

The Processual Page: Materiality and Consciousness in Print and Hypertext

Joseph Tabbi, University of Chicago

Sections of this essay were presented in the spring of 1999 at "Spectatorship" (Maastricht), summer of 2000 at "The Future of the Page" (Saskatchewan), and fall 2000 at "Bookends" (Albany). "The Last Archive" was read at the spring 2003 Electronic Literature Organization conference on "Preserving, Archiving, and Disseminating" (Santa Barbara). "We Have Never Been Hypertextual" was my theme at the spring 2003 meeting of the American Comparative Literature Association (San Marcos). I've also taken a leaf from "A Media Migration: Toward a Potential Literature," the final chapter of *Cognitive Fictions* (Minnesota, 2002).

The Last Archive

In the summer of 2001, I spent several weeks at a Long Island City warehouse sorting through the William Gaddis archive before the papers were purchased, catalogued, and eventually housed with the American fiction collections at the Washington University in St Louis. What I found there was not too surprising-no substantial unpublished work apart from a packet of early attempts at fiction (indicating a literary career that was thankfully not to be, writing satirical pieces for *The New Yorker*). Mainly there were boxes of letters, typescripts, manuscripts, business and educational pamphlets written for money, bills, memorabilia, and clippings-thousands of them, hoarded over half a century: family photographs, paintings, innumerable books. Textual scholars and biographers will have plenty of material with which to date, contextualize, correlate, and otherwise situate the work in relation to the author's "life" and "times" -the *New York Times* in particular, but also copies of *National Enquirer*, and pamphlets by Jimmy Swaggart, Billy Graham, and others, saved in their entirety. Still, I found almost no false starts, no abandoned manuscripts-nothing that did not find its way into the four novels Gaddis published in his lifetime or the posthumous fiction, a monologue of 84 manuscript pages called *Agap' Agape* that he entrusted to his family and literary agent. The author had largely fulfilled his "ambition," like Faulkner in a passage Gaddis admired, "to be, as a private individual, abolished and voided from history, leaving it markless, no refuse save for the printed books."

I imagine that other archives from Gaddis's generation are organized similarly-filled with materials a writer had to have, what was rescued from the trash heap and kept in offices, in file cabinets, in various places of physical storage. Looking at so much printed matter gathered in a vault gave me an insight into all those hermetic rooms occupied in the fiction by so many Gaddis characters. The same room shows up, in various ways, in work by Mary Caponegro, Don DeLillo, William Gass, Joseph McElroy, David Markson, Harry Mathews, and Joy Williams-some of the novelists who came out to the St Paul cathedral in Harlem for the fall 1999 Gaddis memorial. There will never be such a purely textual archive again-not in any of Gaddis's successors, not among writers indifferent to, wary of, or even antagonistic to the literary postmodernism Gaddis helped to inaugurate in the United States.

In calling this the last literary archive, I do not want to imply that there was ever anything pristine about pre-digital writing spaces: the Ninety-Sixth Street apartment in J R, which housed the clutter and some of the same labeled cardboard boxes I discovered, in reality, in Long Island City, was constantly open to the chaos, noise, and entropy of a city environment. Nor does physical boundedness mean that the archive is necessarily finite. In DeLillo's *Libra*, what is the character of Nicholas Branch about if not the hopelessness of attempts to set boundaries, to delimit a topic and defeat conspiracy theories by an exclusive focus on evidence? The mere gathering of materials (unselectively, and without a framework or theory for separating out elements in a meaningful narrative) will surely do more to obscure than illuminate any topic, more to foment than confront conspiracy thinking. A certain helplessness, even an immobility, within accumulating detail is also the condition of David Markson's late-modern Protagonist, the name of a character-in-progress "first seen poised abstractedly amid a kind of transitory disarray? Cartons heaped and piled?"¹ The immobility of the literary artist in isolation, aptly termed a "Reader's Block" by Markson, similarly characterizes Lynne Tillman's Paige Turner, Harry Mathews's journalist, William Gass's man in the chair, Joseph McElroy's Dom, Paul Auster's Quinn, Fanshawe, Black, and Blue—all figures who in their solitude create boundless networks, exposing the limits of both identity construction and historicism. After Gaddis, this recurrent figure in postmodern American fiction can be understood as a central expression of the dream of the literary archive as a material world apart. Concomitantly, the passing of this figure may be understood elegiacally, as a farewell to the New Historicist romance with the telling, the triumphant, the untheorized detail.²

What I found most fascinating, and what is perhaps the richest archival vein for future Gaddis scholarship, is the manuscript page on which the novels were composed. The pages for J R in particular, legal-sized, boxed together with outlines and sets of notes, corrections, numbers, and arrows, were not so much drafted, typed, and revised as they were physically assembled, with lines frequently cut into strips and pasted between the typed lines on a master. Any of those notes or outlines, any lines transcribed from the pile of papers, might at some point be excerpted, clipped, and taped onto the manuscript page, as it made its way through numerous iterations to a final, publishable form, all trace of the author's composing consequently "abolished and voided from history" (Faulkner) —except, of course, for what's left in the archive. The boxes holding more than 2500 manuscript pages also include newspaper clippings, Commodity reports, Annual reports, stockholder letters, shareholder's meeting notes, meeting notices, Newsletters on American Indian Affairs, and a letter on how to buy naval surplus supplies. There are also legal queries, lists of names, acquisitions (Why and How listed in a special table), as well as handwritten calculations.³ For Gaddis, the manuscript page and its desktop context was no less capacious than the Internet; in fact, the visual presentation of diverse materials on a single two-dimensional page may well be closer to Ted Nelson's original conception of hypertext than any hypertext fiction composed since the advent of the Internet. The manuscript page, in an author such as Gaddis, is certainly truer to Nelson's concept of "transclusion" (where a specific command brings a distant text or electronically accessible site in toto to the reader's screen) than the highlighted links dotting the current (but surely not definitive) Web page, circa Y2K.

For the later stages in the composition, Gaddis set up a large table in his Long Island studio so that he could lay out entire sections (the book is not broken up into chapters) presumably to better visualize recurrent themes, motifs, phrases, and so forth. Photographs of the workroom show pages posted to the

wall also. The book is largely composed of dialogue, meant to be experienced-with minimal suspension of disbelief-in real time. Yet clearly Gaddis had a spatial sense of the whole-he needed to see connections, to be able to trace patterns and constantly revise, reconnect, and alter the patterns by inserting new text-usually scripted dialogue among characters but in a few places handwritten notes, drawings, and photographs of non-literary text such as the want ads read by J R and the Hyde boy on the bus on the way to one of their many school trips. (The children, indeed, are bussed and badly supervised more than they are schooled in the novel.)

