Book Review

Interweaving narratology and experimental psychology

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Sanford, Anthony J. & Catherine Emmott. 2012. *Mind, Brain and Narrative*. Cambridge: Cambridge University Press.

During the last two decades, we have observed a fast grow of scholarly interest in the study of narrative. If previously, in the 1960s and 1970s, literary narratology (which initially existed as a subfield of structuralist semiotics) was virtually the only discipline actively dealing with this subject matter, at present there is a whole cluster of overlapping fields of research occupied by various subdisciplines. For instance, the domain of the study of psychological aspects of narrative consists of at least three neighboring subfields – cognitive narratology, stylistics, and psychology of discourse. All of them attempt to understand the complex relations between the structure of the mind and the structure of narrative. However, despite the closeness of these scholarly domains, the results achieved in each of them are usually not taken into account by the others. Narratology and stylistics have grown out of the humanities, such as literary theory, while the psychology of discourse approaches narrative from the side of cognitive psychology. The former two disciplines typically use different kinds of text analysis as their scholarly method, but the psychology of discourse makes use of experiments, and it may be this methodological difference that causes the lack of dialogue between these fields.

Of course, there have been attempts to join these disconnected territories. For example, "empirical literary studies" (van Peer 1986; Miall & Kuiken 1994) represent an endeavor to test hypotheses such as Viktor Shklovskii's theory of estrangement (or foregrounding) via experimental techniques. A more sophisticated approach has been taken by the psychologist Richard Gerrig and several of his colleagues who do not only experimentally investigate narratological topics like suspense or unreliable narration, but also present them in a manner accessible to readers with little or no psychological training (Gerrig 1993, 2010; Gerrig & Egidi 2003). However, the bridges constructed by these studies do not seem

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strong enough to maintain proper exchange of information between psychology and the humanities.

The new book by Anthony J. Sanford and Catherine Emmott is another bridge-constructing attempt of this kind. Sanford is a psychologist interested in the study of text comprehension and Emmott is a linguist studying rhetorical aspects of narrative processing. *Mind, Brain and Narrative* is the result of their long-standing collaboration, although it is also largely based on the separate work each has been engaged in for more than twenty years. The range of the themes encompassed by the book is wide and, at first glance, it seems to cover the majority of the key topics in psychology of discourse: the general principles of text processing, attention to the text, depth of processing, the role of mirror-neuron system in narrative comprehension, the functioning of emotions in narrative, etc. The scope of narratological topics proper is somewhat smaller, including such questions as the devices used for capturing readers' attention, narrative perspective, narrative suspense, curiosity and surprise. However, the distinction between "more psychological" and "more narratological" themes would be somewhat artificial, as they are closely interconnected in the book. Also, it is worth noting that some of the chapters are primarily grounded on the authors' separate studies, while others (e.g., chapter 6, "The experiential aspect: using embodiment theory," or chapter 9, "Narrative's social impact: persuasion and attitude change") are substantial reviews of current research on these problems, conducted by other scholars.

The topics discussed in the book are approached from the perspective of both authors' original *Rhetorical Processing Framework* including three main strands: 1) scenario-mapping theory, 2) rhetorical focusing principle, and 3) experientiality. The main principle of the *scenario-mapping theory* (introduced in Sanford and Garrod 1981) is that successful text comprehension requires mapping of language onto situation-specific knowledge. The latter does not necessarily have to be acquired during the very act of text reading, but usually it is a part of readers' real-world knowledge. According to Sanford and Emmott, "a core idea behind this theory is that understanding does not occur through combining the meanings of individual words to derive sentential meaning, but that understanding requires at least some recognition of a situation or situations that constitute the basis of what is written" (p. 21). This approach seems to be a reworked and more detailed variant of the early cognitivist idea about the important role of frames in information processing, initially applied to visual information processing (see Minsky 1975).

The scenario-mapping theory addresses an important issue concerning the limit of activation of real-world knowledge. In other words, how many inferences should we make on the basis of a text to understand it? For example, if we come

across mention of a dinosaur, should we activate all our knowledge about this kind of creature or is it enough just to recall some very basic information about what a dinosaur is? Sanford and Emmott give the following answer to this problem: "In general, the idea is that the representations used should be relevant to what people need to know in order to understand a basic situation, and no element should be more or less tightly defined than is necessary" (p. 34). Texts usually contain specific cues that indicate how far readers should go in the process of activating their situation knowledge.

This latter problem of the number of inferences needed for proper text comprehension is closely related to another key aspect of Sanford and Emmott's framework, that of the depth of processing and rhetorical focusing. According to Sanford and Emmott, typical text processing is not deep, i.e. the "complete" meanings of words are not activated. Usually, what is used is only the part of the meaning important in the more general context of the message. Following Barton and Sanford (1993), Sanford and Emmott call this specificity of text understanding *shallow processing*. An interesting example of shallow processing is represented by some anomalies of text comprehension. For example, readers usually do not notice any mistakes in the phrase "Moses put two of each sort of animal on the Ark," although it obviously was not Moses but Noah who did that. Such mistakes can happen because rather than the full meaning of the word "Moses" only a small part of it is activated (say, "an Old Testament character").

