The Medial Turn

Joseph Tabbi

Fiction in the Quantum Universe, by Susan Strehle. Chapel Hill: U of North Carolina P, 1992. 282 pp. \$45; pb \$15.95.

Information Multiplicity: American Fiction in the Age of Media Saturation, by John Johnston. Baltimore: Johns Hopkins UP, 1998. 307 pp. \$55; pb \$18.95.

Following such foundational studies as Robert Nadeau's Readings from the New Book on Nature (1981), N. Katherine Hayles's Cosmic Web (1984), David Porush's Soft Machine (1985) and Tom LeClair's Art of Excess (1989), Susan Strehle and John Johnston continue to work with a remarkably stable canon whose authors have "turned to modern science and technology for alternative concepts of narrative necessity and thematic organization" (Johnston 64). In the distributed network of alternatives these mainstream studies have created, Pynchon occupies the shifting center, Barth and Coover persist in the academic margins, Gaddis and McElroy stand in perennial need of recognition by the corporate culture they deconstruct, while DeLillo and, perhaps, Burroughs and Barthelme are located at the popular front of late-capitalist culture wars whose logical outcome is cyberpunk. With Donna Haraway, Atwood and Cadigan complicate the gender imbalance by imagining the machine as "an aspect of our embodiment" coextensive with "us, our processes" (qtd. in Johnston 257). One can expect, as a consequence of the widening circulation of theoretical perspectives around this core group of novelists, that critics after Strehle and Johnston will go on to map further cultural migrations of literature into science and technology, not only in such evident heirs to Pynchon as Vollmann, Wallace and Powers, but also in narratives further afield that, with no obvious thematic reference to science, nonetheless illustrate its rippling cultural effects. Moreover, as books themselves become transformed by developments in electronic textuality, we can expect future critics to acknowledge, more fully than does either of these very linear treatments of very non-linear novels, the implications of a self-conscious, networked aesthetic for the practice of critical writing.

If, after twenty years of formalized science-and-literature studies, critics in North America remain partial to a set of major texts, the cause may be in part a tendency, understandable in excursions into the unmapped territory between disciplines, to let the borrowed disciplinary structures and terminology serve a normative function. Strehle, for example, arranges counterintuitive elements from the new physics alongside their experimental analogues in fiction, to distinguish the offbeat realism of her chosen writers from "the intentionally aesthetic narratives of metafiction." She takes special care early in her study to restrict the term "metafictionist" to such "educated offspring of modernist parents" as Sorrentino, Sukenick and Federman (4). By the same token, "neorealism" doesn't quite cover the "worldly" fiction that qualifies for inclusion, and "self-reflexivity" (a term whose early rejection but increasingly central role in the development of cybernetics Strehle overlooks) is treated as one technique among many, lest reality should become mired in subjectivity and replaced "with an orderly selfreflexive word-world" (18). Deriving a literary principle from the idea of complementarity in physics, Strehle sees her chosen writers as affirming "both art ... and the real world." Her term for such affirmative fiction, "actualism," is taken from Werner Heisenberg's distinction "between the actual and the real," where the actual is defined as an active and dynamic process at the subatomic level that can be observed only indirectly (7).

Rejecting the binary logic of representation articulated by Ortega y Gasset, by which authors "direct readers to observe either the garden outside the window or the glass through which the garden appears" (1), Strehle seeks through actualism a middle way (akin to the "midfiction" analyzed in Alan Wilde's Middle Grounds [1987]). Unfortunately, in allowing physics to set both the terms and much of the content of her discussion, Strehle tends to lose sight of the specifically literary qualities of her subject. Instead of seeking those points where metafiction's concern with the problem of "the outside of the text" might converge with scientific concepts of observation, autopoesis and self-reference, Strehle discards the literary terms (and, with them, a set of writers and techniques whose alternative explorations might have added to her repertoire of possible engagements with the real). Thus direct visual experiments with typography on the page-field, which one finds in Sukenick, Federman, Acker and Gass, have yet to be systematically studied, either in themselves or as literary analogues to the field view of modern science. As it is, in the absence of any discussion of the materialities specific to literary texts, the imported terminology tends to be diluted through universal thematic applications.