Gaddis's book, on its reception in 1975, was likened to notions then current in literary theory-although the likeness was considered damaging aesthetically. J R, according to George Steiner, perfectly illustrated Roland Barthes's concept of the unreadable text, implying the "death of the author" not as a private individual but as an operative cultural construction. In the context of current reflections on the page, I cite this early and, in my view, misleading take on Gaddis because it antedates and parallels a much broader, and more deeply problematic, identification of hypertext and poststructuralist theory. Steiner thought that the new emphasis on an author's mediating function, his transformation into a "medium" through whom text is processed as a "tissue of quotations," none of them original, obviated creativity and eliminated any distinctive voice. Similarly, many prominent hypertext critics have argued that electronic technologies so literally enact poststructuralist theory as to make theory itself irrelevant. George P. Landow, most famously, claimed in 1992 that hypertext would replace "conceptual systems founded upon ideas of center, margin, hierarchy, and linearity . . .with ones of multilinearity, nodes, links, and networks" 4-thereby, as Lance Olsen comments, "enacting the deconstructive turn in the very mechanics of structure." 5 That is Olsen's extension of Landow's claim probably beyond its provenance, but the slippage from "conceptual systems" to "mechanics," so common even now after a full human generation of hypertext experimentation (and many, many generations of software), is typical of the way that hypertext theory continues to literalize post-structuralist thought.6

Gaddis's compositional technique may strike us today as an unbelievably laborious process that could have been avoided, even in the early seventies, had he used a word processor. Likewise, in S/Z when Barthes imagines the text, "in its mass," as "comparable to a sky, at once flat and smooth, deep, without edges and without landmarks,"7 our first thought, understandably, may be of the LCD screen. This literalism, what might be called a reduction of theory to code, is problematic not only because it produces misreadings of either Gaddis, literary hypertext, or for that matter the autonomous development of code by computer programmers and database designers. The technological reduction stems from a deeper misunderstanding of what poststructuralist theory was about in the first place. In removing the author, and in announcing the equally momentous transition from work to text, from a print-bound unity to an open network, Barthes does seem to anticipate the transition from page to screen, if only metaphorically. But I would insist that Barthes's conceptual distinctions, while suggestive, are in fact largely independent of materiality, whether print or electronic. In Barthes and (as we shall see) his near contemporary Ted Nelson, the lexia, or unit of attention, does not depend on how the page is instantiated by either the author during composition or the publisher during presentation. Lexia are defined rather by a cognitive act whose connections and significations the reader alone can make: they are chunked together as units capable of re-integration at another level, without reference to the words, sentences, and paragraphs they contain. What both Steiner and the hypertext critics tend to forget, is that

any breakdown of text into a field of interconnecting lexia depends not primarily on the author, but rather on the reader, who is capable of further text processing precisely because the verbal content of words, sentences, and paragraphs may be forgotten; and attention is then paid to how the page itself circulates in new contexts. (And to the extent that even Gaddis in composing *J R* worked with a revisable, mechanically extendable manuscript page, he is himself as much a reader as an author of his own work.) By bringing one's own concerns to the text, the reader creates associations and links whose linearity or non-linearity is largely independent of the text's material qualities, however much these linearities are exploited or ignored by an author's own pagework. Let us look again at that open sky passage in Barthes's *S/Z*. His conception of textuality as something flat, unending, deep, and infinitely connectable, a textuality in anticipation of the computer screen, nonetheless requires delineation by a reader; specifically, a reader who is capable of acting as an observer or "commentator": like the soothsayer drawing on it with the tip of his staff an imaginary rectangle wherein to consult, according to certain principles, the flight of birds, the commentator traces through the text certain zones of reading, in order to observe therein the migration of meanings . . . the passage of citations (14).

An "imaginary rectangle" in which to observe "the migration of meanings": this might serve as a working definition of the page, more conceptual than material in its existence, more readerly than writerly, and general enough to include both hypertext lexia and codex leaves. What's important is not the shape of the page-the soothsayer might as well draw a circle, an oval, or a squiggle, so long as it's a two-dimensional figure capable of distinguishing what's outside-clear sky or noise, both amount to the same thing-from what's brought or allowed inside-namely, meaning. Key to Barthes's concept-and the page's definition-is the separation of meaning from authorial intention as the text, physically separate from the author, finds its way to readers, who in turn realize connections with other lexia, found in other books. Considered thus, from the perspective of citation and commentary, the larger migration from print to electronic media can be understood as a continuous process, the two media not fundamentally different from one another in terms of what can be stimulated, conceptually, in the minds of readers: the most one can say is that the selections made by readers and authors might be better preserved and more readily made available in hypertext than in print. But even this practical difference, consequential as it could be (in terms of making explicit themes, symbols, and conceptual consistencies hitherto kept implicit), has yet to be realized in most literary hypertexts.

The death of the author is a condition, as Barthes announces at the end of his signature essay, of "the birth of the reader"-but a reader whose function is not so much interpretation as organization, the selection of meaningful text elements from noise and their arrangement within textual space. This shift, from the author as romantic genius, literary outlaw, or cultural outsider to the author-reader who makes selections, is a transition that hypertext and the Web environment definitely accelerate. Whether such selections produce linear or nonlinear structures will depend not so much on the medium-two decades into the era of electronic writing, the most we can say is that the literal nonlinearities in hypertext stimulated literary theorists to rediscover nonlinearity as the rule, rather than the exception, in print narratives. Neither the opposition linearity/nonlinearity nor the literalization of intertextuality provide reliable ways of distinguishing print from hypertext. Where then, if at all, is the difference? Rather than look at what takes place on the hypertext page (which at most enables intensifications and literalizations of poststructuralist concepts that have been on the table for decades), we might instead

look at the page itself, its inherent dynamism and changing topography, as a material basis for what is authentically new about the digital text. Unlike Barthes's two-dimensional rectangle, definitive for pagination in print and most other material carriers, the screen-space has been considered three-dimensional: "Confronted with the surface of the computer screen [itself immaterial and made up purely of light and electricity] one started thinking in spatial terms of 'in front of' and 'behind' rather than in more temporal terms such as 'before' or 'after.'"⁸ So writes Hanjo Berressem, introducing a collection of conference papers, "chaos/control: complexity [chaos theory & cultural production]", that is itself a combination of book and cd/rom. Berressem distinguishes between texts whose signifieds are dynamic (facilitating the distinctively literary sequencings common to print and hypertext) and texts whose signifiers are also dynamic, a property unique to digital carriers. What's distinctive in this newly dynamic page is the ability not so much to stack texts one on top of another, but to enfold various texts into one another. More "topological" than Cartesian, a "datamobile" more than a stack of objects, digital text becomes, for Berressem, a site for data assembly, selection, and performance. What is performed, however, is not the interpretation of "static works that a classic hermeneutics can comfortably work with"(40). In digital carriers, there is no longer a "stable textual basis" for such interpretive activity and sustained close reading: "not only is every reading|path different, the text that is read is different as well" (40).

Berressem's analysis makes evident the extent to which literary activity, with all its devotion to the generation of complexity, consciousness, and reflexive understanding at the level of the signified, has depended on a stable, simplified, largely forgotten page as a material carrier capable of fixing language at the level of the signifier. But when the signifiers themselves are immaterial-when what we see at any moment is only "one of many possible ways that a text might appear, only one of the many faces the text can have, only one of the many texts the text can be," we have reached a point where it may no longer be meaningful to speak of a "page" at all. What we have is instead a potential object described at the level of code: "There is no site prior to its description. There is no page the source code refers to. There is no page 'in itself'" (48-49). No page, only descriptions of possible pages whose realization is up to the reader. The page we are reading at any moment is only stable if we, while reading, actively make it so. No larger cultural or publishing concern is going to preserve the text for us.