However, not all text processing is shallow. One of the milestones of the book is the assertion that there exist specific rhetorical devices that capture readers' attention and, thus, make the processing of some text elements deeper (or, in other words, make them foregrounded). For example, to deepen the processing of the word "Moses," we can use a cleft structure: "It was Moses who put two of each animal on the Ark." In this case chances that readers will notice the mismatch are significantly higher. Sanford, Emmott, and their colleagues have tested different kinds of foregrounding and their experiments clearly show that formal rhetorical instruments do make text processing deeper. Among others, these devices include using very short sentences and mini-paragraphs, low-frequency words, long words, italics, etc. However, the experiments did not confirm the assumption that content-based devices (such as pre-announcements) can also capture readers' attention. This counter-intuitive result surprised the scholars themselves, so that they rather assumed that there could be a mistake in the study method.

Another issue, which may be of particular interest for literary scholars, is the phenomenon opposite to foregrounding – backgrounding, or *burying information* in a narrative text. This is a rhetorical device aimed to distract attention from a certain item. For example, the information placed in subordinate clauses is less likely to be deeply processed compared to the information placed in main

clauses. Fewer people will notice the mistake in the sentence "The liver, which is an organ found only in humans, is often damaged by heavy drinking" than in the sentence "The liver, which is often damaged by heavy drinking, is an organ found only in humans," because in the former case, the incorrect statement is in a relative clause (p. 90). Similarly, "simply by continuing with a message, problems with an earlier part of a message may be buried, even if the information content of the message does not in itself solve that earlier problem" (p. 95). The ideas concerning burying information in a text may be particularly interesting for those studying detective fiction. In this type of narrative, authors typically use backgrounding devices to hide certain clues so that they are presented to the readers but, at the same time, stay unnoticed.

The third key aspect of the rhetorical processing framework is *embodied understanding*, which is "the psychological term for the idea that readers draw on some aspects of sensory experience, motor behavior and emotional experience, while reading" (p. 132). In the discussion of embodiment, Sanford and Emmott predominately base their assumptions on experimental research conducted by other psychologists. One of the most interesting questions asked in this section of the book is "whether simulation of actions and perspectives may be brought about simply by reading about them" (p. 137). For example, it has been shown that reading about pain partially activates areas of the brain that are active while actually feeling pain (Osaka et al. 2004). Following this research, Sanford and Emmott make the assumption that "sometimes the writer might capitalize on embodiment for some parts of a narrative and other times might suppress it, achieving this by utilizing text types which have different amounts of grain" (p. 155). That is, texts rich in descriptions of feelings should potentially be more able to evoke emotions than summary texts with a low level of sensory grain.

In general, the chapters of the book dedicated to embodiment seem to be more preliminary in form, as they touch upon a lot of unsolved problems. In particular, chapter 6 ends with a list of questions (p. 158) concerning embodiment effects that deserve attention. This list might be completed with one more question not mentioned by Sanford and Emmott, although it seems to be important for the general framework of the book: what is the relation between the notion of the granularity of text (and subsequent emotional immersion) and the previously discussed ideas of shallow processing and rhetorical focusing? Overall, sensory grain can hardly be a complete explanation of the way author controls readers' emotions. For example, a poem may be much shorter and lower in its sensory grain than a large prosaic description, but nevertheless may evoke strong feelings in the reader (see Shaw 2008).

The book is not without a few more problematic issues. One of its most noticeable shortcomings is that Sanford and Emmott do not offer any explicit level

model of narrative. Such models are widely used in narratology and typically encompass from two to four narrative levels (e.g., see Bal 1985; Chatman 1975; Schmid 2010). As it seems, using one of them would contribute significantly to the questions left unanswered by the book, such as the aforementioned lack of experimental evidence for the idea of content-based foregrounding devices. Here, a short explanation of the experiment conducted by Sanford and Emmott is required. In their studies of foregrounding, Sanford and Emmott used their original text-change detection method, which is a revised version of the change detection method typically used in visual perception studies. In the course of the experiment, the participants had to read a text passage. After a short pause, they were asked to read a nearly exact copy of the same passage, with only one or two words in it changed. For example, in the sentence "A sports car drove out in front of me and nearly hit my car" (p. 122) the word "drove" was changed to "moved." The researchers' question was whether the participants would notice the substitution. If these altered words had been stressed by means of formal devices (e.g., if the word "drove" was italicized) the readers could cope with the task. However, the participants failed if content foregrounding had been used (such as the pre-announcement "What happened next made me furious"). The situation might have been less problematic if the researchers were using level models of narrative, which introduce a clear distinction between words (i.e. linguistic units) and events or facts (i.e. narrative units). Obviously, the shift from "drove" to "move" hardly makes any difference at the level of narrative. Both words convey virtually the same meaning. Can we assume that formal devices not only have a formal nature but also are better equipped for stressing formal, linguistic differences while content devices are better suited to stressing the content of narrative texts, that is, events and facts? If so, the problem Sanford and Emmott have faced finds a simple explanation: the scholars were trying to test content devices on a level at which they do not function. Instead of substituting words by their synonyms, Sanford and Emmott might have tried to use words that introduce some change into the story world (for example, by substituting "a sports car" with "a classic car"). Most likely, the result of the experiment would have been quite different.

Despite these minor problems, *Mind, Brain and Narrative* is a highly interesting and important book that seems to have appeared at the right time. Narratology (especially the cognitive variety) is currently seeking ways to develop its methodology, and the work of Sanford and Emmott demonstrates a promising vector for further discovery. That is, an empirical method based not so much on the intuitions of scholars (as is typical of the humanities) but on experimental research, based on both psychological and narratological theoretical frameworks. Written in accessible language and not overloaded with psychological terminol-

ogy, this book may serve as a valuable introduction to the domain of research on the border between psychology and the humanities.

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