The radical holding of incompatible concepts together in the mind (as in Bohr's description of light, for example, as both a particle and a wave, and, in another register, Wittgenstein's example of a drawing that is both a duck's head and a rabbit, but never at the same time in the eyes of one observer) reduces to a moderate "position blending some transformed assumptions from realism and antirealism, to create an art about both reality and artistic process." Because Strehle does not address the material means by which such critical assumptions are to be transformed, however, complementarity comes down to compromise, and the mind's participation in the observed environment becomes something neutral, an "awareness of interpretation as an interactive process" (6). Missing from her effort to create a participatory textual reality is any description of the processes of mediation by which the literary mind and its textual embodiments engage with the real. And for this, criticism has little choice but to revisit questions concerning literature's self-conscious engagement, not with abstract "word-worlds" alone, but with the various media, visual as well as aural and verbal, through which narratives are transmitted from authors to readers.

"It is one thing," Donald Davidson writes in "The Material Mind," "for developments in one field to effect changes in a related field, and another thing for knowledge gained in one area to constitute knowledge of another" (Essays on Actions and Events [Oxford: Clarendon, 1980] 247). In urging the adoption of actualism as an alternative to the metafictional discourse generated in her home discipline, Strehle would reconstitute literary knowledge as somehow free of the particularities of the literary medium itself. In a survey of the field up to the early nineties, Strehle criticizes her predecessors for allowing physics to disappear "into the background in readings that focus on aesthetic issues (the rhetorical strategies foregrounding the fictionality of texts)" (22). The word actualism itself promises somehow to place us closer than more familiar terms to the unmediated flow of events beneath a multiplicity of incompatible verbal descriptions. Strehle wants to take account of art and language and the interpreter's awareness of interpretation's effects, but these things remain separate and separable from the work as a whole. That interpretation itself can proceed only through the mediation of language, the indirection that constitutes all that is literary about the object of study, Strehle leaves largely unexplored.

Inattention to the necessary mediation of knowledge and particular styles of narrative indirection leads Strehle to exaggerate systematically the formlessness of her texts, those "loose baggy monsters." Thus, a "quintessential actualistic text" like *Gravity's Rainbow* (27), by refusing

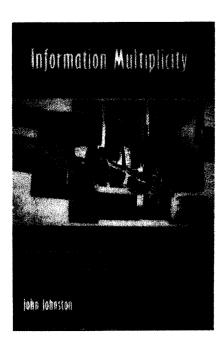
artificial continuities based on Newtonian causality, absolute frames of reference, "materiality, objectivity, and certainty" (24), also rejects "the concept of novelistic economy to become prodigal or wasteful" of its material (225). Similarly, JR "refuses to be a well-made thing" (97); The Public Burning "is long, uneconomical" (73); and "the tension dissipates" in the later sections of Cat's Eye (167). These novels, and Barth's LETTERS, "do not 'come together' to produce a 'big picture' at the end but rather, like Life, fall apart" (226). Compelled by her actualist program to look askance at the real, yet at the same time prevented by her distrust of aestheticism from considering the ways excess surface details are constituted by processes of textual mediation, Strehle cannot read such novels as anything other than instances of a universal narrative of entropic dissolution. Their various presentations, not of the real directly, but of what Johnston would call its "media effects," are left out of the picture.

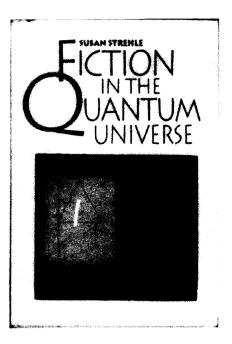
For Johnston, such media effects are ultimately indeterminate (even "delirious" in their psychological manifestations), but nonetheless manage to generate expansive literary "assemblages," a "continuous proliferation of interfaces" between scientific, historical, mythical and literary systems, whose composite structure is anything but loose (83). Strehle's point of reference is quantum physics; Johnston's is mediadiscourse studies and information theory. The implied literary trajectory roughly follows a conceptual trend in postwar sciences, described by John von Neumann in 1949 as a "turn from problems of intensity, substance, and energy, to problems of structure, organization, information, and control" (qtd. in Johnston 61). As the focus of attention has shifted from the microscale of physical reality to the macroscale of social communication, from metaphorical reflections on the nature of matter and energy to the virtual reality of disembodied information, the terms of reference have expanded to include the full range of cultural activity. Authoritative citations of Bohr and Heisenberg, which in Strehle give an extra-literary grounding to meditations on textual indeterminacy, become less and less frequent as U.S. and Canadian critics embrace continental theorists like Baudrillard, Deleuze, Kittler and Virilio, who inhabit the modern scientist's world of statistical probability and create discursive styles appropriate to it (without always adhering to the empirical constraints and contextual limits observed in the sciences).2 When Johnston, for example, draws on modern physics, it is by way of Willard Gibbs's contention that we inhabit, not one world, but all the worlds that are possible answers to a limited set of questions concerning our environment. In making the transition from physics to psychophysics, and in moving beyond Gibbs to Bergson (and his contemporary rewritings in Deleuze and others),

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Johnston takes North American criticism past modernist materialisms to a concept of materiality that opens criticism to a literal multiplicity of channels uniting human minds and technological media.