It is not easy to say "what kind of subject and what kind of culture...digitaltexts imply, and what form of narratology" can be envisioned for a processual text (42). Berressem notes that digital processuality is bound to differ significantly from that of the theater and of performance arts. In the absence of interpretation and without a single text that different readers (or the same reader at a different time) can go back to, the differences from a literary-critical performance in print might be just as great. All print narratives, because of their structural stability, are bound to be grand narratives - "even when they are in themselves polyphonic [Bakhtin] or writerly [Barthes]" (40). This inevitability helps to explain why so many critics mistook hypertext for the material culmination of the grand narratives of post-modern fiction and theory. Yet there remain certain features of contemporary narrative that do in fact anticipate the singularized reading movements constituting the many small narratives likely to emerge in electronic environments. Berressem points to Douglas Coupland's practice of denarrating: a response to "the deluge of electronic and information media into our lives" and the consequent loss of "all the components essential for the forging of identity. ... family, ideology, class strata, a geography, politics and a sense of living within a historic continuum".⁹

When the page itself no longer supports a sense of narrative continuity, we are placed, as authors and readers, in the curious position of having to create our own context or framework within which selections, citations, and emergent narratives can be recognized and preserved. As current readers, we ourselves need to describe the "page" that future readers will see and work with. The archive, as Gaddis seems to have understood within his own medial ecology, needs to be constructed at the moment of composition: in the absence of any single overriding cultural organization, the author's own organization is all that makes possible the continued circulation of meanings within particular structures established when writing. From this understanding authors, readers, and more often authors-as-readers, can address themselves meaningfully to a "future" page. Instead of an object, the page is to become a description of a possible object, reflecting only what the author makes of materials that the reader can, in turn, cast into further potentials.

Turning and Returning

In such fictions as *Microserfs* and *Generation X*, Coupland's narrator handles the loss of cultural identity and narrative continuity by aligning himself with other individuals in loose "groupuscles"; his books are small narratives of affinities rather than identities. Gaddis's massive, but never "grand," narratives, are hypertextual in that they create connections through actual texts and plausible speech and they facilitate transitions, from scene to scene, exclusively through telephones, moving cars and trains, and other media of communication and transportation. These are useable models for a potential narrative in digital text. In what follows I consider some additional models in contemporary fiction and designwriting, distinctive in that their narrative innovations go all the way down, to the material look of the page itself. Harry Mathews, a longtime American member of the Oulipo or workshop for potential literature (my emphasis), explicitly considers what happens when an individual writer, *The Journalist* of his book title, attempts to note down everything that happens to him, as it happens. The encyclopedic experiment turns nightmarish, but no less so than the literal nightmare experienced by Lynn Tillman's character, Paige Turner, who dreams of words as tiny objects that move on the page. Image/narratives by Raymond Federman in collaboration with Anne Burdick in the electronic book review, along with my own work with Burdick and Ewan Branda on the page design of the journal itself, will also be discussed.

In Mathews, the loss of continuity and identity is expressed in terms that are not so much cultural as contextual - in contexts that become richly embedded and capable of infinite expansion. Mathews is an author of what I have termed elsewhere cognitive fictions, works that "denarrate" in Berressem's terms, but in such a way that new forms of consciousness can be seen to emerge out of the denarrating media and technologies. As mind is to its material supports in the brain, so are cognitive fictions in relation to the contemporary media ecology. These works do not oppose themselves to other, faster and more powerful media of communication; rather, they take full advantage of the slower, marginal condition of literature in order to bring experiences shaped by these media into consciousness. In a sense, the literary shadows other media - much as literary hypertexts, so far, have tended to shadow the three-dimensional works and media they cite and comment on, creating a "contour", a path for consciousness, rather than an full-fledged cognitive environment.¹⁰

The Journalist opens in media res, a device that never waited on hypertext-it was in fact originally an

epic convention that got carried over from orality into print. Similarly, the conflation of beginnings and endings within a single print paragraph can make the newfound ability to start anywhere and then jump from one passage to another seem arbitrary by comparison. It is easy to cite examples in printed texts when one thinks one has reached an end-say, after a treacherous stretch of driving in bad weather-only to find that one is in fact just beginning:

The rain had stopped. I could forget about the curved warning signs; the gently winding road, which conformed so gratifyingly to my map, would dry fast. I settled back in the driver's seat and accelerated. The steering wheel came off in my hand.¹¹

The mention of a map, in these fine opening lines, raises many questions relevant to the cognitive mapping that one seeks when reading pages and viewing screens. Conformity to a map is a gratifying, precise, but necessarily false, illusion, because one-to-one correspondences-whether lexical or topographical-fail to describe the ongoing mental activity that actually generates much of our perception of a text or a passing landscape. Given enough rules of mapping, anything can be mapped onto anything; but one never knows all the mappings that are going on in one's own mind and through one's own body. For practical aesthetic purposes, the fewer the rules, the better-hence the gratifications in reading minimal fictions by, for example, Jorge Luis Borges. The power of a minimal mapping is precisely that it makes a world (if not "the" world) knowable against the background of multiple unknown mappings in the unconscious. Mapping generates order from noise; but noise is precisely what Mathews's driver is forced to confront, in all its unknowability, at the moment the steering wheel comes off in his hand. No longer able to distinguish between what is inside and outside, his sense of a personal identity is revealed to have been, at every moment and without his knowing it, a cognitive fiction-which is to say, the fiction that consciousness is very closely connected to what our minds and bodies are actually doing at any moment: The possibility had always been real. You never had to remind yourself of it. And it remains real. At such a moment, who are you? Where are you? You cannot dismiss the question by observing that "you" have become a mere object manipulated by the indifferent laws of physics. One part of you says that; another part listens. What and where are they? What and where is your identity?¹²

A part of us speaks and another part listens, as if our very sense of a stable and continuous self were nothing but a narrative that we tell ourselves, a world fiction that under normal circumstances seems continuous enough and linear, but which is more likely a set of multiple narratives variously linked in concatenations that the brain can search through and recall in a moment. These links are decidedly non-linear, accompanied by analogies, puns, metaphors, rhymes, and associations that generally remain unconscious-except in literature, art, or more immediately defamiliarizing experiences such as can result from a sudden change in our environment, the disengagement of self and world at the moment the steering wheel comes off in our hands. Then our sense of self can be revealed as fundamentally fragmented and permeable-a webwork of signs and divergent discourses vying for attention (and continuing to jostle with one another in our minds, after they have receded from consciousness).

That is how narrative is imagined by the visual artist Anne Burdick in a series of graphic images-also based on travel by car-introducing an ongoing collection of critical writing titled "image + narrative."

screen shot of ebr6 icon then ebr7 icon <http://www.altx.com/ebr/ebr7/ebr7.htm>

caption: On first looking into "image + narrative," readers are presented with a series of animated graphic image files. Through a frame that recalls a TV screen, scenes from a road trip—a staple of narrative continuity—appear as discreet elements in a digital field. White lines passing underneath a car and a variety of signals in a rearview mirror all vie for attention in a field of competing discourses.

