Chapter 22
Visual and Verbal Storytelling

ABSTRACT

This part of the book tells about combining pictorial and verbal solutions. Visual and verbal expression is gaining additional communication possibilities by the developments in data organization techniques, such as search engines on the Internet, cognitive and semantic structuring of information, concept mapping, social networking, and cloud computing. Electronic art, Web design, and communication media support creation of electronic media languages in visual representation and design. This chapter is focused on text visualization and on storytelling delivered in various literary styles.

INTRODUCTION

The ‘words–image,’ ‘image–words’ are generally used dichotomies. Art–science is another traditional dichotomy. ‘Word’ is often associated with science and ‘image’ with art. Depending on one’s scientific or artistic grounding particular objects of interest are becoming the foreground figures on a scene, while the rest is the background. We often strive to free ourselves from such divisions into mutually exclusive parts, and to achieve more holistic, rich creation or production. Integrative approach to multi-sensual, multidisciplinary, and multimedia-oriented creative processes is fundamental in art creating, learning, and instructional strategies. We can recall several approaches of masters in their fields that may combine into a holistic picture. Intellectual potential described by Howard Gardner (1993a,b,c) who taught about at least eight intelligences with resulting mental formations and predispositions of the mind. Feelings and emotions compared by Antonio Damasio (1994, 1999) to horse driving: we have to control horses when each of them tries to take our carriage in different direction. Neural basis of artistic creativity makes attitudes and behaviors more understandable with the advent of neurophysiology and imaging techniques. While exploring neuroaesthetics, a study of the neural basis of artistic creativity and achievement, Semir Zeki (1999) arrived at a conclusion, “artists are, in a sense, neurologists who unknowingly study the brain with techniques unique to them.” Multidimensional and multisensory experiences offered by interactive generative art enable the combining and complementing image and word.

There is a wide range of ways of transferring visual material to verbal description but there is a scarce guidance for going from written material to visual presentation. We present information both in visual context and verbally. For working on a spe-
cific project we may interlace various knowledge areas and combine several approaches, techniques, creative processes, and products including digital persuasion. We can use figures of visual rhetoric, digital storytelling, electronic writing, and convey one message in various literary styles. Visual and verbal expression allows creating messages that exist between literary and digital modes. The developments in data organization techniques enhance visual and verbal communication. Electronic art, web design, and communication media support creation of electronic media languages of visual representation and design, and thus communication media add the visual approach to social networking. Content delivery in a visual form enables verbal and graphic info presentation, sending out our work on the web, and then user/visitor’s interactivity through the web. This way, the joined techniques and processes in working on a specific project can go by retrieving, visualizing, representing, and sharing our knowledge through visual and verbal metaphors.

BEYOND WORDS: VISUALIZING TEXT

The use of electronic media can be put in service in gathering, processing, evaluating, judging, organizing, and publishing information, which allows looking at communication from another angle, using other tools and links. We may organize our thoughts about the writing and its visual counterparts around the basic (and advanced) notions already accumulated and splendidly organized on the web. A somewhat eclectic way of originating this approach requires combining the best results from the efforts of people engaged in many domains, for example visual perception and action, psychology, computer science, philosophy, and also:

- **Linguistics and Language Processing:** Research how humans use words to communicate ideas and feelings, and how such communications are processed and understood (e.g., Edwards, Nagarajan, Dalal, Canolty, Kirsch, Barbaro, & Knight, 2010)
- **Natural Language Processing:** Investigation on interactions between computers and human languages and formalization of natural language semantics as part of computer science and artificial intelligence (Duan & Cruz, 2011)
- **Language Acquisition:** Study on human capacity to perceive and comprehend language and produce words that involves neuroimaging and neurocognitive techniques to analyze brain development, syntax (rules controlling the arrangement of words and phrases in sentences), phonetics (study on speech sounds), vocabulary, and grammar (e.g., Sakai, 2005)
- **Computational Linguistics:** Deals with modeling of natural language from computational perspective (e.g., Uszkoreit, 2000)
- **Neurolinguistics:** A part of linguistics focused on the biological basis of the relationship of the human language and brain (e.g., Phillips & Sakai, 2005)
- **Speech Perception and Production:** Focused on psychological and phonetic study on symbolic units corresponding to phonological segments or phonemes (Casserly & Pisoni, 2010)
- **Semantics:** Logical, formal, and cognitive studies on word meaning, involving semiotics, logic, mathematics, and computer science
- **Categorization:** A part of cognitive activity fundamental for the process of comprehension, differentiation, and understanding, used to group objects into classes, called categories or concepts (e.g., Frey, Gelhausen, & Saake, 2011).
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