The best illustration of Johnston's concept of a media assemblage is his book's cover art, by Gregory Rukavina, titled Mr. Memory (The 39 Steps)—a collage of (presumably) 39 gray rectangles of various sizes arranged in several planes, on which letters and numbers have been projected as if through a camera lens. The media effects are thus distributed over a non-continuous surface, and any illusion of depth is created by the arrangement of the surfaces, their manner of overlapping and the gaps between them. The letters and numbers do not spell out or add up to anything; rather, they remain in their literal materiality, resisting interpretation (unless one goes outside the system of literal projection and relates the whole to the Hitchcock film alluded to in Rukavina's title). By contrast, Strehle's cover illustration, by Molly Renda, features three rectangles of the same size connected along a single vertical so the middle rectangle suggests a page turning in a book. The three figures are set against a speckled black background. This underlying plane alters the coloration and geometric details sketched on the "pages," but it remains separate and formless, an indistinct "reality" affecting, but largely unaffected by, the pages through which it is viewed.





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More consistently than Strehle and perhaps any other U.S. critic. Johnston brings the range of poststructuralist theory to bear on American fiction's most discussed experimental texts. Specifically, Information Multiplicity takes its key terms, "assemblages," "multiplicity," and "machinic phylum," from Deleuze and Guattari; also important are the "discourse networks" or "writing-down systems" (Aufschreibsysteme) from Friedrich Kittler, who decisively generalizes the notion of medium, applying it to all domains of cultural exchange in the social environment no less than in processes of psychological individuation. Like the works by Kittler and Deleuze dealing specifically with literary texts, Johnston's criticism is valuable not for offering new interpretations (readers will find little here that is not already implied in Johnston's precursors). Instead, it resituates the critical discussion by drawing attention to the impact of media themselves, that is, the interdiscursive networks that link writers, archivists, addresses and interpreters. Where Strehle adopts the word actualism to designate the space between text and world in which meaning is generated, Johnston uses the term mediality to indicate the ways a literary text inscribes in its own language the effects produced by other, non-literary, media. Johnston's critical mission is to ascertain how these media effects—our culture's technological unconscious—are narrativized or how they can be seen to condition conscious awareness as a "reading effect."

Johnston's narrative, like Strehle's, is decidedly entropic, but it does not lead (as does Strehle's) to a conception of the real and its textual constructions as shapeless and random. Moreover, because it is situated in specific technological transformations rather than in a generalized epistemological shift, the narrative describes historical changes among novelists and from one work to another which get elided on Strehle's actualistic template. Indeed, where Strehle (like many critics trained in the sixties) finds non-hierarchical and non-linear structures liberating, Johnston knows that such flexible structures largely redefine power in "the military-industrial complex born from World War II" (63). Specifically, Johnston's master narrative works in three stages, proceeding from 1) a time of separate and separable media, registered in such works as Gravity's Rainbow, Lookout Cartridge and JR; to 2) "a condition of . . . partially connected media systems" in DeLillo's later novels and Pynchon's Vineland (where differences in media, as in the transition from filmic to digital registrations, still offer spaces of resistance to newly aggregated structures of corporate power); to 3) the prospect, in cyberpunk fiction, of media's "disappearance" into "a totalized, global information economy" in which "cyborg culture becomes the only culture" (233-34).

Wittgenstein claimed, in the 1922 preface to the Tractatus, that he had put to rest philosophy's open problems. Yet his point was that total connectivity in philosophical understanding would change nothing in the world; only our perception of the relations among its elements would change. Something similar would seem to be true of the cultural implosion of distinct media into a single medium in which, for the first time in history or for the end of history (as Kittler has said), sound, visuals and text exist on the same digital platform. Referring to the mental state of William Gibson's protagonist at the climax of Neuromancer, Johnston writes: "To Case's relief and amazement, the fusion of the two Als appears to change very little-at least from the human perspective, since what this fusion brings about is the Als' transcendence of human affairs altogether" (245). The newly homogenized technopolitical world order helps explain the return to stylized but "rather conventional orderings" in much cyberpunk fiction (Johnston 6; Andrew Ross makes a similar observation in Strange Weather [1991]). "In certain respects," Johnston writes, the machinic phylum "has evolved into a zone much like the street" (246).