In the first sequence, broken white lines move beneath the car's wheels like a needle through a textile; in the next sequence, a suburban street seen through a windscreen and a rear-view mirror settles on a homemade road sign, reading: "You've got our attention." The journey remains the mythic reference for all narrative, an embodied metaphor for the linguistic construction of goal-oriented action in the world. Except that now the illusion of continuity is broken up, for Burdick as for Mathews, by the medium of representation. Through a frame that recalls a TV screen, we see the lines and the reflected images as discreet elements in a digital field—aspects of the woven "thREADs," or inscribed reading pathways, that define Burdick's site design.

screen shot of ebr9 'gathering of thREADs' caption:

The threading, loom-like texture of hypertextuality is suggested in the abstract design that Burdick prepared for a later installment of "image + narrative."

Burdick's imagery, metaphorically in her work for "image + narrative" but increasingly literally in pages devised for the new ebr interface (in collaboration with Site Architect Ewan Branda and myself), confirms both a poststructuralist and a vernacular understanding of electronic textuality as a field of many lines crossing and recrossing to form a complex intertextual weave. This imagery is further developed, in the current ebr, by embedding literal "threads" into the page itself—a family of small icons off in the margins presenting not only conventional bibliographical data (footnotes, author's and editor's notes, and so forth) but also taking readers to affiliated essays within and outside the journal, facilitating reader's glosses, and allowing readers to bring other texts from elsewhere in the Web, in whole or in part. In this way a page generated at another cite will become (after obtaining permissions) a part of ebr. With such activity there is certainly the suggestion of openness, that the connections and potential readerly associations are infinite. Authors are made aware, explicitly, that their production will undergo continued threading, weaving, and glossing at the hands of readers, and this activity will be made visible, cumulative, and public over time with the author's own text (a fabric of quotations, none of them "original," in Barthes's terms).

Hence some of the postructuralist terms will be literalized, even in the new ebr. But there are also—in my view just as important—ways of bringing in readers conceptually. There is for example a filmic dimension to the imagery (recall the enframing TV screen), and also a sound dimension (a database that enables sorting and selections modeled after the disk jockey's "remix"). More than mere literalizations and something other than metaphors, these filmic and sound-like functionalities implicitly locate "us," the journal's readers. As in Barthes, the developing ebr page grants power to readers, not authors, in defining what gets included, and what left out of the page.

screen shot of sample page from the new ebr caption: The threading activity, presented metaphorically in the preceding sequence of animated graphic images, has been installed literally on the page itself in the current database version of ebr (version 4.0, completed Summer 2003). Because readers are free either to operate or ignore this functionality, the potential for connectivity is enhanced rather than obviated by the technology.

The Most Linear Hypertext in the Universe

To further emphasize the independence of the reader's experience from the text's mediality, whether that experience is primarily linear, reflexive, distributed, serial, or (more likely) some combination of all these modes, I want to consider briefly an unusual hypertext, "Eating Books," which was written by Raymond Federman and then designed out of Burdick's offices. This work is remarkable, technically, not for its interactivity but for its self-containment. In fact, it uses no links at all but instead enforces a linearity more strenuously than any print book I know. If Moby has written the loudest song in the universe, Federman and Burdick have produced the most linear hypertext.

Screen shot of ebr7 'Eating Books'

We are told, at the start of Federman's narrative, that the book to be eaten is a telephone book, the most strictly lexical of narratives and, in Federman's words, "the only book in your library which came free. Except, of course, for the books you stole." Further along, after scrolling lengthwise through the narrative, we encounter a self-consciously old-fashioned typeface in French, Federman's first language, indicating something "Voltaire once said, or was it Diderot who said that, Andre Gide said it too, but I know he stole that saying from someone else: *Voler un Livre . . .*" A digression on Voltaire's anti-semitism momentarily suspends the narrative line-but not the literal line of text, whose material form, like the material arrangement of modules and neural networks in the brain, enables but hardly corresponds to the cognitive processes enacted by the narration. Largely, these are processes of memory, and of textual citation-all of which interrupt the line of thought and put into question the origin of the quotation. Even the language of its actual utterance is in question-since Voltaire supposedly said it to Isaac Newton, on a chance meeting in the streets of London. Finally, after these digressions have run their course, the narrative ends with the full transcription of the saying: "To Steal a Book is not a crime as long as one reads the book."

This literary hypertext features not a single link and only one technical feature associated with the electronic medium. The single distinguishing feature is this: unlike the printed line, the line in hypertext, once read, cannot be gone back to and reread. It has been swallowed, literally: as ephemeral as any spoken utterance (unless of course the entire sequence is reloaded and run again). In this narrative, linearity in itself is no assurance against inattention or loss of memory. For that, we need a different conception of what constitutes stability within the new media-a conception involving the reader in the act of observation and selection. Stability in electronic environments, I want to suggest, comes from the literal construction of the object of study rather than its interpretation-for that is what we are doing, constructing the page (and forgetting past pages, the pages we've passed over) as we move selectively

through the developing Web archive.

Normally in hypertext we are given not a single line of text but a multiplicity of sources and texts for browsing, so that image and narrative, the verbal and the visual, all exist on the same plane; even the near and the far, as hypertext poet Stephanie Strickland has written, are "equally present, and equally speedily present" ¹³Where a book or a spoken utterance can only refer to the texts and images that it cites, directing readers toward a plane of meaning that is not identical with the plane of the printed page, a Web page can, in theory, actually present its electronic citations directly, through the clickable link or mouseover view that brings the environment into the screen space. (Federman, had he wanted to, presumably could have accessed an online archive containing the actual words attributed to Voltaire, Diderot, Gide, and so on.) The screen and the environment exist potentially on the same plane, as a set of overlapping pages with continually shifting margins. Once read, the words of Federman's text don't really disappear; they instead become a potential in the mind of the reader, one that we can imagine being activated at any time in a hypertext that lets the reader select elements from within the discourse environment. The promise of hypertext (purposely withheld by Federman) is its creation of a pattern that readers, or the author at a later time, can return to, but differently, when encountering similar events and patterns later on. Through direct citation, and not through hearsay, the outside is thus ready at any moment to match up with the inside, and this permeability, more than the actuality of any particular link or set of links, seems to me to be definitive of reading in electronic environments, where all texts are virtually present.¹⁴

Words that Yield: to Frames that Form

To the extent that we have hypertext only through a series of mediations-our screen that brings the environment in, our browsing software, the electronic desktop that lets us customize image and text for further processing, and so on-we are likely to be that much more aware of our collaborative activity while reading. Far from confirming readers in a central and author-like authority, the hypertext composition "literally opens up" the space in which the reader co-exists with the materials being read. Strickland describes this readerly disorientation in an essay published concurrently with her hypertext poem sequence, True North:

Released from the printed page into this floating space, readers are often uneasy. What is the poem? Is it the sum of every possible way to proceed, the sequence of such journeys, or one particular path privileged as a saved reading? Only slowly does one assimilate the truth that one may return each time differently. ¹⁵

Narrative is again imagined as a journey, but a journey whose meaning does not await us in some future fulfilment at a determined endpoint; rather, once enough materials have been assembled on the screen or within the writing space and a direction through them or set of relations among them has been established, meaning can then be reconstructed along multiple pathways by which readers may return. This sort of retrospective construction-known as 'multifinality' in evolutionary theory-creates a situation in which meaning is largely produced not moment by moment during unicursal reading, but when the set

of completed observations can be grouped together as a unity, a bundle of achieved pathways that can then be introduced as a working element in other readings, and other constructions.

