In the closing chapter of his recent bestseller [*The Blank Slate*](http://mentalhelp.net/books/books.php?type=de&id=1555)*,*Steven Pinker attributes what he dislikes in modern literature to the influence of poor empiricist psychology. The modernist ‘denial of human nature’ resulted, Pinker informs us sadly, in the replacement of ‘omniscient narration, structured plots, the orderly introduction of characters, and general readability’ by ‘a stream of consciousness, events presented out of order, baffling characters and causal sequences, subjective and disjointed narration, and difficult prose’ (p.410). And, worse still, ‘in postmodernist literature, authors comment on what they are writing while they are writing it’ (p.411). Pinker doesn’t mention the intense pleasure which rather large numbers of readers find in the novels of Thomas Pynchon or Paul Auster, for example: but I suspect this would be ascribed to a disavowed hunger for status fostered by pretentious and unintelligible critics (compare pp.412-6).

Those whose literary criticism is less impressed with evolutionary psychologists’ nativism about aesthetics might sensibly seek out good alternative cognitive theory. In recent years the field of ‘literature-and-cognition’ has indeed become hearteningly diverse. But Joseph Tabbi here undertakes the particularly difficult task of finding appropriate cognitive background for theorizing the kind of reflexive, ‘metafictional’ writing which Pinker singles out for special disdain.

The American novelists and poets discussed in Tabbi’s loosely connected essays are, he argues, moving ‘toward a more cognitive realism in fiction – based on notation and reportability rather than representation, and recognizing conscious experience as a process of selection, an autopoietic creation out of noise that is far more complex than anything yet accomplished by computer simulation’ (p.xxv). Tabbi examines novels by Pynchon, Auster, Richard Powers, David Markson, and (in less detail) the work of Harry Mathews, Lynne Tillman, and Stephanie Strickland. These writers, Tabbi claims, ‘are creating a new order of realism’ by ‘actually imagining those aspects of a cognitive system that have sunk below the level of operational awareness’ (p.130).

The book is not well organized. Chapter and section titles are wildly overoptimistic (‘A Media Theory of the Unconscious’), agonizingly punning (‘Mapping the Cor[e]tex[t]’), or inaccurate (a section titled ‘The Journalists: Markson, Maso, Mathews, and Auster’ in fact discusses Maurice Blanchot). Descartes’ solitary revelations in ‘a small Bavarian farmhouse’ occurred in 1619, not 1629 (p.100). More significantly, it is mystifying that Tabbi does not discuss in any detail the one novel he mentions which engages deeply with cognitive science, Richard Powers’ *Galatea 2.2,*a heartbreaking post-connectionist campus novel about the attempt to train a program named Helen to produce convincingly ‘human-like’ literary criticism. After a number of postponements in his chapter on Powers (‘Fiction to the Second Powers’), Tabbi evades the book with the bewildering excuse that ‘As [*Galatea*](http://www2.english.uiuc.edu/powers/bib/reviews_galatea22.htm)also systematically sets out the cognitive themes that are also my themes, analysis of these themes would be redundant here’ (p.72). Such teasing might be understood by sympathetic readers as playful parrying with his material, but Tabbi’s naïve and unimaginative prose wards us off. Do even cognitive-scientific readers of Thomas Pynchon need to be told that he ‘is self-conscious about questions of narrative form’ (p.26)? Brief quotations on memory and representation from Powers and Markson are unfortunately much more striking than the theorizing which surrounds them, and the temptation to go to the novels first should probably not be resisted.

Tabbi’s interest in cognitive science is intended to issue in a new ‘medial ecology’, a framework in which to analyze the diverse ways in which embodied brains couple with various changing technological and cultural systems. His primary frame of scientific reference is the systems theory of Bateson, Bertalanffy, Luhmann, and early Varela, rather than any of the movements of the 1990s toward embodied cognition, dynamical systems, and the extended mind. The ‘cognitive’ references cited are a popular paper by Bernard Baars, and Francis Crick’s autobiography. But Tabbi deals with none of the cross-disciplinary work on cognitive technologies and ecologies which could ground his project, by (for example) Sunny Auyang, Rodney Brooks, Andy Clark, Merlin Donald, John Haugeland, Ed Hutchins, Alva Noe, Esther Thelen, Evan Thompson, or Tim van Gelder. This is particularly surprising given the weight Tabbi places on the notion of ‘distributed cognition’ (e.g. p.59, p.83, p.104, p.121). He never tries to explain this phrase (nor other key cross-disciplinary concepts like ‘representation’ and ‘emergence’), but Tabbi seems sometimes to be thinking of distributed representation within individual neural networks in the brain (e.g. p.104, p.121), and sometimes of the quite different notion of a ‘distributed cognitive environment’ (p.83) in which mental states and processes are literally spread or smeared across brain, body, and (social, technological, and physical) environment.

