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M A R K B . N . H A N S E N

The Digital Topography of
Mark Z. Danielewski's *House of Leaves*

Zampanò only wrote "heater." The word "water" back there [in *The Navidson Record*]
—I added that.

Now there's an admission, eh?

Hey, not fair, you cry.

Hey, hey, fuck you, I say.

House of Leaves

For Mark Z. Danielewski, perhaps the central burden of contemporary authorship is to reaffirm the novel as a relevant—indeed newly relevant—cultural form:

[B]ooks don't have to be so limited. They can intensify informational content and experience. Multiple stories can lie side by side on the page. . . . Words can also be colored and those colors can have meaning. How quickly pages are turned or not turned can be addressed. Hell pages can be tilted, turned upside down, even read backwards. . . . But here's the joke. Books have had this capacity all along. . . . Books are remarkable constructions with enormous possibilities. . . . But somehow the analogue powers of these wonderful bundles of paper have been forgotten. Somewhere along the way, all its possibilities were denied. I'd like to see that perception change. I'd like to see the book reintroduced for all it really is.

("Conversation")

House of Leaves, the novel Danielewski wrote to reintroduce the book "for all it really is," is a tour de force in typographic and media experimentation with the printed word. From its cover page and

initial inset to its enigmatic final page, the novel defies standard expectations in a rich variety of ways. Making pseudoserious reference to the blue highlighting of hyperlinks on Web pages, the blue ink of the word “house” in the work’s title transforms this keyword into something like a portal to information located elsewhere, both within and beyond the novel’s frame. And the color collage comprising the first inset page juxtaposes what looks to be a randomly selected group of common-use objects with snippets of manuscript copy as if to suggest some underlying equivalence between them. The final page—curiously situated *after* the index and credits page—bears the inscription “Yggdrasil” in the form of a *T* followed by four lines of text and a fifth line containing a single, large-font, bold *O*. A reference to the giant tree supporting the universe in Norse mythology, the page startles in its apparent randomness, reinforcing the well-nigh cosmological closure effected by the novel it culminates, yet shedding no new light on just what should be made of it.

While these examples already begin to expose the medial basis informing the novel’s typographic play, they in no way exhaust its engagement with media. (The adjective “medial,” by now adopted as a standard term in media studies, will here mark the specificity of analyses concerned with the materiality of the medium and of media generally.) Indeed, as we shall see, these examples form so many symptoms of what can only be understood (following Danielewski’s aim to reintroduce the book for all it really is) to be a *media-technical*, and not simply a stylistic or formal, shift in the function of the novel. *House of Leaves* is obsessed with technical mediation and the new media ecology that has been introduced and expanded since the introduction of technical recording in the nineteenth century. The broad outlines of a theory of the media revolution in literature have already been laid out in the work of self-proclaimed “media scientist” Friedrich Kittler, who, in *Discourse Networks 1800/1900* and *Gramophone, Film, Typewriter*, has catalogued the disenfranchisement of literature—its devolution from the exalted role of “universal medium” to a more humble vocation as one medium among others in a hybrid media ecology consisting of audio recording, image recording,

and now digitization.¹ Yet where Kittler seems content to identify the specific media forms—gramophone, film, and typewriter—as three broadly similar recording apparatuses, Danielewski takes pains to circumscribe the constitutive limitations of each and, in line with his stated aim, to champion the superiority of print. Paradoxical as it sounds, the privilege of literature stems less from its capacity to ape the flexibility of technical media than from the novel's long-standing correlation with the body (the exemplar of which would certainly have to be Rabelais's *Gargantua and Pantagruel*). It is precisely by updating this correlation in the context of today's complex and hybrid media ecology that Danielewski manages to submit the novel to a formal transformation, one that literally compels its adaptation to our allegedly "post-hermeneutical" informational culture and that does so, precisely, by treating the novel as a body subject to development and deformation. In the broadest sense, such an updating of the novel's tie to the body is precisely what is at stake in its central thematic engagement—with the topological figure of a house that is larger inside than outside. The effort to document or otherwise make sense of this physically impossible object generates a series of mediations which quite literally stand in for the void of referentiality at the novel's core. Lacking the force of indexicality, these mediations can only acquire the force of conviction by eliciting embodied reactions in their fictional and actual readers. They garner their rhetorical effect by triggering what I shall call "reality affects."

Given the novel's obsession with media and mediation, it is hardly surprising that the first of these mediations is a film, *The Navidson Record*, compiled by Pulitzer Prize-winning photojournalist Will Navidson from videos made by himself, his wife Karen Green, and several of the characters involved in exploring the new house they moved into in order to begin afresh—the curious, "warped" house on Ash Tree Lane that turns out to be larger on the inside than on the outside. The events captured by this film come

1. I discuss Kittler's conceptions of media separation and digital convergence at some length in "Cinema beyond Cybernetics."

to us through the mediation of one Zampanò, a Borges-like figure, apparently named after the protagonist in Federico Fellini's *La Strada*, who possesses a diabolical penchant for mixing real and fictional sources in an apparent bid to garner verisimilitude for his enterprise. (*House of Leaves*, in consequence, is littered with footnotes, an indeterminate number of which are pure inventions of its author.) Zampanò's narrative, having been left unfinished at his death, in turn comes to us through yet another layer of mediation: that of the young tattoo artist's assistant, Johnny Truant, who not only assembles the pieces of the manuscript into a cogent order, but in the process adds a series of footnotes and appended documents that detail the destabilizing effects of the narrative on his already confused personal life. In yet another iteration of this framing structure, all of this material is said to come to us thanks to the efforts of a group of mysterious "editors," who have taken the work of Zampanò and Truant that initially—or so we're told—circulated on the Internet and bound it together in book form, adding supplementary material allegedly worthy of the title of "second edition."

As if this bewildering proliferation of mediations were not enough, several further twists intensify the referential void at the novel's center. In his introduction to the manuscript, Truant gives voice to his own suspicions that the film does not in fact exist:

[A]s I fast discovered, Zampanò's entire project is about a film which doesn't exist. You can look, I have, but no matter how long you search you will never find *The Navidson Record* in theaters or video stores. Furthermore, most of what's said by famous people has been made up. I tried contacting all of them. Those that took the time to respond told me they had never heard of Will Navidson let alone Zampanò.

