Chapter 4
Creativity, Intuition, Insight, and Imagination

ABSTRACT

Discussion of the notion of creativity and the creative process seems necessary in a book about computational solutions going beyond text and numbers because notions such as art creation, creativity, and the creative process have been considerably broadened due to the input coming from computer science and computer technologies. Countless options of social networking provide fuel for many forms of online creative works. Comprehension of the role of creativity in new media art involving concepts beyond the 2D and 3D graphics such as interactive and time-based art, networking, the online, virtual, and Second Life presence, evoke initiatives taken in journals, books, college curricular programs, conferences, and the new options taken by artists and designers. This results in the quest of the new role of digital creativity and an emerging need for boosting digital creativity in schools. The further text looks at the role of creativity in a process of digital art image creation.

INTRODUCTION

Emphasis that is given in relation to digital creativity takes form of establishing journals, opening interdisciplinary academic degree programs, and developing software applications. Discussion of the notion of creativity and the creative process seems necessary in a book about computational solutions going beyond text and numbers because of the change in the meaning of this concept. The scope of this theme has been considerably broadened due to the input coming from computer science, computer applications, and their interfaces. The content of this chapter has been designed to invoke manifestations of digital creativity in the readers who interact with the text.

The role, function, and terminology related to creativity expanded onto the domains of technology and information technologies. This may result from the changing approach to art and art creation and current demand for art products as an inherent part of science- and technology-related solutions. These dynamic changes are going parallel to the developments in computer technology, with electronic computers being over 60 years old (the first-generation computer UNIVAC 1 was produced in 1951), personal computers existing for more than 30 years (microcomputers becoming popular in the late seventies), and the web accessibility to the public for more than 20 years: Tim Berners-Lee used the NeXT computer as the first web server and wrote the first web browser WorldWideWeb in 1990 (Berners-Lee & Cailliau, 1990). Because of all these events, the creativity demands are shifting from a need for proficiency in the traditional art forms to creating aesthetically challenging interactive digital content, which is essential for data mining and web visualization.

THE MEANING OF THE CREATIVE PROCESS

Creativity is often seen as the ability to create or design something useful or beautiful or novel: in science, to create even the simplest but own solution or invention; in art, the work that represents one's own flow of thought. As Robert Sternberg (1998/2011, p. 145) stated, "People are creative by virtue of a combination of intellectual, stylistic, and personality attributes. Sternberg & Lubart (1999, p. 3) wrote, it is "the ability to produce work that is both novel (i.e., original, unexpected) and appropriate (i.e., useful, adaptive concerning task constraints)." "First, creative ideas must represent something different, new, or innovative. Second, creative ideas are of high quality. Third, creative ideas must also be appropriate to the task at hand or some redefinition of that task. Thus, a creative response is novel, good, and relevant" (Kaufman & Sternberg, 2010, p. xiii).

Mihaly Csikszentmihalyi (2011) who in his own words, "devoted 30 years of research to how creative people live and work" stated that "creativity is a central source of meaning in our lives. Most of the things that are interesting, important, and human are the result of creativity." Csikszentmihalyi (1998) describes the autotelic activity as one we do for its own sake. Autotelic personality – "an individual who generally does things for their own sake rather than in order to achieve some external goal (Csikszentmihalyi, 1998, p. 117). Next are the notes excerpted from his article about the creative personality (Csikszentmihalyi, 2011).

Creative individuals are remarkable for their ability to adapt to almost any situation and to make do with whatever is at hand to reach their goals." Being creative provides "a profound sense of being part of an entity greater than ourselves… If I had to express in one word what makes their personalities different from others, it's complexity. They show tendencies of thought and action that in most people are segregated. They contain contradictory extremes…Creative people have physical energy, but they're also often quiet…they tend to be smart yet naive at the same time…they combine playfulness and discipline, or responsibility and irresponsibility…but this playfulness goes together with a quality of endurance and perseverance…most of them work late into the night and persist when less driven individuals would not…Creative people alternate between imagination, fantasy, and a rooted sense of reality…Creative people tend to be both extroverted and introverted…humble and proud at the same time…Creative people escape rigid gender role stereotyping: creative and talented girls are more dominant and tough than other girls, and creative boys are more sensitive and less aggressive than their male peers. Creative individuals are more likely to have not only the strengths of their own gender but those of the other one, too…Creative people are both rebellious and conservative… Most creative people are very passionate about

Related Content

Ambivalent Interplay
Heejoo Kim (2009). *Handbook of Research on Computational Arts and Creative Informatics (pp. 146-161).*
www.irma-international.org/chapter/ambivalent-interplay/19717

Sustainable Cinema: The Moving Image and the Forces of Nature
Scott Hessels (2012). *Biologically-Inspired Computing for the Arts: Scientific Data through Graphics (pp. 90-104).*
www.irma-international.org/chapter/sustainable-cinema-moving-image-forces/65024

Development of a 2D Digital Animation for Yorùbá Folktale Narrative
Alade Samuel Mayowa (2020). *International Journal of Art, Culture and Design Technologies (pp. 47-61).*
www.irma-international.org/article/development-of-a-2d-digital-animation-for-yorb-folktale-narrative/258094

A Simple Physically-Based 3D Liquids Surface Tracking Algorithm
Gonçalo N. P. Amadorand Abel J. P. Gomes (2011). *International Journal of Creative Interfaces and Computer Graphics (pp. 37-48).*
www.irma-international.org/article/simple-physically-based-liquids-surface/60535

The Earth Sciences and Creative Practice: Entering the Anthropocene
Suzette Worden (2015). *Handbook of Research on Digital Media and Creative Technologies (pp. 110-140).*
www.irma-international.org/chapter/the-earth-sciences-and-creative-practice/129310