

The movie of emotions: A novel's experimental modular structure that conveys scientific theories and research findings

Raffaele Calabretta

Istituto di Scienze e Tecnologie della Cognizione del Cnr, Roma
raffaele.calabretta@istc.cnr.it <http://laral.istc.cnr.it/rcalabretta/IlFilm delleEmozioni/>

There is a growing trend of the use of literary techniques for the popularization of scientific findings and theories (e.g., Lloyd, 2003; vedi Eakin, 2003). The book *Il film delle emozioni* ('The movie of emotions'; Calabretta, 2007, second edition) makes an attempt at using a narrative structure for communicating the most recent scientific knowledge relative to the functioning of the brain and, particularly, to emotion management.

But the book is not a scientific essay on emotions in a traditional way. It was defined as "a happily unclassifiable book, therefore, an experimental one". Since there is both one main character and narrative tension, perhaps the book can be defined as an essay on emotions in the form of a novel.

The novel describes the several attempts of the main character Gabriele to write the script of a movie for emotional training; in reality, it reveals itself to be the dramatization of interior, interpersonal and social conflicts of a scientist that desperately looks for happiness, and the dramatization of the creative process of writing. Using the Enzensberger's definition, the book is an example of an Alka-Seltzer novel, that as the tablet in water crumbles in thousands of narrative bubbles. Gabriele's identity is a puzzle that the reader reconstructs by means of the accumulation of details scattered in the narrative forms over the whole book (also in the appendix). This is a metaphor of the way episodic memory works (the kind of memory that allows us to remember our personal experiences). It "is not a literal reproduction of the past, but is instead constructed by pulling together pieces of information from different sources" (Schacter & Addis, 2007).

The book is borderline literature that mixes registers and genres: the novel, an autobiography, a scientific paper about emotions, a diary, an emotional trainer, rich of link and bibliographic references, but also a manual on how to live. The book structure is composite: is a digital miscellany, made up of a variety of materials (i.e., computer files): diary pages, sketches, e-mail exchanges, summaries of films, bits of the news, parts of film scripts, excerpts from scientific papers, jottings. It does not have the true structure of a novel, but can be read as a modern day one, fragmented and hypertextual. The computer files represents the extended memory and therefore an extension of the cognitive abilities of the main character.

This particular novel's structure mixes the classical dramaturgical division in three acts with the chaotic features of our times. The book is a fragmented and modular combination of files. This original structure made up of text pieces pasted together without an apparent order represents a metaphor of the nature of modern man's work activity plunged into technologies, that prevent him from concentrate and work on the same task more than 4 minutes, before being interrupted by emails or cellular phone sms.

A feature of the novel is that its structure is not causal, instead it is conceived and realized to convey the novel's themes and some scientific findings and theories, whose in this paper some examples will be given.

Calabretta, R. (2007). *The movie of emotions: A novel's experimental modular structure that conveys scientific theories and research findings*. *Proceedings of the International Conference on Complex Systems*. New England Complex Systems Institute (Ed.), Cambridge, MA.

First example: the novel is structured with many conclusions that, through small adjustments, prepare and approximate the real conclusion. This slow approach to the conclusion is a metaphor of the book's final message: the happiness consists in enjoying the small progress, improvements that we make towards the satisfaction of our desires.

Second example: the plot of the novel owns some properties of complex systems.

Third example: the novel's modular structure reproduces the scientific results of a specific research on the evolution of brain modularity (Calabretta *et al.*, 2000).

Fourth example: the flashback of the book structure refers to the functioning of amygdala on the genesis and impact of emotions.

Fifth example: according to Daniel Wegner of Harvard University, fast thinking increases individuals' mood, self-esteem, feelings of creativity, feelings of power, and energy level (Pronin & Wegner, 2006). At the same way, the book structure with its continuous alternate of main character's thought and of styles of writing could create in the readers an increased positive mood, as confirmed by several readers of the book.

Sixth example: the novel was defined a hypertextual one. Why? The book tells the story of Gabriele. In the book there are not other main characters. In reality, the story of Gabriele is enriched by the characters of the movies cited in the book, with a multiplicative effect.

It was very hard to find a publisher interested in publishing this very experimental book, it took about two years of search: in fact, for scientific publisher it was little orthodox, while for narrative publishers was little narrative. Incredibly, after being published, the book was very well received by critics and readers and it was featured in numerous magazines, newspapers, television shows, and reviewing sources. In spite of thousands of persons that downloaded the book for free, the first edition was sold out and very recently the second edition was published.

Bibliografia

Calabretta, R. (2007, second edition). *Il film delle emozioni*. Gaffi editore, Rome.

Calabretta, R., Nolfi, S., Parisi, D. & Wagner, G.P. (2000). Duplication of modules facilitates the evolution of functional specialization. *Artificial Life* 6:69-84.

Eakin, E. (2003). Art and Science Meet With Novel Results. *The New York Times*, 18 Ottobre, Sezione B, Pagina 7, Colonna 4.

Lloyd, D. (2003). *Radiant cool: A novel theory of consciousness*. MIT Press, Cambridge, MA.

Pronin, E., & Wegner, D. M. (2006). Manic thinking: Independent effects of thought speed and thought content on mood. *Psychological Science*, 17, 807-813.

Schacter, D. L. & Addis' D. R. (2007). Constructive memory: The ghosts of past and future. *Nature* 445, 27.

Calabretta, R. (2007). *The movie of emotions: A novel's experimental modular structure that conveys scientific theories and research findings*. *Proceedings of the International Conference on Complex Systems*. New England Complex Systems Institute (Ed.), Cambridge, MA.