With that release from a future-orientation, and the environmental interruption of cognitive illusions of continuity, comes a relocation of meaning-making in the hands and eyes and ears of the reader, who now seeks to be simultaneously "in touch and in control" of both the hypertext and its environment (to cite the title of another Strickland essay). For this to happen, the evolving hypertext must create its environment even as the hypertext reader draws material from the environment—a "floating space" that lacks all distinction until a selection is made. Instead of a uniform surround, this created environment is then a product of selections that determine which, out of all possible, objects and Web sites will be significant within the reader's own writing space. In this respect (and not in naive equations of two very different associative mechanisms), hypertext is mind-like because the mind, too, like any organism, admits only those aspects of the environment that it is structurally able to process. A successful hypertext construction will be, therefore, not an accumulation of objects and texts defined indexically as some sort of pre-existing information network; it will be, rather, a set of dovetailing or complementary structures, which have cognitive meaning to the extent that these structures are brought out, sequentially and associatively, in the process of linking.

It could well be that a perceived lack of a true cognitive dimension in hypertext is behind critical calls for a "rhetoric or stylistics of departure and arrival" 16 oriented toward aspects of the target text that are structurally and thematically relevant to the source text currently on the screen. As Jan van Looy writes in his "Conclusion: Toward a Hyperfiction Poetics," "the notion of 'words that yield' has to be elaborated [by the author]. . . In the same way as a full stop and a capital letter signal the beginning of the next sentence, links should inform the reader of their presence and their aim, and suggest a destination." The link, then, is not so much a mode of neutral connectivity as an active device that enframes; it is the bounded place where readers create a literary and visual system that would otherwise exist as an indistinguishable mass or unknown domain of automatic functioning. Indeed, Burdick allegorizes the permeability of inside and outside and their mutual self-creation with her framing device in "You've Got Our Attention." Because the animated graphic image file puts us in the position of the driver, an observer of the changing scene behind and in front of the car, we're doubly mediated. Looking through both the windshield or mirror and the enframing TV screen, we find ourselves in the position of an observer observing herself. This second-order observation, I want to suggest, is at the heart of any narrative transit through electronic landscapes; and the renewed centrality of such reflexive, second-order positioning has little to do with the specific means—the browser and its clickable link—of moving around in that environment. Rather, reflexivity and meta-observation in narrative is simply consistent with an environment where all language is meta-language—so that everything one sees on the screen is the result of a description at the level of code (html, xml, and so forth).

Hypertext links? Links are easy; trustworthy links, hard:

The words lie there and they may be lies. They lie on the page. They are little worms. Once she dreamed, on the night before a reading she was to give, that rather than words on paper, there were tiny objects linked one to another, which she had to decipher instantly and turn into words, sentences, a story, flawlessly, of course. Funny fear of the blank page. Didn't she recently explain that writing was erasure,

because the words were already there, already in the world, that the page wasn't blank.17

The proto-hypertextual quality of Lynne Tillman's conception of language, the psychological block that the blank page inspires, and a lost objectivity that has separated the word from the world, are not uncommon features in contemporary experimental fiction in the United States. There are many literary anticipations of hypertext "blocks"-a newly literalized, potentially infinite network no less intimidating, in its plenitude, than the blank page. In *Cognitive Fictions*, I considered how a number of authors-Tillman, Markson, Auster, and Mathews in particular-found ways of opening the block using a variety of self-referential strategies. Confronted by structures impossible to grasp cognitively-a hypertext in which everything is connected, the blank page where nothing is connected to anything-the author names that impossibility and so re-enters the structure at another level, the level of language, the level of observation. Of course, references, plot developments, and other narrative material need to accumulate un-selfconsciously before such self-conscious, self-referential re-entry is possible. Re-entry cannot be done by force of will. (The assertion of self-consciousness prior to achieving narrative momentum is a frequent failing in American metafiction of the sixties and seventies.) Once however the proliferating connections make possible a new perspective, the blocked author-now a reader-can establish a fresh relation to words that lose their referential power; they become Tillman's "tiny objects" endlessly recombining, entering a new realm, the realm of the virtual. What distinguishes the aesthetic use of such objects is the artist's ability not simply to create from them a passive memory or record, but a transformation, away from their initial context into other contexts rich in potential. The aesthetic organization cannot simply be embodied materially, encoded and preserved independently of the reading activity. Requiring recognition and re-ordering by the reader, the pattern stands a chance actually of being remembered (which of course means that much in the original, author-created text will necessarily be forgotten).

In "To Find Words," which opens the collection, *The Madame Realism Complex*, Tillman's protagonist is a young author named, improbably, Paige Turner, who cannot "pretend to believe in words and in the power of stories" and so determines to write instead about writing itself. Her narrative alternates between third-person views of Paige, direct presentations out of the literal pages in her notebook, and first-person commentaries by a narrator with access to Paige's thoughts. To herself, Paige defines her ambitions as an author in the barest material terms: "to find words and place them in sentences in a certain order. Syntax." (17) That's what Paige thinks; the sentence she goes on to write has to do with "a sin tax in the U.S. on liquor and cigarettes. . . ." (17) This happens throughout the narrative, as the words found by the narrator are continually taken over and re-appropriated by the character, and vice versa. At issue is the relation between the thought-track that runs through every one of Tillman's essay-narratives (whether presented as fiction or non-fiction) and the texts that her protagonists are working on-or, when the protagonists are non-writers, between the self and the voices and human visitors who "become phrases in [the] body" ("To Find Words" 33). In one formulation, this is said to be the relation between conscious and unconscious thought:

"It is in the unconscious [Paige writes] that fantasy, moments of the day, and memory live, a reservoir for the poetry of the world. Is everything else prose? Is what's conscious ordinary prose, the prose of the world?" (25-26) But the formulation is rejected, as the narrator, ever ready to turn on a pun, responds:

Or, I tease, the pose of the world. She is separating much too neatly the world she knows-I nearly wrote word for world-from the world she doesn't know, the one that owns her and to which she is a slave. She is a slave to what she can't remember and doesn't know and she is a slave to what she remembers and what she thinks she knows. Her education has damaged her in ways she does not even know (26).

Paige does not know what she does not know; an eye does not see what it does not see; and "the world is what one does not perceive when one perceives it" (Luhmann): such truisms characterize all systems. But the narrator, Paige's creator who exists at a later stage in her literary career and cognitive development, presumably does know. Between the various narrative levels, first- and third-person narration, early and later development, the author who writes a draft and the same author (now a reader) who revises, we can perceive what the character wishing to be an author cannot see: for example, the educational system and ready-made fund of cultural memories that enslave her because she knows no other possibilities. The words she knows are her world.