What changes, then, is not the known environment but our mental creation of its elements—and its reciprocal creation, in us, of a mixture of (not exclusively literary) reading effects. More than an index of cultural entropy, the external media environment becomes, at least implicitly in Johnston, a cognitive map of a new form of subjectivity one that is "displaced and redistributed throughout the entire machinic activity that writing and reading these novels entails" (5). This new subjectivity, "a contemporary version of what Freud called the 'psychic apparatus'" (14), emerges specifically from new ways of textualizing memory and perception. And just as Freud's contemporaries found it useful to redefine consciousness in relation to the emergent medium of their time, cinema, contemporary subjectivity finds theoretical elaboration (in Lacan's symbolic order, Deleuze's machinic phylum and Kittler's discourse networks) as "an interiorized reflection of the current standards of all technical media" (33). Multiplicity is essential, for it is in the gaps among media and, more specifically, in the gaps between the reader and the media effects registered by the novel that Johnston's novelists model the dynamics of a psychic apparatus (33, 51).

As the return to conventional form in cyberpunk reveals, however, literary narrative remains hard pressed to keep up with the expansive orderings of contemporary media. For all the newly decentered environmental webwork, narrative, as Johnston realizes, must be "anchored to a perspective and thus to a center of intentionality." Sophisticated prose-fictional narratives counter the digitalization of

information "by transposing its history into a continuous but indeterminate stream of delirious media effects." Thus Gravity's Rainbow "mimics film, radio, dance hall music, drug-induced hallucinations, and seances in which the dead speak" (63). In JR, as in Raymond Williams's concept of televisual flow, the center of intentionality need only be transferred from the level of narrative content to that of corporate organization. Once we consider programming rather than programs, corporate agents rather than human agencies, "interruption is transformed into something like its opposite, continuity," and the result is a trans-personal - though, again, ultimately delirious—intentionality (125). Such insights are unavailable to Strehle, although they have been worked out elsewhere in Pynchon and Gaddis criticism.3 Yet, where Strehle narrates a universal dissolution of narrative energies, Johnston's finely tooled machinic assemblage repeatedly threatens to go out of control. It is unclear, given his wholly machinic view of human consciousness, whether his framework can allow for the emergence of any mind that is not delirious-that is, not riddled by anxiety at its own groundlessness.

Another way to look at delirium is to begin with the word's etymology-from the Latin de lira, meaning "out of the furrow." The word delirium can thus refer, as the novelist and art critic William S. Wilson has pointed out, to faulty cultivation in which the plow pulls out of the furrow. Similarly, in a literary context, where rational thought proceeds in a line furrowed with opposites, to be delirious can mean to go outside oppositional thinking. A plow pulls out of the furrow where rooted plants are meant to grow in straight lines. That is one way of transitioning from striated to smooth space, in Deleuze's vocabulary. Outside and over the furrow, untended vegetation is likely to be rhizomatic. And so is narrative when it resists the linearity of sentences on a page and tries to get outside the furrowed oppositions and rootedness of rational thought.4 Rhizomatic thought, like rhizomatic narrative, needs no ground or foundation; rather, it finds horizontal support through a process of expanding connections, and thus creates a foundation as it goes, in what Joseph McElroy (in a narrative vein very much in tune with Deleuze) would call a "collaborative network" or, more simply, "Field."

In a chapter on McElroy's Lookout Cartridge, which differs from other mega-novels in being restricted to the first-person viewpoint of a single narrator, Johnston again formulates Field as a "novelistic dilemma: how can a narrative cause information to proliferate from varied perspectives and thus sketch a collaborative network, all the while remaining attached to the consciousness or point of view of a single individual subject?" (98–99). A number of potential answers may

be found in the ensemble of theories and perspectives currently gathered under the heading of cognitive science, which Johnston mentions in an early footnote to Howard Gardner's *Mind's New Science* (1985) and in a more extended reference to Daniel Dennett's concept of consciousness as a revisionary process involving "multiple drafts" (104–05). Indeed, although Johnston doesn't say so explicitly, his narrative center and source of continuity, which the novelist must construct among partially connected media systems, functions very much like the conscious mind as currently understood—responding to gaps in awareness and incommensurable representations by creatively linking them into a workable mental image or patchwork representation. Although Johnston does not make the attempt, a more direct and sustained translation between mental and media ecologies would no doubt expand our understanding of the particular constraints relevant to contemporary aesthetic experience.

