

## Chapter 2

# Thinking with Pictures: Art as an Instrument of Acquiring Knowledge

### ABSTRACT

*Projects described in this chapter are aimed at enhancing our thinking with pictures. “Thinking with Pictures” encourages the reader to use visual thinking as an instrument of acquiring knowledge, and introduces two projects aimed at developing visual literacy and applying various ways of visual expression. “Collage” introduces collage technique as a tool for visual communication. Two projects provided in this chapter are aimed at enhancing visual literacy and skills. “Sketching a shoe” is intended to amplify one’s confidence about one’s ability to depict things, and build a feeling of being prepared to make quick drawings on a board or on iPad. This project will encourage the reader to make sketches that strengthen one’s own argumentation, show what one wants to be seen, and help to convey one’s own solution in a visual way. “Creating a Composition with a Crowd” encourages the reader to draw a group of people and apply visual reasoning by showing background scenery that has an explanatory power. The next part of the chapter tells about collage because one may say without exaggeration that in the digital times most artists apply the form of a collage in their work. The Internet is flooded with ready images, clipart, art, and design samples, intriguing specimens. More importantly, ideas are not copyrighted. Before the advent of computers many artists applied techniques of cutting and pasting readymade material, thus making collages (two dimensional) and assemblages (three dimensional) of different forms.*

### INTRODUCTION

Workshops, books, and handouts designed to assist non-artists in developing visual literacy contain usually exercises pertaining to the reader’s perception (such as: where does your eye go first and where it goes after that), art appreciation

(where is the light coming from and how light affects the mood of the image), and ways to communicate about the artwork (e.g., information about the details and people shown in the image, and the creator’s possible perspective on the subject). Rhetoric involves effective and persuasive communication through speech or

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writing. Traditionally, rhetoric involves grammatical purity, clearness, force, and elegance of composition (Hill, 1878/2007). The creation of meaning with the use of visual language is a part of visual rhetoric. Visual rhetoric involves communication with the use of rhetorical figures including metaphors focused on the data, which are aimed at enhancing understanding for the user by inserting figures of connection, comparison for similarity or opposition, and figures of combination – a pictorial simile (Lengler & Vande Moere, 2009). The authors postulate that designers should be educated in principles of rhetoric to become effective in communication in a particular knowledge domain, solve the problems of aesthetics, and achieve visual inference.

According to Semir Zeki (1999, 2001) a neurobiologist at the University College London, the visual brain searches for gaining knowledge about the world. He defines a general function of art as an extension of the major function of the visual brain in a search for the constant, essential features of objects, surfaces, faces, and situations in order to acquire knowledge about a wide category of objects or faces. Therefore, the artist must be selective, choosing the attributes that are essential and discarding the superfluous.

Drawings and graphics can become instruments of thinking. Henry Petroski (1992), the author of comprehensive monograph about a pencil, writes,

*The pencil, the tool of doodlers, stands for thinking and creativity, but at the same time, as the toy of children, it symbolizes spontaneity and immaturity. Yet the pencil's graphite is also the ephemeral medium of thinkers, planners, drafters, architects, and engineers, the medium to be erased, revised, smudged, obliterated, lost – or inked over. ... Toulouse-Lautrec said of himself, "I am a pencil." (p. 6).*

## CRITICAL VS. CREATIVE THINKING

It might be a good time to analyze some works of arts, not only in terms of their aesthetic values but also by looking at the content of each image and a message it conveys to the perceiver. In addition to color reproductions published in art books it is easy to browse online (e.g., on Google) for the copies of works of art by typing a title of a masterpiece, a name of an artist, or the artistic style and then select 'Images.' For example, it might be interesting to see how William Blake's (1757-1827) poetic and symbolic paintings (such as "Pity", 1795) show his imaginative, mystical vision of the world. Piero di Cosimo's (1461-1521) "Perseus Freeing Andromeda" (1515) is another example of the imaginative vision of the world inhabited by bizarre monsters.

Integration of art and science in projects proposed in this book may require making many kinds of overlaps between the critical and the visual way of thinking. We may discern types of art that progressively abstract the essence of the picture theme:

- Photography shows everything we see. When we contrast traditional versus digital photographic imaging we may want to pay attention to cognitive processes, both artist's and viewers', in terms of the sending/receiving a message through imaging. The question is, how much image manipulation with the use of software may contradict the statement by Rudolph Arnheim who posed that photographs might affect our observation by singling out accidentals as readily as essentials, and making everything equally important, and that the extremely realistic images may have less symbolic value than the flags and company logos with strong symbolic power (Arnheim, 1990). Rudolf Arnheim (1954/2004) describes composition as the way in which works of art are

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