Suzanne Nalbantian, Chair

Report on Research Committee "Comparative Literature and Neuroscience"
August 17, 2012

The major activity of my research committee in this, its first year, was to create an interdisciplinary conference (April 19-21, 2012) in the scientific setting of Cold Spring Harbor Laboratory (NY). It was noteworthy to have the Lab and the ICLA in true consilience of the humanities and the field of neuroscience.

This meeting fostered productive interchange. As a group, in the 2012 symposium, we converged comparative literature, neuroscience, neurophilosophy, neuropsychology, and neuropsychiatry with participants moving across the disciplines in the study of the brain and of memory, in particular. Many of the participants had mixed specializations and evolutions in their careers across the disciplinary borders, which enhanced effective communication. An ongoing twofold objective was in place. On the one hand, comparative literature, with its multifarious embodiments of lived human experience, was shown to be a rich reservoir of data for this endeavor. On the other hand, mainstream neuroscience was presented as a means of approaching literature from a true "neuro" perspective based on neurobiology.

The work of this committee goes beyond the guesswork or mere theorizing that sometimes characterizes such study and instead is aimed at showing the true nature of solid, science-based interdisciplinary methodology. In particular, one neurobiologist/philosopher argued that the most reductive kind of neuroscience, and the most predominant for the field at large, that of cellular and molecular studies using animal models, can have the most impact on understanding the causes of cognitive functions, which in turn can extend to impact on the humanities, and even on the writing of imaginative literature. This participant also challenged the extended mind theory movement in cognitive neuroscience that external features of environment can override basic brain mechanisms. Several literary critics showed misgivings about trendy cognitive or evolutionary literary criticism, showing that much of it lacks a solid grounding in neuroscience.

The topics that were covered in this first meeting were:
--Different memory systems and corresponding classification of literary data of descriptive phenomenology.
--Memory pathologies in the brain and in literary works.
--Nonconscious memory in the brain and in literature.
--Neuropsychological bases of literary phenomena and aesthetic experiences.
--Scientific brainimaging techniques that can be used to evaluate aesthetic reception.
--A 21st -century neuroculture producing neuroliterature on brain-related issues.

This committee has thusfar introduced new interesting literary texts for memory data and will continue to do so. This includes Professor Hitoshi Oshima's description of the fiction of Kobayashi Hideo and its discussion of the significance of collective, cultural memory in Japanese modernist literary works with cross-reference to Bergson. There was also Professor Howard Mancing's discussion of Spanish texts that feature characters struggling with memory, such as in a Unamuno novella and in Carmen Martín Gaite's *The Back Room*. Anthroplogist

Fernando Vidal discussed a set of contemporary Anglo-American neuronovels—of Richard Powers, Ian McEwan, David Lodge-- as a form of scientific realism relating to an episteme of brainhood and in particular to post 9/11 impact, such as the fragility of selfhood.

The exchanges between literary analyses and scientific documentation were particularly illuminating. Regarding pathologies of memory, a neurologist pointed out effects of Alzheimer's disease with loss of word diversity and of syntactic complexity on Iris Murdoch's last novel *Jackson's Dilemma.* I introduced a set of Surrealist poems, of Breton, Aragon and Desnos, that demonstrated aspects of nonconscious memory processing, often propelled by hynagogic states—what was corroborated by memory/sleep neuroscientist Robert Stickgold in his tracking of different phases of sleep which serve different memory functions. A cognitive neuroscientist's analysis of Proust's *A la Recherche du temps perdu* brought new insights into the neuropsychological basis of Proustian memory and its demonstration of William James's concept of contextual "fringe" associations. Specific neural substrates (with a focus on hippocampal activity) of the Proustian phenomenological experience were discussed. A neuroscientist's reference to Nabokov's notion of hereditary memory in *Speak, Memory* heightened the scientific argument against the blank slate notion of the mind.

The following methodological issues have also arisen, which will be carried over in subsequent meetings:

1) How literary information can serve as data for the scientists in light of the fact that art is involved in shaping the raw brain material. 2) Are we examining the brain of the artist or the brain of the reader? This issue involves revisiting death-of-the-author theory and reception theory in this new interdisciplinary context of study. How do the intention of the artist and autobiography come into play? 3) How can this kind of neurostudy shape literary studies? Why is this enterprise not another form of psychoanalytic criticism or study of the psychology of creativity? 4) What happens when neuro literary findings do not coincide with scientific ones? 5) What mental activities are currently measurable and what needs to be measured? 6) How is neuroanalysis of literary texts different from current cognitive literary studies and "theory of mind" approaches of intersubjectivity?

This participation of some of the members of the ICLA Research Committee is the first in a series of meetings designed to engage the related topics of human memory, consciousness and creativity. It lay the groundwork for the next meeting, which is organized around 4 group sessions on "Consciousness and the Brain," at the 2013 ICLA Paris Congress. A larger group of comparatists have joined this next project with a truly international representation.

.