999b). The fourth-grade slump. In M. A. Runco & Steven Pritzker (Eds.), *Encyclopedia of creativity* (pp. 743–744). New York: Academic Press.
- 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., & Richards, R. (Eds.). (1998). *Eminent creativity, everyday creativity, and health*. Norwood, NJ: Ablex.
- Runco, M. A., Johnson, D., & Gaynor, J. R. (1999). The judgmental bases of creativity and implications for the study of gifted youth. In A. Fishkin, B. Cramond, & P. Olszewski-Kubilius (Eds.), *Creativity in youth: Research and methods* (pp. 113–141). Cresskill, NJ: Hampton.
- Runco, M. A., Plucker, J. A., & Lim, W. (2000). Development and psychometric integrity of a measure of ideational behavior. *Creativity Research Journal*, 13, 393–400.
- Simonton, D. K. (1988). *Scientific genius*. New York: Cambridge University Press.

- Simonton, D. K. (1995). Exceptional personal influence: An integrative paradigm. *Creativity Research Journal*, 8, 371–376.
- Stein, M. I. (1953). Creativity and culture. *Journal of Psychology*, 36, 311–322.
- Torrance, E. P. (1968). A longitudinal examination of the fourth-grade slump in creativity. *Gifted Child Quarterly*, 12, 195–199.
- Wallace, D. B. (1991). The genesis and microgenesis of sudden insight in the creation of literature. *Creativity Research Journal*, 4, 41–50.
- Wallach, M. A., & Wing, C. (1969). *The talented student*. New York: Holt, Rinehart & Winston.
- Weber R. (1996). Toward a language of invention and synthetic thinking. *Creativity Research Journal*.
- Weeks, D., & James, J. (1995). *Eccentrics*. London: Weidenfeld & Nicolson.
- Zajonc, R. B. (1980). Feeling and thinking: Preferences need no inferences. *American Psychologist*, 35, 151–175.