

**Creativity 101:
An Introduction to Some Basic Concepts and the Field of Creativity Studies**

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Some Creativity Basics

Creativity is fundamental to life. Though we may not give it much conscience thought, the very world we live in has been shaped by human creativity. Look around. We are surrounded by tangible representations of human creativity. Almost all that we see originated through the imaginative powers of some individual or group of individuals. The pervasive nature of creativity was captured well when Robert Fritz – author, filmmaker, and composer – observed, “The creative process has had more impact, power, influence, and success than any other process in history. All of the arts, many of the sciences, architecture, popular culture, and the entire technological age we live in exists because of the creative process” (1991, p. 5).

Museums have served as repositories of the creative products described by Fritz. Through their collections museums draw explicit attention to creativity and thus play an important role in helping communities to recognize and celebrate the achievements brought about in a variety of human endeavors. Indeed, if it were not for museums society would retain very little memory of the best that human creativity has to offer.

What is creativity? The word is often invoked but not well understood. Certainly creativity refers to an outcome or product, but it is much more. The product, the tangible representation of an idea, serves only as the tip of the iceberg. And as with the iceberg much of the phenomenon of creativity is hidden from view. More than 40 years ago a researcher named Mel Rhodes attempted to define creativity. After analyzing some 50 published definitions of creativity and imagination, Rhodes discovered that creativity defied a single definition; rather he referred to creativity as a multifaceted concept. That is, it is the interaction of at least three facets that yields a creative product. These facets are referred to as **person**, **process**, and **environment**. The **person** facet refers to the skills, traits, abilities, and motivation that predispose an individual to be creative.

Process relates to the mental activities a person or group goes through to achieve some

creative end. Finally, the **environment**, an individual's physical and psychological surroundings, can serve to either facilitate or undermine creative thought. Like a chemical reaction, the right qualities of all three facets must be present to bring about change.

The most commonly held definition of creativity in the academic literature is “the production of a novel idea that serves some purpose.” Creativity represents a balance between originality and usefulness. To be original means to be the first, to be unique, or phrased in operational terms “to be a statistically infrequent or uncommon idea.” To be useful means to solve some problem, resolve some difficulty, or fulfill some desire or wish.

We can certainly take a retrospective look at creativity and identify how it has shaped our world, but what is the value of creativity in the present moment and for the future? The importance of creativity can be felt at many levels, from the individual, to an organization, to an entire society. For individuals our ability to think creatively enables us to cope with life's challenges and to resolve complex problems. We often face problems, both in our professional and personal lives, that are ambiguous and for which there is no apparent solution. In such situations we must employ creative thinking to discover effective solutions. In fact, so common is the need for creative problem solving in the workplace, that a study sponsored by the US Labor Department identified Creative Thinking and Problem Solving as one of seven basic skill sets required for professional success (see Carnevale, Gainer and Meltzer 1990). It has also been argued that creative thinking skills promote good mental health¹ and can stave off the decline in mental activity associated with aging².

Never has the need for creative thinking been more important in organizations, both profit and non-profit. The global economic competition faced by today's organizations makes creativity imperative; the degree to which companies can transform creative ideas into innovative products and services is often the difference between success and failure³. As Andy VanGundy noted, “organizational growth and survival can be tied directly to an

organization's ability to produce (or adopt) and implement new services, products, and processes" (1987, 358). The need for creative thinking is not limited to for profit ventures. Non-profits are also being challenged to use their creative talents, i.e., to do more with less, to reinvent themselves, to continue to grow, to find new sources of funding, to develop fresh programs and activities, etc.

Historian Arnold Toynbee argued that creativity was essential for societies to thrive. He argued, "to give a fair chance to potential creativity is a matter of life and death for any society" (1964, 4). Toynbee suggested that nations that support and nurture the creative talents of its citizens are destined to make history, while those that ignore the creative talents of its people will soon be surpassed by other nations. As a greater number of jobs are outsourced to other countries, it becomes increasingly apparent that the economic engine for America is its ability to produce new ideas, service, products, and industries. In other words, to use the talents of our workforce to not reproduce products, but to harness the creative talents of our citizens and lead the world in innovation across all industries and sectors, from manufacturing to education, from technology to the arts, from health sciences to architecture, from energy to museum design, etc.