(xix–xx)²

2. In a reversal altogether typical of Danielewski's novel, the categorical force of this declaration is put into question, though certainly not entirely undercut, by the editors' insertion of a supplementary section entitled "Contrary Evidence" consisting of five exhibits—including a comic-book depiction of the rescue scene, an architectural mock-up, and most strikingly an actual still image from the film, "Exploration #4"—all of which would seem to furnish contextual and, most importantly, indexical evidence of the film's existence.

This mind-numbing evidentiary quandary is compounded by the even more startling revelation that Zampanò was “blind as a bat” and thus physically incapable of performing the job of mediation he has allegedly performed (xxi). Finally, jumping up a logical level, it has recently been suggested that Zampanò’s identity as the main character in Fellini’s *La Strada* makes him a fictional character *within* the fictional world of the novel, a fiction to the second-degree.³ In the wake of this imbrication of the fictional and the real, any effort to mark their separation is simply, for reasons of principle, impossible.

Far more important, however, than the epistemological hurdles these twists introduce is the ontological indifference underlying them and the definitive departure that it signals away from the tired postmodern agonies bound up with the figure of simulation. It is as if mediation has become so ubiquitous and inexorable in the world of the novel (which is, after all, our world too) as simply to *be* reality, to be the bedrock upon which our investment and belief in the real can be built: “See,” Truant announces with the confidence of embodied hindsight, “the irony is it makes no difference that the documentary at the heart of this book is fiction. Zampanò knew from the get go that what’s real or isn’t real doesn’t matter here. The consequences are the same” (xx). Far from an invitation to wax poetic about the simulacral pseudofoundation of contemporary

3. This claim is advanced by Larry McCaffery and Sinda Gregory in appendix 1 of their interview with Danielewski: “But perhaps even more important than what these revelations about Zampanò’s past may add to our understanding of [the] novel is what they imply about the overall narrative structure of *House of Leaves*. Once we assume that the Zampanò who wrote the novel in *House of Leaves* is literally the character Fellini created in *La Strada*, we are forced to revise our assumptions concerning the status of the world projected within Johnny Truant’s framing narrative. That is, if Zampanò is only an imaginary character existing in a work of art, then everything else in the framing tale involving Johnny—including his mother, his (re)construction of the manuscript, and everything relating to the world in which this framing tale occurs—would necessarily also have to be ‘unreal,’ even in the sense of the imaginary ‘real’ posited in most works of fiction” (“Haunted House” 126). While this analysis is certainly correct, it is merely one of many examples in the novel of paradoxical fictional framing, and thus it serves as part of what I am taking to be the novel’s sustained assault on orthography, the inscription of the past as real and exactly repeatable.

media culture, what this deceptively flippant maxim betrays is a disturbing willingness on Truant's part to accept the waning of the orthographic function of recording. As the reader soon discovers, this willingness—far from betokening a curiosity stemming from Truant's (admittedly curious) psychological profile—is simply a necessary consequence of the novel's play with mediation and undermining of any "sacred text." From Truant's sustained alterations of the text to the reported interventions of the unidentified editors, from Zampanò's impossible perceptual acts to Truant's mother Pelafina's unreliability as a conveyer of her own voice, the novel insistently stages the futility of any effort to anchor the events it recounts in a stable recorded form.

While the deployment of these and other characters as figures for the end of orthography certainly presages a shift away from traditional realism and psychological characterization, the novel's challenge—to generate belief without objective basis—becomes acute only when the role of the reader is taken into account. For as Danielewski explains in an interview, the novel's true protagonist is the figure of interpretation, which is to say, the act of reading, or even, perhaps, the reader herself:

Let us say there is no sacred text here. That notion of authenticity or originality is constantly refuted. The novel doesn't allow the reader to ever say, "Oh, I see: this is the authentic, original text, exactly how it looked, what it always had to say." That's the irony of [Truant's] mother's letters [which are included as an appendix to the novel]: at first you probably just assume that, okay, this is the real thing, but then the artifice of the way they look starts to undercut everything, so you're not sure. Pretty soon you begin to notice that at every level in the novel some act of interpretation is going on. The question is, why? Well, there are many reasons, but the most important one is that everything we encounter involves an act of interpretation on our part. And this doesn't just apply to what we encounter in books, but to what we respond to in life. Oh, we live comfortably because we create these sacred domains in our head where we believe that we have a specific history, a certain set of experiences. We believe that our memories keep us in direct touch with what has happened. But memory never puts us in touch with anything directly; it's always interpretive, reductive, a complicated compression of information.

("Haunted House" 121)

Everything in this complex and rich novel—including everything that smacks of traditional realism (the investment in disturbed family dynamics, the oscillation among various focalizers, and so on)—is in the end subordinated to the task of posing the challenge of interpretation to the reader. The novel works, on the far side of orthographic recording, not by capturing a world, but by triggering the projection of a world—an imaginary world—out of the reader’s interpretive interventions and accumulating memorial sedimentations.

Literally meaning “straight writing,” the *orthographic* function of recording designates the capacity of various technologies to register the past as past, to inscribe the past in a way that allows for its exact repetition. Despite its etymology, this function is neither limited to nor best exemplified by writing, and indeed assumes its purest form in the technical domain—in the phenomenology of photography. It is Roland Barthes who pinpoints this elective affinity between photography and orthography when, in *Camera Lucida*, he champions the specificity of photography as that technical medium capable of bringing together reality and the past:

I call “photographic referent” not the *optionally* real thing to which an image or a sign refers but the *necessarily* real thing which has been placed before the lens, without which there would be no photograph. Painting can feign reality without having seen it. Discourse combines signs which have referents, of course, but these referents can be and are most often “chimeras.” Contrary to these imitations, in Photography I can never deny that *the thing has been there*. There is a superimposition here: of reality and of the past.

(76)

This conjunction of reality and the past is the principle of photographic certainty and the very basis for its specific intentionality: photography’s noema, Barthes tells us, is “that has been [*ça a été*]” (77).

