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Literary Neurofiction. On Richard Powers's *The Echo Maker* (New York, Farrar, Straus and Giroux, 2006)

One remarkable common trait of contemporary anglo-american fiction is a keen fascination with the tentative mapping of areas in the brain supposed to act as the seats of basic psychological functions. Profiles of brain activity revealed by PET scans or functional Magnetic Resonance Imaging (fMRI) have become the starting point for a growing number of reflections on the vanishing role of human agency in the definition of identity. Writers like Ian McEwan, Jonathan Franzen, Jeffrey Eugenides, Umberto Eco and David Lodge have peopled their recent works with cognitive scientists, neurosurgeons, and researchers in the fields of artificial intelligence, neurology, or biochemistry, all of them somehow involved in the collective project of shedding light on the neural correlates of consciousness (NCC). The neuro-heroes often interact with patients suffering from various kinds of brain damage; patients who act as precious pathfinders, becoming involuntary probes into the darkest recesses of consciousness. Their cognitive impairments turn them into fit trailblazers through the wilderness opened up by recent forays into the tangled territory that straddles identity, gender and biology. Most of these *Neurological Novels* employ cognitive impairments as a key to unlock the mysteries of personality. As a consequence the focus on the unconscious functions of the brain no longer requires an analysis of Freudian repressed memories. Gone are the days of the literary experiments of High Modernism, which led to the development of the "stream of consciousness" as the exemplary writing technique of the early twentieth-century. Today the scrutiny of the synaptic mechanisms underlying the processes whereby the brain makes the self opens the way to new forms of formal experimentation, and at the same time it allows for the emergence of a crucial, interdisciplinary "mental terrain". Novels like Lodge's *Thinks...* (2001) or Franzen's *The Corrections* (2001) dramatize a conflict which is shared by many of the artists I mentioned: the clash between the materialistic explanation of every human activity - which the authors usually attribute to the neuroscientific community - and the "humanist" resistance to the reductionist approach which considers science the only true form of knowledge. They present a kind of "science-in-fiction" which is different from traditional "science-fiction" in that it allows no space to imaginary worlds emerging after a visionary technological breakthrough. Neurological novels are securely based in present debates and dilemmas: it is a fiction which invokes only references to "hard facts" that can be retrieved through available technological devices. Their authors deal with scientific enterprises devoted to identifying the matrix of genetically organized structures that allegedly underline and restrict our behavioural options.

If the defining element of a "neurological novel" is the presence of a troubled interest in the idea that the self is merely an organizing principle maintained by random arrangements of synaptic connections, then *The Echo Maker*, a novel written by Richard Powers in 2006 could be taken as a perfect example of this blossoming genre.

Richard Powers (born in 1957) is one of the most acclaimed novelists of his generation – *The Echo Maker*, his ninth novel, was awarded the National Book Award in 2006, and was a finalist for the 2007 Pulitzer Prize for Fiction – and he has made a career out of transforming scientific ideas into fictions that strive not only to bridge the gap between the Two Cultures but also to illuminate their common grounds. Powers has always been interested in the concept of storytelling as an instrument of truth, already a major theme in his first novel, *Three Farmers on Their Way to a Dance* (1985), but it is in its latest novel that the role played by narration in giving shape and meaning to our lives reaches center stage.

*The Echo Maker* tells the story of Mark Schluter, a twenty-seven-year-old meatpacker. Mark suffers from a severe head trauma after his truck is involved in a mysterious accident on a Nebraska country road during a cold February night in 2002. Weeks later, when he recovers from his coma, Mark is diagnosed with Capgras syndrome, a rare neurological disorder that leads him to believe that the woman who visits him every day in his hospital room claiming to be his sister Karin is, in fact, an imposter playing a game on him. He calls her Kopy Karin, The Pretend Sister, and accuses her of keeping the the real Karin away from him. In the same way he thinks that his dog is now a perfect reproduction of his own Blackie. Even his house seems to him only a copy of the real thing. The only person Mark seems to trust, at least in the beginning, is the famous neurologist and best-selling author Gerald Weber (a combination of Oliver Sacks and V.S. Ramachandran), whom Karin convinces to fly to Nebraska to help her brother. This is the beginning of a complex, multi-layered story which is focalized through three different points of view (Mark's, Karin's and Weber's) and encompasses three major subplots. The crucial metaphor yet is undoubtedly provided by Capgras symptoms. But what is Capgras' delusion? V.S. Ramachandran describes it as "one of the most colorful syndromes in neurology":

The patient, who is often mentally quite lucid, comes to regard close acquaintances – usually his parents, children, spouse or siblings – as impostors...When I look at a face, my temporal cortex recognizes the image – mother, boss, friend – and passes on the information to my amygdala to discern the emotional significance of that face. When this activation is then relayed to the rest of my limbic system, I start experiencing nuances of emotion (love, anger, disappointment) appropriate to the particular face. (FYB 162)

However, if the connections between the amygdala and the face recognition area have been damaged, the patient recognizes his sister but doesn't experience any emotions when looking at her face. *Kopy Karin* looks identical to Karin, but she doesn't "feel like" her. This leads Mark to think that although the woman resembles Karin, she cannot but be a double. Damage in the temporal lobes thus enables us to deal with crucial questions about the workings of memory and the nature of personal identity. The problem with Capgras patients does not concern the ability to recognize faces nor in the ability to experience emotions.