The Scientific Study of Creativity

Many are surprised to learn that scholarly interest in creativity has resulted in a formal field of study. As Robert Paul Weiner noted, in his piece titled *Creativity in Context* (see this issue of *The Informal Learning Review*), the word creativity was not widely used until about 1950. The mid-way point of the 20th century has often been cited as demarcation point for the systematic study of creativity. It was in 1950 that J. P. Guilford gave his presidential address to the American Psychological Association. In his address, simply titled "Creativity", Guilford drew attention to this human quality that had gone virtually overlooked by most psychologists. To support his claim that creativity had been widely neglected, Guilford conducted a literature search and found that less than one percent of the 121,000 studies indexed in the *Psychological Abstracts* dealt directly with the topic of creativity. Guilford concluded his speech by urging psychologists to pursue two avenues of research: 1) to describe the nature of creativity by identifying its key

properties; and 2) to use knowledge about the nature of creativity to design educational programs and experiences that enhance this ability in all people.

Much has changed since Guilford's speech. For many reasons, the study of creativity has flourished over the last half-century. There are thousands of books on creativity. In fact, the Creative Studies collection in our library at Buffalo State College holds almost 4,000 volumes on the subject of creativity⁴. There are now three refereed journals in the English language focused solely on the topic of creativity (i.e., *The Journal of Creative Behavior*, *Creativity Research Journal*, and *Creativity and Innovation Management*). In 1999 Academic Press published the *Encyclopedia of Creativity*. Creativity researchers can be found in many of the top psychology and education departments, as well as business schools across the US. There are a large number of creativity conferences held annually around the world. Creativity consultants and facilitators abound. And there are a small number of degree-granting programs in the field of creativity.

Can Creative Talent be Enhanced?

Our program at Buffalo State College was designed to address the second challenge posed by Guilford, namely to develop educational programs that enhance creative thinking. Founded in 1967, the International Center for Studies in Creativity offers a Master of Science in Creativity and Change Leadership, as well as an undergraduate minor in Creativity Studies. A cornerstone to our curriculum is a creative process methodology called Creative Problem Solving (CPS)⁵. Alex Osborn, creator of the popular creativity tool Brainstorming, developed CPS more than 50 years ago. Since then CPS has been continuously refined and tested. Today CPS is one of the most widely used methods for deliberately provoking creative thinking, and it is one of the most thoroughly researched process models. In fact, a recent meta-analytic study on creativity training found CPS to be one the most successful creativity programs in changing attitudes, developing divergent thinking skills, and enhancing problem solving performance⁶.

CPS is a framework that organizes principles, procedures and tools that can be applied to complex problems. Mirroring the way people naturally engage in creative thinking⁷, the CPS framework organizes these principles, procedures and tools into four stages: 1) Assessing the Situation; 2) Clarifying the Problem; 3) Generating Ideas; and 4) Developing a Plan of Action. CPS can be applied alone or in groups. When used in groups, it results in bringing the best thinking of all members forward and enhances consensus-based decision-making. In the accompanying insert Kristin Dailey describes how she has successfully employed CPS at the Buffalo Museum of Science.

The examples provided by Kristin Dailey illustrate how museums can deliberately employ creative process methods to stimulate creative thinking in relationship to community programs and internal work. It would seem to me that museums are in a powerful position, through their collections and educational programs, to uplift the creative potential of our citizenry. This potential is not likely to be maximized if museums do not consciously see themselves as facilitators of creative thought. Once this important role is explicitly leveraged, the experiences of both the museum patrons and the employees are more likely to become transformative.

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¹ Carl Rogers theory of self-actualization takes the view that fulfilling one's creative potential is a mentally healthy act.

² Fred Warshofsky's book *Stealing Time: The New Science of Aging* highlights research that indicates that engaging in new activities, particularly those that are mentally stimulating, after the age of 50, significantly reduces the mental decline associated with aging.

³ See my chapter titled "Creativity in Organizations: An Imperative or Distraction" in Willy Haukedal and Bard Kuvaas's book *Creativity and Problem-Solving in Context of Business Management* (2004) for more information on the importance of creativity to organizations.

⁴ Our Center's web page includes a searchable database of creativity literature. Go to www.buffalostate.edu/centers/creativity and click on the literature tab. The freely available literature database is called CBIR.

⁵ For a more complete description of the graduate and undergraduate curriculum go to the Center's website found in the previous note.

⁶ See the work of Ginamarie Scott, Lyle Leritz and Michael Mumford published in the fourth issue of the *Creativity Research Journal* (2004).

⁷ The recent exhibit at the Buffalo Museum of Science, called Invention at Play, underscored the extent to which CPS mirrors the principles and procedures used by inventors.