Whereas Barthes takes pains to distinguish photography from other media, philosopher Bernard Stiegler deploys Barthes’s analysis as the basis for an account of orthography in general.⁴ Orthography,

4. Indeed, Barthes categorically distinguishes photography from cinema, which is said to sweep away and deny the pose, the “thought of that instant, however brief, in which a real thing happened to be motionless in front of the eye” (78).

or “straight writing,” has been adopted by Stiegler as a paradigm for technical recording as such, from writing to more recent, real time, literal inscription technologies like phonography and cinema.⁵ According to Stiegler, orthographic recording allows for the *exact inscription* of events and thus for their exact repetition, as well as the ensuing possibility to experience *the same exact thing more than once* (the possibility upon which Stiegler’s neo-Husserlian analysis of memory is based).⁶ In his analysis of Barthes, however, Stiegler suggests that photography should be distinguished less for its technical

5. Stiegler has developed a broad-ranging and original philosophy of technology in the last decade. His ongoing project, *Technics and Time*, now comprises three volumes: *The Fault of Epimetheus*, *La désorientation*, and *Le temps du cinéma et la question du mal-être*. Stiegler’s basic argument is that the human has always been technologically exteriorized and has evolved following the operation of “epiphylogenesis,” evolution by means other than life (that is, via the passage of cultural knowledge). In volumes 2 and 3, Stiegler turns his attention specifically to contemporary technologies and develops a forceful argument for the primacy of culturally sedimented, technically stored memory as the condition of possibility for the human synthesis of memory and hence for the experience of time itself. The core of this analysis concerns Stiegler’s critical expansion of Edmund Husserl’s account of internal time-consciousness and the distinction between primary retention and secondary memory. In this expansion, Stiegler introduces a third form of memory, “tertiary memory,” which is defined as the storage of experiences *not lived by present consciousness* that nonetheless become available for adoption by that consciousness. This mechanism is precisely that of cultural inheritance, and Stiegler’s great merit is to show both how much it is intertwined with technics and how it is inseparable from the issue of our human experience of time. For further discussion of Stiegler’s project, see Hansen, “Time of Affect.”

6. Stiegler develops a complex account of how memory serves to condition perception that expands Husserl’s account in the *Lectures on the Phenomenology of Internal Time Consciousness* (1905). According to Stiegler (here following Jacques Derrida’s deconstruction in *Speech and Phenomena*), “primary retention” (the now of perception, including the “just-past” that is retained for a short interval as part of the present) is contaminated by secondary retention, since the inclusion of the past (even the just-past) in the present introduces the role of memory, and hence imagination, into the inscriptional modality of perception. Stiegler builds on this deconstruction of Husserl by demonstrating, in great detail and with great force, that both primary and secondary retention are in turn made possible by the prior existence of what he calls “tertiary retention,” meaning the inscription or exact recording of the past that has never been lived by present consciousness so that it becomes available to be re-presentified by that consciousness. Much of the force of Stiegler’s analysis comes from his correlation of tertiary memory—and thus the entire Husserlian apparatus of memory—with technical recording: it is, Stiegler reasons, only with the possibility of experiencing the exact same temporal event (or “temporal object”) more than once that the contamination of primary by secondary retention becomes manifest. See Stiegler *Désorientation*, chapter 4.

singularity (which it shares with other mechanical inscription technologies) than for its exemplary resistance to phonocentrism: “The photo will in effect place us at a remove from ‘phonocentric’ temptations. And it will also permit us to discover that alongside orthographic writing there exist other types of exact registrations,” an ensemble of “*orthothetic* memory supports [*supports orthothétiques de la mémoire*]” (*Désorientation* 24). What Stiegler has in mind here (and on this point his analysis certainly converges with Kittler’s) is the host of technical recording instruments from photography to the digital computer—“straight-positing” (ortho-thetic) memory supports—that today function to inscribe our experience or, in Stiegler’s neo-Husserlian, phenomenological account, the memory of (our) experience.

Precisely because of its dual principle—at once reality and the past—the photograph forms something of a paradigm for orthography as such: because it makes present a past that, however, cannot be a part of *my* past, that cannot be lived *by me*, photography insulates the past, the “that has been,” even as it allows for its re-presentification. Photography thus preserves the past in a way that avoids the phonocentric privilege of the present. Put another way, photography, precisely because its orthographic force stems from a technical (or, as Barthes says, a chemical) source, assures the autonomy of the past in the face of its inherent potential for re-presentification. In this way, it forms a model that can help us conceptualize orthographic writing in its proper sense as the inscription of the past *as past*, and not simply the copy of the voice, the writing down of the *phonē* (the voice): “the meaning of literal orthothesis [*orthothèse littérale*] is not fidelity to the *phonē* as self-presence, but the literal registration of the past *as past*, as *passage* of the letter, or of the word [*parole*] *by* the letter—a certain mode of repeatability of the having-taken-place (if not of a having-been) of the play of writing” (Stiegler, *Désorientation* 48).

With his realization that it makes no difference whether the film is a fiction, what Johnny Truant effectively pronounces is precisely the *waning of the orthothetic function in general*. At stake here is more than simply the contamination of photographic orthothesis by the fictionalizing power of discourse: it is not just that in the age of Photoshop the alleged certainty of the photographic finds itself

subject to generalized suspicion. In question is the very possibility for accurate recording per se, the capacity of technical inscription to capture what Danielewski celebrates, like Thomas Pynchon before him, as the singularity of experience. In an age marked by the massive proliferation of (primarily audiovisual) apparatuses for capturing events of all sorts, from the most trivial to the most monumental, *House of Leaves* asserts the nongeneralizability (or nonrepeatability) of experience—the resistance of the singular to orthography, to technical inscription of any sort. This is precisely why *House of Leaves* is particularly well suited to theorize the medial shift in the function of the novel. As a corporeal palimpsest of the effects of mediation—including the mediation that it performs itself—*House of Leaves* practices what it preaches, always yielding one more singular experience each time it is read.⁷