What they lose is the ability to link the two: it is this missing connection that enables us to rethink the processes whereby we construct narratives about our life and the people who inhabit it.

This is made clear in the scene where Gerald Weber discusses Mark's symptoms with Dr. Hayes, another neurologist working on Mark's case:

Hayes produced a series of images and clipped them to his light box: Mark Schuter's brain in cross section [...] each shade of gray spoke of function or failure. This subsystem still chattered; this one had fallen silent.[...]

"He gets an intact facial match, and that generates the appropriate associated memories. He knows his sister looks exactly like...his sister."

"But no emotional ramification. Getting all the associations for a face without that gut feeling of familiarity. Pushed to a choice, cortex has to defer to amygdala."

Weber smiled, despite himself. " So it's not what you think you feel that wins out, it's what you feel you think" (131)

The lesion to the fibers going from the the temporal lobes to the amygdala brings on the shocking revelation of the role played by our emotions in the act of recognition. According to Ramachandran, the fact that a brain disorder that most people regard as a psychiatric problem can be explained in terms of known brain circuitry, enables us to uncover new insights about how memories are stored and retrieved. Throughout the novel Weber – who shares most of Ramachandran's theories (and case studies) even though his features closely resemble Oliver Sack's – directs our attention to the case histories of brain damaged patients whose brain has tricked itself, failing to recognize certain aspects of reality. The life-long study of conditions like agnosia or phantom limbs has lead Weber to realize that there is no self without self-delusion. The long list of patients suffering from rare brain disorders described by Weber presents readers with a map of what neuroscience knows about brain structure, inviting us to take into account the likelihood of imminent developments that could prove beyond doubt the biological origins of consciousness. Weber thinks we are living in an age when the mistery of the mind is about to be revealed, and it is a kind of optimism that Powers himself seems to share:

Weber chanced to be working at the precise moment when the race was making its first real headway into the basic riddle of conscious existence: How does the brain erect a mind and how does the mind erect everything else? Do we have free will? What is the self and what are the neurological correlates of consciousness? Questions that had been embarassingly speculative since the beginning of awareness were now on the verge of empirical answer (134)

However it is by analyzing "Mark's attempts to tell himself back into a continuous story" (143) that Weber gradually realizes the implications of Capgras. In order to make a sense of wholeness available again, logic gives in: "A single solid fiction always beat the truth of our scattering" observes Weber about Mark's predicament (164). It is in the narratives we build, and not in the facts we claim to know, that we find the truth that shapes our lives:

Consciousness works by telling a story, one that is whole, continuous and stable. When that story breaks, consciousness rewrites it. Each revised draft claims to be the original. And so, when disease or accident interrupt us, we're often the last to know (185)

Mark Schluter seems indeed to be the last to know what is happening to him. When he starts to perceive himself as surrounded by doubles, by facsimiles of the people and places he loved best, he becomes one of the several "echo makers" the title refers to. He is not the only one, though. All the characters in the book suffer from a profound dislocation between "who" they believe themselves to be and their actual lives: this is the case not only with the three main characters but also with the secondary ones: Barbara, the nurse who attends to Mark, the one person he trusts, is not a real nurse, and Bonnie – Mark's girlfriend – has a job in which she impersonates a pioneer woman and dresses and speaks like a pioneer all day long. Everything in Nebraska seems an imitation of itself. What is authentic, what is fake? We can no longer know. Maybe the question itself is irrelevant: fictions are all we have, but we need not worry because that is an essential part of the human condition, as Weber himself finally comes to realize:

The thought formed in him as he lay awake at dawn, listening to a mockingbird roll through its round of pilfered calls: of selves as the self describes itself, no one had one. Lying, denying, repressing, confabulating: these weren't pathologies. They were signature of awareness, trying to stay intact. What was truth, compared to survival? (382)

It's not only personal identity that is called into question by references to the Capgras syndrome. *The Echo Maker* also asks to be read on a political level. American self-deception after September 11 is the hidden theme that links the various subplots together. Mark's car accident takes place on February 20, 2002, and some of his friends spend the following months eager to enroll and fight back. Yet it is only in the final twist of the story that we learn how closely related the Twin Towers attacks and Mark's accident really are, and we can fully appreciate the full scope and ambition of a novel which manages to combine neuroscience, environmental issues and political insights, travelling across thresholds to illuminate the complexity of contemporary culture.