There’s nothing incompatible in these two ideas: indeed anthropologist Hutchins and philosopher Clark have argued powerfully that they are complementary, since unstable connectionist brains tend to hook up with more durable and representationally-flexible external media in temporary ‘doubly distributed’ cognitive systems. But emerging theories of the interface in the arts as in the cognitive sciences need to address explicitly the difficulty of understanding such tangles of inner and outer resources. Instead, Tabbi’s complaint that the descriptions of the ‘materiality’ of both text and brain ‘have been missing, for the most part, from scientific descriptions of consciousness’ (p.96) suggests that he is unaware of this diverse work on distributed and embodied cognition.

The most useful concept which Tabbi draws from systems theory is ‘re-entry’. He hopes that Gerald Edelman’s views about the cognitive significance of reciprocal pathways in the brain will parallel or inform literary strategies of jumping to a different narrative level, as in the nested narratives of Pynchon’s *Mason & Dixon,*Auster’s *New York Trilogy,* and Markson’s *Wittgenstein’s Mistress.*Re-entry is, for Tabbi, ‘a way of proceeding from blockage to a metalevel where narration can continue’ (p.95). Just as the human mind can ‘reinternalize the difference between itself and its environment’ and then use that discovered difference to reorganize its relations with the environment, so such narrative leaps can copy or fold a difference into a novel’s system (pp.21-3).

These strategies of re-entry come into play once we recognize the impossibility of bringing all the sedimented and reverberating activities of the mind into consciousness. Tabbi convicts Pynchon of seeking, in the earlier, magically encyclopedic [*Gravity’s Rainbow*](http://www.themodernword.com/pynchon/pynchon_grintro.html)*,* to catalogue everything, furiously trying to bring all of the mind and its noise to the surface. Pynchon’s trademark paranoia is thus diagnosed as, in part, a panic about mental control, in which characters are driven ‘to read signs of conscious intention *everywhere’*(p.34). Tabbi makes the interesting comparison with the ‘totalizing insistence’ of Gregory Bateson’s cybernetic epistemology that there is a *single* loop or overarching pattern ‘immanent in the total interconnected social system and planetary ecology’. He then adopts John Johnston’s reading of *Vineland*to argue that Pynchon’s more recent work highlights gaps in consciousness, mapping them onto ‘gaps between different technological regimes’, and foregrounding the construction of a fragile narrative continuity out of incommensurable representations. So the later Pynchon ‘seems to have come to terms with the mind’s partial and contingent nature’ (p.51).

Tabbi himself ascribes this gappiness in mental life to modularity. Though he says little about what this means, references to the primitive importance of selective attention and seriality of output suggest that some Fodorian distinction between autonomous, impenetrable modules and ‘central systems’ is in play. But this is not the only way that ‘large tracts of the unconscious and much of our representational activity may be lost to the self’ (p.32). Tabbi reads a set-piece in *Gravity’s Rainbow*in which the nervous system is dramatized as a surreal bureaucracy as a consequence of Pynchon’s dismissal of behaviorism, which ‘needs no further elaboration here’ (p.32). But the noisy pandemonium of the scene might instead be seen as anticipating the way Brooks, Clark, Daniel Dennett and others argue for the total dissolution of ‘central systems’. And despite his lip-service to the idea he finds in his writers that the ‘sense of a personal identity’ is itself ‘a cognitive fiction’ (p.123), Tabbi himself is strangely reluctant to give up on the privacy and interiority of the mental. Referring to ‘the irreducible solitude of conscious existence and writerly activity’, Tabbi argues that one can never enter the head of another individual, ‘and can never know that individual’s thoughts as such’ (p.92). Perhaps this is why Tabbi finds it impossible to study structures (media hardware, or cognitive structures) and consciousness simultaneously, so that we must instead ‘fluctuate between these incompatible theories’, as if cognitive/media ecology is inevitably pitted *against*phenomenology (p.120).

The development of a non-Pinkerian cognitive literary theory sophisticated enough to embrace these writers who ‘comment on what they are writing while they are writing it’ will be tough. My guess, after reading Joseph Tabbi’s brave but unsatisfying book, is that it needs a livelier sense of fun, a more robust naturalism about self, and (especially) deeper, insistent immersion in the multidisciplinary tangle of psychological work on memory, narrative, mental representation, and embodied, doubly distributed cognition.