7. The novel repeatedly brings home this transfer of focus from postmodern epistemological play to orthographic critique. Consider, for example, the passage documenting Navidson's efforts to read, by match light (and "paper light"), the one book he brought with him on his explorations of the house—a text not surprisingly called *House of Leaves*. As the passage detailing the so-called "Navidson match question" hilariously recounts, Navidson had only one pack of matches, from the Learned pub outside Oxford, England, which despite being "good matches," only afford him time to read six pages of the novel in one go. Accordingly, in order to proceed with his reading, Navidson is forced to use already read pages as "raw material" to produce light. Despite the "calculations" of obviously fictional researcher Hans Staker, which, we are told, turn out to be "more a form of academic onanism, a jerk of numeric wishful thinking," than anything to do "with the real world," Navidson is "forced to light the cover of the book as well as the spine," causing him to burn his fingers and lose some of the text. Left in the end with one page and one match, Navidson literally consumes and lets be consumed the last remnant of the book: "First, he reads a few lines by match light and then as the heat bites his fingertips he applies the flame to the page. Here then is one end: a final act of reading, a final act of consumption. And as the fire rapidly devours the paper, Navidson's eyes frantically sweep down over the text, keeping just ahead of the necessary immolation, until as he reaches the last few words, flames lick around his hands, ash peels off into the surrounding emptiness, and then as the fire retreats, dimming, its light suddenly spent, the book is gone leaving nothing behind but invisible traces already dismantled in the dark" (467). What we experience here is an inversion of the postmodern topos of the *mise en abyme*: stripped of its epistemologically debilitating impact, this episode of Navidson reading the very text in which he figures as a fictional character functions to foreground the equivalence between the two forms of consumption—reading and material destruction—here thematized. The point, then, is to emphasize the absence of any "sacred text"—literally instanced by the destruction of Navidson's copy of *House of Leaves*—and the primacy of the singular act of reading that forms its necessary correlate.

The Digital

Danielewski observes that most people, if asked what *House of Leaves* is about, would say “it’s about a house which is bigger on the inside than the outside” (“Conversation”). Put another way, the novel is about an *impossible* object, a referent that is absent not simply in the sense of being lost or unlocatable, or even in the sense—common to all fiction—of lacking any existence whatsoever prior to and outside of the fiction that conjures it up. *House of Leaves* is a realist novel about an object that, for precise technical reasons, cannot belong to the “reality” we inhabit as embodied beings: even the *fictional* existence of this house is, in some sense, impossible.⁸ If we locate *House of Leaves* at the end of a long line of antimimetic novels—from (say) Laurence Sterne’s *Tristram Shandy* to (say) Italo Calvino’s *If on a Winter’s Night a Traveler*—we can better grasp its (relative) novelty; here the referential impossibility is not narrative-based and epistemologically focused so much as it is material: at bottom it stems from an incompatibility between the “topo-logic” of digital processing and the phenomenal dimension of human experience. *House of Leaves* is a narrative, in short, that forthrightly admits the void at its center so as better to foreground the role of belief in its “reality” claim. And embodied belief is precisely the allegorical object of the hyperactive proliferation of mediation that comes to fill in the novel’s central void.

Despite its referential impossibility, it remains the case that the house, as N. Katherine Hayles has astutely pointed out, “nevertheless enters the space of representation” (“Saving the Subject” 788). In a quite literal sense, it is the intrusion of the house into the lives of the novel’s characters—not to mention those of its readers—that generates the narrative as such. This fact should not, however, be taken as license to interpret the house too narrowly as a figure for the novel in which it figures (a literal “house of leaves”). While it certainly is that, the house must also and more fundamentally be viewed as a figure for the otherness of the digital, both as it enters

8. Here, to avoid confusion, we should note that *House of Leaves* is not a science-fiction novel, which makes its engagement with the impossible distinct from that engagement constitutive of science fiction as a literary genre.

thematically into the world of the novel and also as it punctures the surface of its textuality. Not unlike the uneasy correlation between parameter-driven design techniques and built form in contemporary architecture (where the design possibilities materialized in the former vastly exceed the geometrical realities of the latter),⁹ what we encounter in this impossible house is a figure for a spatial dimension—a topological figure—that cannot find adequate representation in the forms of orthographic recording exhaustively inventoried by the novel, but that still manages to exert an immense impact as the very motor force driving both the host of recording technologies thematized in the novel and the recording technology that is the text itself. This figural labor becomes quite explicit at the moment when Zampanò compares the house to an actual icefall:

Similar to the Khumbu Icefall at the base of Mount Everest where blue seracs and chasms change unexpectedly throughout the day and night, Navidson is the first one to discover how that place also seems to constantly change. Unlike the Icefall, however, not even a single hairline fracture appears in those walls. Absolutely nothing visible to the eye provides a reason or even evidence of those terrifying shifts which can in a matter of moments reconstitute a simple path into an extremely complicated one.

(68–69)

Here, through its very difference from a physical entity, we can see the house for what it is: a flexible, topological form capable of infinite and seamless modification; a postvisual figure immune to the

9. For a useful discussion of this uneasy correlation in the world of today's "cyberarchitects," see Kloft 198–205. Harold Kloft conceives this tension as that between form and performance: "[W]hat is currently promoted as 'digital' architecture is marred by a fatal assumption that innovation in architecture is today mainly expressed through form. No doubt, the topological geometry is presumed to be the basis for an adequate formal language. With unrelenting eloquence, somewhat like an adolescent rebellion against the formal dogmatism of Modernism, the focus has been on visualizing what is believed to be its greatest asset—the extravagance of form—thereby ending up with a new dogmatism that is no less rigid. The fascination with the new digital processes for the creation of architectonic form is certainly understandable. But it is equally obvious that the formal experimentation they permit cannot by itself lead to a new architecture. . . . One can only hope that architecture will resist such trivialization and, having discovered the form of this new paradigm, will go on to discover its performance" (204–5).

laws governing the phenomenology of photography, cinema, and video; a logic of transformation whose output is disproportionate to its input. In this perspective, the house is nothing if not a figure for the digital: its paradoxical presence as the impossible absence at the core of the novel forms a provocation that, as we shall see, is analogous in its effects to the provocation of the digital.