Like all writers, Paige longs to find a voice and a style-to make music with words. Yet the words she succeeds in finding are consistently turned into other words by the narrator, or the same word is given a different meaning. Syntax becomes sin tax; prose is unmasked as a mere pose, so that the limitations inherent in the words Paige uses can be, not overcome, but reinscribed within a new perspective. "She imagines the inside is the outside. She is greedy for everything," and so she will eventually transform the boundary between herself and her environment into a division within herself: "She opens her mouth wide. If words could make wishes come true. If wishes were horses she'd ride away" (18). Paige of course knows that words are not wishes, as Oedipa Maas discovers that a sign is not what it is: unlike a digital tape whose meaning and function is identical with its coding, or a "complexity" that is "its own best-shortest-description" (True North, "Figures of Speech" 13), neither spoken words nor material signs have the power to do what they say; they can only create alternate worlds inside the speaker or writer. Each world Paige might inhabit or Oedipa project is a different constellation of words with its own articulation and its own blindspots that can only be displaced by finding other words and (not finding) other blind spots.

To be sure, most print fiction tries to suppress narrative self-consciousness in the interest of immersing readers more fully in a story. Similarly, enormous sums of money have been spent in making virtual reality environments as "transparent" and immersive as possible, so that we might move through them with a feeling of verisimilitude. It was not always so in the computer business, as changes in the meaning assigned to the word transparency might indicate. At first, the word was used to mean that a user was close to the operating system (such that one tells the machine to do things in ways that it really does do things). Today, transparency more often means that the operating system is invisible, and so what's transparent is the machine itself-a window manufactured out of opacity (hence Microsoft's Windows). A steam locomotive displays its power in its massive levers and wheels; the transparent case of an iMac displays nothing operative. But consider the way a computer scientist actually involved in making decisions at the level of operations:

Lentz did a good job of making the hardware transparent to me. He hooked up topologies the

culmination of a decade or more of tinkering. He explained every link in the process. . . . The gist consisted of vectors. A stimulus vector, converted by the net's self-reorganization into a response vector. We started with a three-deep array of neurodes, enough for a test start. Each field was the size of the net that had learned to pronounce English. Implementation A would be spared this task. Lentz wired it to a canned speech synthesis routine. We worked at the level not of phonemes but of whole words. 18

Which is to say that the task had been modularized, such that with each move to the next level, from phonemes to whole words to sentences to entire texts, the previous level would be absorbed into a more comprehensive operation.

By actually imagining those aspects of a cognitive system that have sunk below the level of operational awareness, a small number of contemporary novelists and poets are creating a new order of realism in fiction and poetry, akin to functionalism in technological design and operational-minimalism in painting, that makes a frank admission of its own materiality and so establishes a ground on which authors and readers can meet as equals and communicate without illusions. Mathews works within this neomaterialist climate, as do most of the Oulipo members with whom he is associated. Georges Perec had written a novel, *La Disparition*, without using the letter e (the novel has been translated into English, a language where not even the article "the" is allowed, under the punning title, *A Void*); Italo Calvino arranged the chapters for *Invisible Cities* according to a mathematical formula in which the chapters, like cities, build themselves up by numbers, 1, 21, 321, 4321, and then erase themselves in inverse order: 54321, 543, 54, 5; Raymond Queneau proposed ten sonnets, each of whose 14 lines could be arranged in any order, producing 10¹⁴ or Cent mille milliards de poems (one hundred thousand billion poems). This is not automatic writing; rather it is writing under constraint. Such work does not give over the creative process to either the unconscious or mathematical formalisms but rather forces the co-conscious, language-based, composing mind to put itself into contact with formal and procedural conditions that are always present, always constraining, supporting, tweaking, and unconsciously controlling the creative process. Such writing is procedural rather than programmatic-an important distinction since procedures remain closer to composition than to publication, circulation, or the need to find applications. Another difference from programming is that the Oulipian follows self-set rules, constraints of one's own making. And so the author learns how autonomy produces results that are not entirely under authorial control. From a cognitive perspective, such writing is significant in that it recognizes the thousands of ways that conscious experience "is constantly influencing and being influenced by many unconscious processes" involving perception and action, thought and emotion, as well as the computational and recursive routines that support the construction of even the simplest sentence. 19

Although for more than thirty years this group has devoted themselves, ostensibly, to researching past literary forms and making them available to the public, few of these forms have ever been used beyond the moment of their "discovery" -and this is possibly the best thing about the Oulipo and what distinguishes their art from mere formalism. For what signifies is the cognitive and combinatorial potential that is held in the forms, not the form itself, which can go back on the shelf with all the other dusty books and dusty bottles the moment it is perceived or identified as a form. (The same is true of invented forms and self-imposed constraints: Mathews, for example, has never found it necessary to reveal the constraint under which he wrote his most Oulipian novel, *Cigarettes*.)

The Journal of the Journal

That we know the world only through particular frameworks, categorizations, and pre-established expectations is brought home to readers by the very look of *The Journalist*, in which paragraphs are numbered, and then renumbered and subdivided in an elaborate and doomed attempt to match the language to the atomistic world of facts and perceptions. The project is doomed because, unlike the semiotic model of a network of signifiers linked with each other and their signifieds, the identity of the world is a composite of attributes that only come into existence as they are observed. Even the shoes that the journalist's colleagues wear to work or the sunlight falling across a secretary's telephone become distinct (and thus capable of relating to one another) only as they are newly noted in the journal; only then do they "emerge from the strangeness of systems outside" the journalist's control, as the clarity of his own evolving system plunges endlessly into the obscurity of these "systems outside" (9).

As noted attributes take form in clusters shaped in a network of coded relations, Mathews's novel spirals away from any notion of journal writing as the objective reporting of some pre-existing world; only in the notation are objects and events "naturalized" (9). At the same time, the novel also avoids attributing purposeful creation to the writer-observer. Instead, as the narrator discovers to his surprise, the journal has a life of its own, its purpose the mere reflection and reproduction of the categories with which he approaches the world. This narrator, the "journalist" of the title, has been advised by his doctor to jot down "everything" that happens to him (8), "from how much he has spent on books and movies to what he eats" (dustjacket). But "everything," he soon discovers, is already caught up in its own networks of relations, and each item can belong to more than one category and can operate at several different levels. Initially he tries to distinguish "between fact and speculation, between what is external and verifiable and what is subjective," but this does not prevent the one from mingling into the other (20). Indeed, as distinctions noted down in the journal continue to proliferate and the act of recording makes ever greater demands on his time, lived experience and the record of the experience converge and the notation system itself expands to the point where it ceases to be meaningful to speak of a life "outside" the system. So logical and poised are the notes that, although readers are given plenty of indications as to the journalist's deteriorating state, we are as surprised as he is when he breaks from his obsession long enough to observe himself: "when I heard a dry noise above my head, like a cracking in the ceiling boards: I saw myself as if through an eye in the ceiling, fidgeting and sweating like a demented inmate, a disgrace. I calmed down" (129).