For opening this line of inquiry (in a chapter that succeeds at last in bringing into focus both the nature of McElroy's alleged difficulty and his unique importance), and for more generally linking questions of literary self-consciousness to self-reflexive systems in the larger media environment, Johnston's book deserves the widest possible readership, among literary theorists and practical critics alike. One must wonder, though, whether the implications of Johnston's argument have not already changed the climate in which such a reception has been possible. The energies unleashed by modern physics, media theory and cognitive science have migrated in ways neither of these two books anticipates. As Strehle has produced no successor in the systematic application of models from quantum physics, neither will Johnston. The linear explication of a fractalizing discourse needs to be done only once. Responsibly raising the standard of contemporary criticism of fiction, Johnston has made graduate seminars in Pynchon, Gaddis, McElroy and the like a possibility for perhaps another decade. But given new curricular demands for attending to the popular culture produced by the very corporate media whose effects these novelists recreate, it is doubtful that students will have time to go on reading these novelists as a group or even their individual works in their entirety. Surely it is time criticism come to terms with the fact that contemporary media of reception have doomed their most complex and accurate chronicles to the status of unread classics. If these word-happy novels came into prominence at a time when critical thought was completing a "linguistic turn," in Richard Rorty's phrase, they enter obsolescence at a moment that might now be characterized as a "medial turn"-a cultural transformation these books anticipate and urge on in their thoroughgoing articulation (in writing) of non-literary media effects. The

book itself will not be unchanged by these media transformations, and critical practice will also require appropriate adjustments. Instead of continuing to produce interpretations and close readings as a way of making novels available for students in an academic setting, future criticism will no doubt engage textual fragmentation on its own terms, whether through hypertextual means or through some other method of mosaic or collage. Criticism, in short, needs to migrate into other, non-literary media. Once there, it may be in a better position to identify unexpected contributions to a remarkable, but distinctly historical, moment when literary narrative and its supporting networks exerted a discernable pull against corporate media.⁵

-University of Illinois-Chicago

Notes

¹In his manuscript "Narrative and Materiality: Rethinking Objectivity in Postmodern Fiction and Theory" (1997), Daniel Punday does consider the visual nature of Sukenick's and Federman's narratives, among others. Steve Tomasula's review of Federman's *Double or Nothing* and *Critifiction*, written in collaboration with font designer Steven Farrell, demonstrates one way a self-conscious criticism might go about transforming its own visual look on the page (*Private Arts* 8–9 (1994): 416–33).

²What looks like "fashionable nonsense" to empirical scientists like Jean Bricmont and Alan Sokal, a mis-translation between two very different languages and confusion between global and atomistic levels, is rightly taken for progress in literary understanding. Whether or not Johnston's method of narrative multiplication turns out to be a responsible way of approaching the natural world (and much new work, especially in the cognitive sciences, takes account of narrative theories), the rapid expansion of critical contexts has undeniably complicated our understanding of the materialities of contemporary American fiction.

³Piotr Siemion examines the transformation of human into corporate agency in "Whale Songs: The American Mega-Novel and the Age of Bureaucratic Domination" (diss. 1994. Columbia). I consider Williams's concept of flow in "The Technology of Quotation: William Gaddis's *JR* and Contemporary Media" (*Mosaic* 28.4 [1995]) 150–51.

⁴Wilson, in a series of letter-essays to various correspondents that is itself an example of rhizomatic communication, has applied this concept of delirium as a kind of plowing to the scene in *Lot 49* where Oedipa encounters the aged sailor: "Cammed each night out of that safe furrow the bulk of this city's waking each sunrise again set virtuously to plowing, what rich soils had he turned, what concentric planets uncovered?" (125–26). "The sailor plows," Wilson writes,

but at diagonal angles to the furrows of official citizenry. Oedipa realizes the need to be out of the furrow, which is out of opposites, and out of opposition: "and if there was just America then it seemed the only way she could continue, and manage to be at all relevant to it, was as an alien, unfurrowed, assumed full circle into some paranoia" [CL 182]. Setting aside the tiresome use of "paranoia," "unfurrowed" is out of the opposites, in what must seem a delirium. Pynchon places Oedipa between opposites: on one hand, experience furrowed by opposites that can't be reconciled; and on the other hand, experience beyond opposites, out of the groove: "Trembling, unfurrowed, she slipped sidewise, screeching back across grooves of years" [CL 129]. (Undated letter to Marjorie Welish, forwarded as an enclosure to Daniel Wenk, May 1998)

⁵This review also appears in *Electronic Book Review* 10 (1999–2000) http://www.altx.com/ebr/reviews/rev10/r10tab.htm.