That this analogy-by-effect surfaces most insistently at the point where the text's thematic concern with the digital coincides with its most extreme typographical deformation can hardly be fortuitous. Indeed, this coincidence might be considered the culmination of the text's thematic engagement with the digital, the moment where this latter shades into a concern with the digital as a subterranean deformational force that threatens the integrity of the (traditional) text.¹⁰ Chapter 9 recounts "Exploration #4," in which the adventurer Holloway and his team encounter further evidence of the house's warped expansions as well as the bestial growl that, precisely by concretizing the unknown danger, will wind up driving Holloway out of his mind and ultimately to his demise. Interspersed through the narration of this exploration and serving to interrupt its progression are a series of typological innovations—upside down and horizontal footnotes that literally carve into the space of the text. Certainly the highlight of this experimentation is footnote 144, a blue-outlined frame, set near the top of the page and containing a (necessarily partial) list of everything that is *not* in the house. Here the outside world punctures the closure of the fictional world in a particularly destabilizing manner, since this list could be extended infinitely. And the formal deformations to which it submits the novel put the latter's long-standing stability as a storage technology into

10. If this is the case, it is not surprising that *The Navidson Record* begins with an invocation of the digital as its guiding theme: "While enthusiasts and detractors will continue to empty entire dictionaries attempting to describe or deride it, 'authenticity' still remains the word most likely to stir a debate. In fact, this leading obsession—to validate or invalidate the reels and tapes—invariably brings up a collateral and more general concern: whether or not, with the advent of digital technology, image has forsaken its once impeccable hold on the truth" (3). Nor is it insignificant that this introductory passage ends with a footnote that directs the reader to chapter 9, precisely the point where this thematic concern shades over into a symptomatology of the impact of the digital on the text.

question: not only does this list of what's not in the house run on through fourteen right-hand pages of the manuscript, but in its appearance on the left-hand pages, it presents the text in reverse, as if the normally opaque text were suddenly rendered transparent, or at the very least punctured by a see-through or reflective portal. This play with page layout and function culminates in a blank blue-outlined box followed, on the very next page, by a solid-blue box, and on the next by a larger unframed box of blank white space imposed directly on and obscuring a single passage devoted to the capacity of digital technology to manipulate images.

Thus while it playfully alludes to the capacity of text to mimic the effects of technical recording media, this culmination also foregrounds a deeper engagement of the text with digital technology: made to coincide with a citation championing the improvements in real-time (analog) orthographic recording technology, the abrupt growth of the text box into an unwieldy blank field obstructing the text beneath hints at the potential disjunction between textuality and technical recording media.¹¹ Here we can see clearly how the novel's thematic interest in coupling orthographic recording with textual deformation is a pretext for a more important argument concerning the rehabilitation of fiction in the wake of the digital. That is why the just-invoked passage championing improvements in orthographesis goes on to conclude with a consideration of how the digital differs categorically from "low-end," that is, analog, technology: rather than extending the scope of orthographic recording, digital manipulation threatens to suspend the orthographic function of recording per se: "Digital manipulation allows for the creation of almost anything the imagination can come up with, all in the safe confines of an editing suite . . ." (144). What the digital here signifies is the wholesale substitution of the productive imagination for the registration of the real—the triumph of fiction over documentation. It is in this sense that the fictional house can and must be understood as a figure for the digital: it challenges techniques of orthographic recording and, by

11. The citation is attributed to one Murphy Gruner, who informs us that "as the recording time for tapes and digital disks increases, as battery life is extended, and as camera size is reduced, the larger the window will grow for capturing events as they occur" (144).

evading capture in any form, reveals the digital to be a force resistant to orthothesis as such, to be the very force of fiction itself.

Media

Much more than just a thematic focal point, the impossible house that is literally larger inside than outside plays the role of catalyst for the events and actions that transpire within the novel. And more than just a motor for narration, it triggers a medial agon in which print's capacity to mimic technical orthographic recording attests not simply to its flexibility but—far more significantly, in my opinion—to its special aptitude for “documenting” the undocumentable impact of the digital. Even as it reconfigures the novel from story-telling vehicle to interface onto a virtually limitless universe of information, the thematization of mediation serves first and foremost to foreground the paradoxical privilege enjoyed by print in today's new media ecology.

Consider, as an initial example, how the house literally jump-starts the narrative: it is only once the house's peculiar spatial properties are discovered in chapter 4 that both film and text acquire a plot. Prior to this moment, the void of narration has been filled by Zampanò's description of some altogether innocuous documentary footage from the daily lives of the Navidsons in their new house on Ash Tree Lane.¹² Abruptly puncturing this static picture,

12. Though devoid of any consequential narrative action, this preliminary section does serve to reveal the potential tension between literary narrative and visual recording that will become central to the novel as a whole. When Zampanò seeks to reconstruct the film Navidson “set out to make” from the seemingly straightforward surveillance images and intentions for the project, he very deftly illustrates the medial difference between film and text, where what can only be the accurate registration of an innocent intention in film becomes, in effect, a portent of events to come. Thus film transfigures Navidson's intention simply “to create a record of how Karen and I bought a small house in the country and moved into it with our children,” to “see how everything turns out”: “In many ways,” Zampanò observes, “the opening of *The Navidson Record* . . . remains one of the more disturbing sequences because it so effectively denies itself even the slightest premonition about what will soon take place on Ash Tree Lane” (8). Once the house is revealed to be a physically impossible topological figure, however, this division of labor between technical recording and writing—registration of the event versus imaginative supplementation—breaks down, and the two forms of media become far more complexly interarticulated.

the discovery of the house's transformation triggers a frenzied proliferation of recording that will drive the plot of both film and text from this point forward. It is hardly insignificant that this proliferation occurs in direct response to a failure of technical orthography—the failure of ubiquitous Hi-8 video surveillance cameras to capture the house's uncanny transformation.¹³ Indeed, this plot-instigating incident puts into play an odd logic that will recur throughout the narrative: rather than leading to a disinvestment in technical recording, as we might expect from such a bizarre event, orthographic failure will, time and again, only intensify orthographic desire. Yet even as it sets off an escalating multiplication of layers of mediation, this odd logic will also cause the relation between text and technical recording to evolve in ways that speak directly to the changing status of the literary in the new media ecology. As the resistance of the house to orthographic capture yields an ever more complex deployment of technical mediation (to the point where, in Exploration #4, photography, film, video, surveillance video, and sound recording are all deployed together), the text undergoes a kind of internal functional division: on the one hand, its apparent seduction by this escalating orthographic frenzy causes it to join the fray and demonstrate its own flexibility as a form of media capable of mimicking other media; and on the other hand, it differentiates itself from technical recording in what amounts to an assertion of the novel's privilege within today's complex media ecology. *House of Leaves* shows itself—and therewith the novel as such—to be the appropriate vehicle for documenting the incapacity of orthographic recording technology to document the impossible house, which is to say, the digital condition that, as Kittler says, "determines our situation" (*Gramophone* xxxix).