This is an astonishing moment-not because, while reading, we are unaware of the narrator's growing obsessiveness and mental stress. His literary decorum matches an imperturbable poise typical of Mathews, even as his protagonist steals into a closet in order to toss rolls of toilet paper down the airshaft of his office building, and later neglects to change out of his soiled white suit, after a fall and lapse of consciousness during a night-time prowling. He does allow himself to make a mental note: "I must get back early in the morning and straighten up" (173). But of course he does no such thing. In the morning he will be writing in the journal, and recording these very actions. The journalist is interested in the illusion of control, never the actual manipulation of reality, which is "the world's, not mine" (154). In this he is true to those psychoses in which the patient, while perfectly capable of "reality testing,"

evidences no inclination to it (a condition noted by the clinical psychologist Louis Sass). At no time does the journalist apply any of his numerous and detailed acts of self-observation to the improvement of his condition. For no sooner does he reflect back on himself than he retreats from the self-observation, into the security of the note-taking system. Because such acts are recorded entirely from within this system, however, we accept his state as "natural." To the extent that we enter the fiction, we accommodate ourselves to it, like a live fish adjusting its body temperature to a surrounding fluid, not noticing that it is slowly boiling or becoming frozen. In essence, by accepting the terms of Mathews's fiction, we enter something very like the "floating space" that Strickland speaks of in electronic environments, before that environment is articulated and made active by the reader's selective engagements and disengagements. For the journalist, and for "us," the journal's reader, the outside world does not exist-except as it conforms to the selections and identifications that the journalist's mental state disposes him to make.

sample page from The Journalist caption: The protagonist of Harry Mathews's novel, *The Journalist*, produces a print hypertext when he tries to note down "everything" that happens to him, as it happens. Like print, e-text is a framing medium within which readers and writers become category makers, builders of systems, and self-conscious observers of their own observations.

Even more significant for the narrative structure than this (quickly suppressed) moment of self-consciousness, is the decision that can be felt pulling at him from the start, to replace the proliferating petty differences noted down in his journal with a single global distinction: he will move the system one level up, applying the idea of the journal to itself. Here is how he explains his decision to write a "journal of the journal": "What I discovered is this: all the care I have brought to organizing this journal has been misspent; my laborious classifications have proved worthless; my efforts at competence are an illusion. Why? Because I have left out the chief activity of my life and the chief fact of my project: the keeping of this journal" (190-91). From here, it is only one small step to the next and final logical level at which we as readers experience a book titled *The Journalist*, when Mathews's narrator admits to "a closeted vision, that of writing a novel-a novel about someone whose passion is keeping a journal" (209).

In numerous essays and interviews, Mathews has held that the role of the author is to provide materials that readers can then use as a means of creation.²⁰ In literary studies, such a position has been made to seem marginal and exceptional. To contain the self-consciousness and radical contingency that must pervade the creative act at every moment, mainstream writing programs tend to regard a fundamental condition as a technique, and novels explicitly concerned with reflexive identity-making are most often filed away (and largely forgotten) under the sub-category, "Metafiction." That literature has thus largely marginalized its own reflexivity (in favour of some liberal humanist ideal of authorial self-possession) is all the more surprising given that it is a field whose subject is homogeneous with its object, in that both literature and criticism (that is, writing about writing) are conducted in the same medium. This point is brought home to Mathews's *Journalist* when he discovers the necessity of keeping a "Journal of the Journal." In all he has been doing up to that point, he has left out his own controlling presence, and only now, when he is in fact losing his grip, does he accord the writing itself, "the making of each page, the making itself," its "supreme place." The system that uses meaning is not the mind of the journalist

himself, but the communicative network that he deploys—a network whose growing complexity cannot be internalized, cannot be made available for introspection. Yet the journalist acts as if, by bringing that complexity to the page itself, he will master "everything" in life that impinges on consciousness. And this delusion, that the operations of consciousness and textuality can be brought to the page, is the material counterpart, if not the cause, of his progress toward insanity.

And so it is, by the novel's end, that Mathews's journalist breaks down and falls silent. Now a patient in a mental hospital, he resumes speaking only when his wife reads him a children's story, which opens: "Once upon a time and a very good time, monkey chew tobacco and spit white lime, once upon a time there was a young boy named Michael" (236). Hearing these lines and the opening scene (in which Michael, leaving home at the age of nine, gets off an express train), the journalist then begins to interrupt with words of his own, adding characters, objects, and events as his wife goes on reading. With this small and mutually distanced dialogue, a modest hypertextual collaboration, the novel reaches a kind of closure impossible from within the journalist's earlier elaborate system of notation and classification. The system gives way to a more properly narrative apparatus, reflexivity and circularity turn into forward movement, and the act of turning inward is replaced by the turning of pages in a book. The journalist is now poised for re-entry into his environment at another level—in a wholeness of interiority and exteriority and a dialogue that is not so much a communication between two people as a creation of a new narrative object outside either one of them, and outside any inscription in the book they are reading. This is something the journalist recognizes, in an especially lucid moment: My work is not for "the world" (by that I mean anybody else) or for me (I hardly have time to read what I've written). It's for "It." "Its" fugitive name does not matter. I've called it truth, and before that reality; since it is never to be completely obtained, it may be beyond naming altogether." (200) (Mathews's journalist, appropriately, is himself never named in the novel.)

Paul Harris nonetheless suggests a name that is appropriate not only for Mathews's novel but for all constraint-driven narrative: "The potential of constrained writing," Harris notes, "is that it ends up an autopoietic writing machine." Autopoiesis—literally, self-making—describes "a form of system organization where the system as a whole produces and replaces its own components and differentiates itself from its surrounding environment on a continual basis." ²¹In Mathews's case, the "it" that is both self and not-self, a unity that consists of reciprocal perturbations between system and environment, is a kind of machine for "generating linguistic distinctions in a linguistic domain." ²²Such a process, though arbitrary and capable of referring only to other elements—the expanding network of signifiers—in the linguistic domain, will eventually shut down in paradox unless something in the structure answers to real elements in the environment (which, in turn, have their own domain-specific structure of distinctions). Nonetheless, from the system's point of view, there is no environment: like Mathews's journalist in the throes of a literary obsession, the autopoietic system, for all it "knows," is only following its own rules in maintaining a set of self-reinforcing, homeostatic relations. The map is the territory, and there is no outside of the system—except, and this is the crucial formal feature that I have been pointing to throughout this essay, when the connections within the system reach sufficient density that it becomes possible to recognize this very circularity, and deparadoxize the constitutive distinction through a second-order observation. This recognition—the bootstrapping into consciousness itself—is what shifts the system (and Mathews's narrative) to a level of self-consciousness beyond solipsism and paradox.

