

## Chapter 4

# Inquiries about Art and Graphics

### ABSTRACT

*In this chapter, discussion pertains to the current tendencies driven from the developments in computing, technology, and communication media, which inevitably have a strong effect on art creation and the ways of its installation. The text comprises discussion about some tendencies in producing images in connection with technology-induced opportunities and requests. There is a strong impact of technology and social networking on approaches to creating art graphics, while programming and computing serve as tools for art generation and installation at digital art forums and exhibitions. Discussion focuses on cognition in art, abstract thinking in art and science, and also the creative thinking in contrast to the critical thinking. As a consequence, there is a need to update current formats of doctoral studies and doctoral degrees in art, so the further text puts forward a proposition of developing a comprehensive curriculum for a doctoral program.*

### 4.1. THINKING IN THE ART MODE

#### Critical vs. Creative Thinking

An overlap between the critical and the visual way of thinking allows integration of art and science. Critical thinking skills, in accord with widely held positions, entail logical thinking and reasoning. This may include skills such as comparison, classification, sequencing, cause/effect, patterning,

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webbing, analogies, deductive and inductive reasoning, forecasting, planning, hypothesizing, and critiquing. Critical thinking, which traditionally has been ascribed to left-brain reasoning, is typified as analytic, convergent, verbal, linear, objective, judgmental, focused on a subject, and probability of its change. Scientific thinking is used in investigating processes and events, acquiring new information, and integrating previous scientific knowledge. Scientists use analogies from similar domains in proposing new hypotheses. Research on scientific thinking (Dunbar, 1997) revealed that over 50% of the findings resulted from interpreting unexpected findings that were very different from the hypotheses based on literature.

Our creative thinking supports our visual way of thinking. Traditionally ascribed to right-brain activity, our ability to think in non-verbal, visual terms, allows us to see connections and relationships where others have not, and to imagine or invent something new. Creative thinking has been described as involving the skills of flexibility, originality, fluency, elaboration, brainstorming, modification, imagery, associative thinking, attribute listing, metaphorical thinking, and forced relationships occurring when we compare seemingly unrelated items. The aim of creative thinking is to stimulate curiosity and promote divergence. Creativity has been also described as an attitude: the ability to accept change and newness, a willingness to play with ideas and possibilities, a flexibility of outlook, the habit of enjoying the good, while looking for ways to improve it. With this approach, we may continually improve our ideas and solutions by making refinements to our work. Studies have shown that creative individuals are more spontaneous, expressive, and less controlled or inhibited. They also tend to trust their own judgment and ideas, they are not afraid of trying something new. “The goal of art is to aid in the comprehension of the world’s ideas,” wrote Georg Wilhelm Hegel (Macdonald, 1970, p. 372).

## **Cognition in Art**

Everything the artist learns, hears, and experiences goes deeply into different parts of their brain and stays there, also in its unconscious parts, often synthesizing and transforming into the core of the issue that is central to its meaning. Later on, when some event or experience triggers artist’s imagination, parts of their brain go into a semi-conscious state such as daydreaming, to create the point of departure for an artwork. Artist’s connotations and associations (conscious and free) are then refined by the cognitive and emotional filters,

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