Before exploring this privilege further, let us pause to examine precisely how this plot-instigating function of the house—and specifically the way in which it correlates the structure and function

13. "[T]he motion sensors were never triggered. . . . Virtually a week seamlessly elided, showing us the family as they depart from a house without that strange interior space present only to return a fraction of a second later to find it already in place, almost as if it had been there all along" (28). Mediated through Navidson's surveillance system, the house's transformation registers as a deformation of the temporality of daily life, an erasure of the duration of lived experience that leaves a practically seamless punctual transition: life compressed to fit the limits of recording.

of the narrative with the orthographic task thematized within the novel—impacts on the other aspects of the novel as a generic form. Effectively, by soliciting Zampanò's narrative into an agon with recording media, *House of Leaves* subordinates traditional characterization to allegorical functions that serve the ends of the medial agon. Consider, for example, the portrayal of Navidson. Navidson is, quite literally, a cipher for orthographic desire: all of the aspects that, traditionally speaking, contribute to well-rounded characterization—psychology, past experience, personal idiosyncrasies, and so on—are in his case mere subfunctions, indeed true epiphenomena, of this overriding function. This is why Navidson's character furnishes the very emblem for the paradoxical correlation of orthographic failure and orthographic desire we have just observed:

Perhaps one reason Navidson became so enamored with photography was the way it gave permanence to moments that were often so fleeting. Nevertheless, not even ten thousand photographs can secure a world, and so while Navidson may have worked harder, taken greater risks and become increasingly more successful, he was ultimately misled in feeling that his labor could make up for the love he was deprived of as a child and the ultimate sense of security such love bestows. . . . More than just snapping a few pictures and recording daily events with a few Hi 8s, Navidson wanted to use images to create an outpost set against the transience of the world. No wonder he found it so impossible to give up his professional occupation. In his mind abandoning photography meant submitting to loss.

(22–23)

What this passage so clearly shows is how Navidson's character encompasses both sides of the paradox of orthography: his history as a Pulitzer Prize-winning photographer, for example, stands just as clearly behind the desire that causes the family to retreat from the public domain as it does his inability to do so without documenting every step of the process.

Like character, relations between characters are also a direct function of the agon of media. Such relations develop only because and to the extent that they come together in the common task of documenting the impossible house. One striking instance appears in the renewal of Navidson's relationship with his brother Tom, a relationship, we are told, that has been strained for "over eight

years" (31). While we might expect the coincidence of the house's transformation to occasion a reconciliation between these characters, this possibility is soon put to rest by nothing other than the house itself: "[T]he moment and opportunity for some kind of fraternal healing disappears when Tom makes an important discovery: Navidson was wrong. The interior of the house exceeds the exterior not by 1/4" but by 5/16"" (32). This pattern holds for the remainder of the narrative, as if offering an allegory for the capacity of the house—precisely because of the orthographic crisis it both occasions and figures—to subsume all possibility of independent character relations: at each point that Will and Tom begin to address the substance of their estrangement (Will's success, Tom's drinking), some more pressing need related to the documentation of the house supervenes.

In an even more direct expression of its obsession with the problem of orthography, the novel enacts a subordination of face-to-face relations between characters in favor of ever more highly mediated forms. For example, Karen and Navidson communicate best across the distance of media interfaces: they speak to each other through Hi-8 video diaries and learn more about one another (and themselves) from viewing their documentations of the other than from any form of direct contact. One need only consider Karen's perspective on the relationship: her estrangement from Navidson mounts as his orthographic fervor intensifies, to the point that she actually abandons Navidson and the house; it is only after having assayed her own documentation, "A Brief History of Who I Love," that she can see Navidson "as something other than her own personal fears and projections." Through this mediation, Karen is able to witness how much Navidson "cherished the human will to persevere" and to glimpse the "longing and tenderness he felt toward her and their children" (368).

Even as it testifies to the irreducible complicity between character and mediation in this novel of mediations, this example also folds into itself supplementary layers of mediation which obscure even that measure of reconciliation that would seem to be effected between Karen and Navidson. The fact that Karen's method is to let "Navidson's work speak for itself" could not be more significant: the Navidson she rediscovers is not the private Navidson that she

so desires, but rather the Navidson that appears through the lens of his own photographic mediation. This conflation is symbolized by the conclusion of Karen's film, which, despite showcasing material from Karen's hand (a home video of Navidson and his children at play in their new home), serves above all to highlight the inadequacy of film as a documentary medium: unable to follow Navidson's actions as he grabs their daughter Daisy and holds her up to the blinding sun, the film culminates in total overexposure, showing Navidson (and the children that tie Karen to him) "vanish[ing] in a burst of light," as if transmogrified into the very materiality of film itself (368).

This recognition of the limitations of orthographic recording technology is not, however, restricted to localized "character" perspectives but woven increasingly tightly into Zampanò's unfolding narrative. At first this takes place thematically, as events reveal the utter impossibility of documenting that space. Following Exploration #3, where the house appears for the first time in its immensity, the adventurer Holloway matter-of-factly pronounces the eclipse of orthography: "It's impossible to photograph what we saw" (86). For Zampanò, the force of this pronouncement suspends any lingering faith in the redemptive power of Navidson's extraordinary gift:

Even after seeing Navidson's accomplished shots, it is hard to disagree with Holloway. The darkness recreated in a lab or television set does not begin to tell the true story. Whether chemical clots determining black or video grey approximating absence, the images still remain two dimensional. In order to have a third dimension, depth cues are required, which in the case of the stairway means more light. The flares, however, barely illuminate the size of that bore. In fact they are easily extinguished by the very thing they are supposed to expose. Only knowledge illuminates that bottomless place, disclosing the deep ultimately absent in all the tapes and stills—those strange *cartes de visites*.