The discovery that "the main story of the journal is the journal itself" (191) is the trigger point, in Mathews, of narrative applied to itself. A new level of sustainability emerges when a referential notion (the journal) becomes an object in itself, an element that is made to migrate from "outside" to "inside" the journal. Only through such a reversal of target and source can the journal's system differentiate internally, and so eliminate its border with the outside, "lived," world. The price that Mathews's narrator pays for this recognition is, not surprisingly, silence. At the book's end, he is literally speechless, and his account of the final hours in his deterioration must be collected and presented (without interpretation) by a clinical psychiatrist at the place where he has been institutionalized. Who, then, has provided those journal entries up to the point where the journalist gave up control over his production? No answer is forthcoming, either from within the fiction or the more general structure of autopoietic systems. Because the movement from level to meta-level is a difference that can have no actual equivalent in reality (the narrator cannot be both a character and the author of the book at the same time), the self-generated difference functions at a wholly mental level. But it is no less "real" for that, because this is how the human mind works, its neurobiological construction based largely on "self-perception and on self-established differences that have no actual equivalent in reality." 23 The Journalist emerges as a cognitive fiction because cognition is itself fictive in nature.

We Have Never Been Hypertextual

The insanity that in Mathews's Journalist derives from so many sources both personal and emotional can be displayed in moving detail only by being transformed to an equivalent-call it a textual-insanity in the very form of a writer's journal. This is the insanity of thinking that any author, or any single reading mind, can bring thought's content and conceptual categories fully onto the page; that contexts can be elaborated indefinitely, and independently of social or cultural supports; that thought's complexity can be imparted to the complexity of the page itself. The Journalist's connundrum, I want to suggest, is structurally similar to problems inherent in all dreams of expansive archiving, including the dream of hypertext as put forward by Nelson and others.

If Bruno Latour has made the case that "We Have Never Been Modern," it is only fair, a full human generation after the introduction of hypertext, to ask whether writers on the Web have ever been hypertextual or whether the proliferation of platforms, commercial interfaces, and non-standard pages have not in fact constricted the vast potential of the Web. Such media, possessing their own categories and sorting mechanisms, certainly make parts of the Web manageable mostly to consumers but for the most part these media can only get in the way of the reader's own ability to make selections and organize materials. More generally according to Latour, the mis-application of rational categories to a field that is perhaps organized but not, in itself, rational, is the reason why the project of modernity has remained, and likely will remain, unfulfilled. Modernity, Latour argues, tries to establish clear categories separating subject and object, knowledge of things from power politics, but the attempt to organize experience through these categories can only produce pages and pages that document interfering and contradictory events. The documentary history of modernity is thus no less confused than the pages composed by Mathews's journalist-witness for example any page of any major newspaper where "all of nature and all of culture get churned up every day" (2).

If by "hypertext" we mean what its framers envisioned, we have certainly not begun to be hypertextual. Initially, in 1963 when Ted Nelson defined the terms, hypertext and hypermedia had little to do with linking as such; connectivity was not about the maximization of research efforts, and the Internet was not meant to be a global archive of everything, ever. Nelson, it is true, imagined a medium to end all media, where everything said becomes a kind of footnote to everything else. But he also, more interestingly and more basically, proposed that a text or media object, once established in a database, could be cited in its entirety-taken wholly, collaboratively and freshly, into a new composition. Each individual work then might be regarded not so much as an entry in an encyclopedia as a sample in a DJ's mix-except that what is sampled is the whole. A page capable of enacting the Internet's recombinant potential, a page that begins life only in circulation, takes other pages into its own data space, and goes on living only as long as it is cited by others-this is as yet unknown in the contemporary Web. Which is another way of saying, simply, that the pages we have are already, for the most part, unknown because individual texts are too often experienced in isolation. Using the Internet not only to access individual pages but also to organize various pages in various media, is one way to make known what contemporary art and literature have already achieved. The work we have needs to combine together, clash, and separate out into meaningful clusters. Rather than another new form or radical movement, we need instead a more robust hypertext collectivity, whose principles of selection, organization, and internal arrangement are themselves significant and their use subject to widespread agreement.

One can read Nelson's initial formulations, incidentally, by pointing a Web browser to <http://www.xanado.com>. That's all it takes to enact a "basic or chunk style hypertext", one that comes on the screen when you reference a Web address. But Nelson also talks about "collateral hypertext", "stretchtext" that changes continuously through annotation and so forth, as well as an "anthological" hypertext in which materials from all over come together, into an electronic book with a table of contents that can be revised. What I would wish for in a future Web page is a deeply referential practice in which all of these modes work together: that convergence would help create a digital archive adequate for the widespread nostalgia that arguably drives the whole project of Web construction-a nostalgia less for the past than for a present that is incompletely experienced. As Nelson said, we build new and more reliable forms of digital storage because "thoughts and minds do not last." And neither do pages-unless they keep on circulating within the media where thoughts and minds find expression.

Ever since its commercial introduction in the mid-'90s, much has been made of the Internet's mind-like qualities-its capacities, as a distributed network, for linking widely separated sub-networks together and doing associative work. The Web, it was claimed, was capable of remembering everything (for us); its storage capacities were essentially limitless, and information could be gotten in a moment by those who most needed it. What has been missing from the cognitive analogy is an appreciation of an actual, human mind's incredible powers of selection and attention, its capacity not only to remember but (much more often and more actively) to ignore and to forget-that is, to repress information not relevant to the project at hand, to filter out unwanted demands on our attention, and to fit what is remembered to new circumstances. Along with distributed memory, the mind has the serial ability to focus, moment by moment, on a continuing and extended present. The mind takes from past experience only what's needed (and it's never enough) to make sense of the present, to correlate what's seen, heard, felt, and read with

patterns and schema that have been experienced before. However this process works (and whether the mind's work can even be known is itself a subject for debate), cognition clearly involves much more than information storage and retrieval. The information that a mind calls up changes what's experienced, and is itself changed by it—even as an artist's sketch is often less an external aid to memory than a means of creation. The sketch itself can always become an active element in the emerging composition, a transformation no less than a record of the artist's thought.

Likewise, past achievements in art and literature, instead of remaining static sources for citation, can be, and need to be, brought to the page as active elements in current compositions. "Making it new," in Ezra Pound's well-known dictate, but with an emphasis on the reader's making. Too much hypertext, and too much postmodern fiction and poetry has been characterized by an ironic "citing" of past styles, treating established art forms apart from enabling life forms: an endlessly expanding context without culture. Collages without content, patchwork personalities, bricolage absent of constructive purpose, and corporate compilations are poor models for the present. When a skyscraper roof models the pattern of a Victorian chair; or when once-powerful, clashing symbols appear together as neutral hybrids (the relief decorating a Mosque, a Christian cross), we have visible evidence that we are living too much in the mode of information. The past, in such art, is called on too freely, without any commitment to everyday life practice or overall world views embodied by the work. A literature, however, that takes responsibility for what it selects, that cites works whole, not piecemeal—such a literature goes beyond the exchange of information and makes a kind of intersubjectivity possible. Such a literature opens the chance (in Ted Nelson's words) once again to "become a community of common access to a shared heritage."²⁴ This is, for me, a worthwhile conception for a future page. Realizing its potential would be less a matter of inventing forms than of more fully experiencing what we have, in the present moment when we have it (and not in some future archive).