(87)

Later on, when it is taken up by Navidson himself, this contrast between orthographic illumination and some kind of deeper, sightless knowledge serves explicitly to introduce the superiority of print: in a snippet from "The Last Interview" detailing the rescue of Billy Reston (a document curiously missing from the inventory of

supplementary materials assembled in the appendices), Navidson recounts his own discovery of the incongruity between mediated representation and reality: “[W]hen I finally went back to the house to retrieve the Hi 8s, I couldn’t believe how quickly it had all happened. My leap looks so easy and that darkness doesn’t seem dark at all. You can’t see the hollowness in it, the cold. Funny how incompetent images can sometimes be” (344). Confirming the validity of Navidson’s pronouncement here, Zampanò goes on to observe: “Only the interviews inform these events. They alone show us how the moments bruise and bleed.”¹⁴

This same pattern of mediation serving to highlight the comparative superiority of print over technical recording informs the novel’s investment in the capacity of print to mimic and thereby subsume the operations of recording technologies like photography and film. Consider, for example, the text’s simulation of the film running out, smack in the middle of the rescue. Spread out over the space of five pages (307–11, with slashes indicating page breaks) and located at various heights on the page, the following words are inscribed: “The film runs out here, / leaving nothing else behind but an unremarkable / white // screen.” Here the blank page functions as a material analog of the blank screen and the word “blank,” giving a sensory correlate to the abrupt cessation of visual information that occurs when a film runs out or when the meaning of the word “blank” sinks in. Yet again, as a closely related example helps to show, the line between mimicry and the differentiation of media can be a very fine one indeed. Just prior to this moment, as Navidson, Tom, and Reston seek to rescue Holloway’s assistants,

14. This theme of the superiority of writing to technical recording is reiterated countless times throughout Zampanò’s narrative, always in close correlation with the impossible figure of the house. Thus, for example, the drawings of Navidson’s children are celebrated for their capacity to capture “the awfulness at the heart of the house”: in contrast to the stark, sanitized perfection of the photographic renderings, the “shallow lines and imperfect shapes” of these drawings “narrat[e] the light seeping away from their lives” (315). Embodying the force of imagination over the merely reproductive, these examples attest to the truth of (invented?) photography critic Kadina Ashbeckie’s claim that “technology’s failure is over[un] by the onslaught of myth” (335).

Jed and Wax, from the now homicidal and heavily armed Holloway, the film captures Jed's assassination in footage that would later permit frame-by-frame analysis "as diligent as any close analysis of the Zapruder film." If, like the Zapruder film, this documentary footage affords "[a]mple information perhaps to track the trajectories of individual skull bits and blood droplets, determine destinations, even origins," it does not contain "nearly enough information to actually ever reassemble the shatter," or in other words, to document exhaustively the irreversible process in which Jed's life transitioned over into death (193). That such a transition can only be gestured at by both text and film becomes clear from the ensuing passage, which once again unfolds over the space of several pages:

Here then— / the after / math /of meaning. / A life / time/ finished
between / the space of / two frames. / The dark line where the / eye per-
sists in seeing / something that was never there / To begin with.

(193–205)

In this case, the gradual unfolding of the text differentiates it from the very filmic expression it is attempting to simulate. Yet it does so entirely to the advantage of the print medium, for by contrasting its own simulation to the filmic phenomenon of the afterimage, where what is seen is something extra-orthographic, something imagined, this passage brings a depth and complexity to the representation of death that, so the novel suggests, simply cannot be achieved in a mechanical medium like film.

Certainly, we could add to these examples the many moments in which the typographical arrangement of the text functions to mimic the action depicted in the film (for example, when the word "snaps" is stretched out over the space of three pages in imitation of the stretching of the rope holding the gurney as the stairway expands [294–96]); or we could focus on moments when typography serves to produce cinematic effects of temporal acceleration and deceleration (for example, the suspense generated by speeding up the turning of pages during the confrontation with Holloway [213–38] or the stasis achieved by the dense superimposition of several layers of footnoted text in chapter 9). And yet despite the undeniable testimony these typographical deformations lend to the mimetic

flexibility of print text, we cannot overlook their prevailing *media-technical* function: more than signs of the text's capacity to subsume the function of other media, these deformations in the body of the novel are so many symptoms of the *impossibility of representing the digital, of its resistance to orthographic capture*.

Body

If print nevertheless enjoys a certain privilege in the context of this representational impossibility, it must stem from something other than its orthographic capacity.¹⁵ Indeed, it can hardly come as a surprise that, in addition to the deformation of the generic and typographic conventions of the novel, the house also elicits fundamental changes in how we understand the novel as a process or, in other words, in how the novel—or rather how the process of reading the novel—generates meaning. If we bear in mind that the text we're holding in our hands has been quite literally transcribed by Johnny Truant, we can immediately appreciate how the "original" we're reading is itself already a copy, and—given Johnny's addition to the text of footnotes recounting the personal transformation it elicits in him—how it is *a copy with a difference*, which is to say, a singular embodied reading of a "text" that doesn't exist in any other form, or at least that

15. I must therefore take issue with Hayles's reading of the novel as a celebration of the medial flexibility of print. "The computer," Hayles writes, "has often been proclaimed the ultimate medium because it can incorporate every other medium within itself. As if learning about omnivorous appetite from the computer, *House of Leaves*, in a frenzy of remediation, attempts to eat all the other media" (781). Beyond its implicit (and, in my opinion, inadequate) view of the digital computer as a mere extension of the orthographic project of technical recording media, Hayles's reading significantly downplays the way in which the deformations of the text point to the failure of print and the novel as *recording* technologies (or "remediations" of such technologies, in the terminology Hayles borrows from Jay David Bolter and Richard Grusin, and ultimately from Marshall McLuhan), and thus to an extra-orthographic vocation that can only be worked out through a consideration of embodied response. Here, the mediation of the text by its reading—by Johnny Truant's reading and by ours—must be differentiated from other layers of mediation and, as I shall argue, accorded a certain privilege. I would nonetheless wholeheartedly concur with Hayles's conclusion that "*House of Leaves* recuperates the traditions of the print book—particularly the novel as a literary form," and that "the price it pays for this recuperation is a metamorphosis so profound that it becomes a new kind of form and artifact" (781).

can't be passed on to us in such a form. Indeed, Truant's mediation here presents a counterpart, within the domain of text, to the proliferating layers of orthographic mediation thematized in the narrative. As a post-orthographic analogical mediation, Truant's narrative figures the act of reading as an act of copying with a difference—a difference that is, in fact, borne directly by the body of the reader.¹⁶

Consider, in this respect, Truant's encounter, late in the text, with a group of musicians who had written song lyrics, "I live at the end of a Five and a Half Minute Hallway," based on a text they found

16. As I see it (and as my argument in this section will substantiate), Truant holds a privilege within the novel precisely because of his status as the "first reader" of Zampanò's narrative. I therefore find myself in disagreement with Danielewski, who, in a recent interview, claims that "there are many ways to enter *House of Leaves*" ("Haunted House" 111). Certainly the reader can follow the suggestion of footnote 78 on page 72 and read the letters in appendix 2-E from Johnny's institutionalized mother, Pelafina, before resuming the narrative, and perhaps some readers will actually make their way to *House of Leaves* by first reading *The Whalestoe Letters* (the independently published, enhanced edition of these letters), but it remains the case that whatever information these letters furnish about Pelafina serves first and foremost to introduce further information about Johnny: in short, they are subordinate to his function as narrator–first reader. In a sense, this situation is very well captured by Larry McCaffery's own experience of following the path suggested by footnote 72: McCaffery's return to the text is impacted by his reading of the letters, but without in any way changing his reliance on Johnny as the primary mediator of the story and model of interpretation. "[O]nce I finished her letters and returned to page 72," recounts McCaffery, "several things had occurred. First, it was now clearer to me that the author of this book had a much wider range of styles and voices than I had suspected up to that point. And second, throughout the rest of the novel, I was very aware that I now had a completely different perspective on Johnny Truant than if I had not turned from page 72 to appendix E" ("Haunted House" 112). If McCaffery was "quite literally reading a different book from the one most other readers would be reading," it was still a book whose primary narrator is Johnny Truant. Truant's privileged position requires a similar subordination of the potential themes that Pelafina's letters make available, such as family dysfunction. One need only consider the example of the typographically complex letter of January 3, 1988 (627), which forcefully demonstrates not only that Pelafina's letters are not direct conveyances of her inner voice, but that her character is itself a figure for the necessary mediation of the voice, the living present, the self-identical self. Because Pelafina simply could not have typeset the complex overlay of the word "forgive" on the typewriter available to her, her letter confronts us with evidence of the irreducibility of mediation: her allegedly "direct" expressions are thoroughly mediated and, as such, subject to all of the interpretive intrusions that comprise the novel's sustained assault on orthography. The important point here is that any effort to recuperate a level of thematic interpretation falters in the face of the material-epistemological-ontological hurdles the text insistently sets into place everywhere the reader turns.

on the Internet—the alleged first edition of *House of Leaves*. Given that this text includes an introduction and notes by Johnny Truant, the encounter creates something of a *mise-en-abyme* effect, since (at the very least) it underscores the existence of two different versions of the novel, only one of which (the one we're reading) could include Truant's notes about this encounter. We're thus compelled to ask after the status of this section of the novel (chapter 21) and, more generally, about whether Johnny's notes are properly located *inside* or *outside* of its frame. As in the earlier-mentioned passage where Navidson reads *House of Leaves* by match-and-paper light (see note 7), what is here staged is the transfer of focus from post-modern epistemological play to orthographic critique. In this respect, it is hardly surprising that Truant's interest in this text concerns the marginal notations added by the musicians and the larger question of orthographic exactitude they raise:

I thumbed through the pages, virtually every one marked, stained and red-lined with inquiring and I thought frequently inspired comments. In a few of the margins, there were even some pretty stunning personal riffs about the lives of the musicians themselves. I was amazed and shocked and suddenly very uncertain about what I had done. I didn't know whether to feel angry for being so out of the loop or sad for having done something I didn't entirely understand or maybe just happy about it all. There's no question I cherished the substance of those pages, however imperfect, however incomplete. Though in that respect they were absolutely complete, every error and unfinished gesture and all that inaudible discourse, preserved and intact. Here now, resting in the palms of my hands, an echo from across the years.

(514)

Beyond signifying the author's loss of authority over his text and the merging of author and reader functions, this passage attests to Truant's simultaneous recognition of the singularity of his own "reading" and of every other act of reading that might concretize his text. That is precisely why the pages he holds in his hands are at once "incomplete" and "absolutely complete": as the potential trigger for subsequent acts of reading, a trigger whose potential stems precisely from the failure of an orthographic fixing of the events recounted in the text, these pages are necessarily incomplete; but as a cipher of Truant's own experience of reading the text, an

experience that exists only in his embodied actualization—as the perception of an *inaudible echo* from the past—they are perfectly complete. As in the earlier Navidson–match light episode, the point here is not so much to introduce epistemic logjams as it is to foreground the correlation between the post-orthographic condition and the role of singular readerly embodiment. This is what I propose to call reading as copying with a difference.

Not surprisingly, given the thematic and theoretical focus of *House of Leaves*, the reconfiguration of the novel as a copy with a difference is the direct payoff of the text's agon with other media. And if the novel appears to be the victor in this agon, it is precisely because it undergoes a fundamental transformation in its function: liberated from its vocation as a means to stabilize, resurrect, and transmit the past—that is, to cash in a referential promise—the novel in its post-orthographic form operates as a kind of machine for producing what we might call “reality affects” in the reader. Itself the payoff—or the realization—of the reader's singular concretization of *House of Leaves*, such a reconfiguration is in fact anticipated from the very first page of *The Navidson Record*, where Zampanò urges the reader to ignore debates concerning the veracity of the film and to dwell instead on what's actually *in* the film: “Though many continue to devote substantial time and energy to the antinomies of fact or fiction, representation or artifice, document or prank, as of late the more interesting material dwells exclusively on the interpretation of events within the film” (3). In what amounts to a compact allegory of its ironic, if not self-undermining, impact, the text's first reader, Johnny Truant, proves himself unable to stick to such an interpretive strategy, despite his best intentions. Confronting Zampanò's later observation that “the best argument for fact is the absolute unaffordability of fiction,” Truant makes a prescient observation of his own: Zampanò has, despite his own hermeneutical injunction, managed to wander into “his own discussion of ‘the antinomies of fact or fiction, representation or artifice, document or prank’ within *The Navidson Record*.¹⁹⁶” (149–195). Yet rather than bringing clarity, this observation brings only confusion: “I have no idea whether it's on purpose or not. Sometimes I'm certain it is. Other times I'm sure it's just one big fucking train wreck” (149–195). The paradoxical impact of Zampanò's well-nigh

new critical aesthetic is itself subsequently allegorized at the level of textual materiality, as Truant's observation is itself literally pierced from the outside—both by the footnote that interrupts it only in order to continue it and by the indecipherable, because utterly singular, free association it inspires from Johnny (and which forms the content of that footnote):

¹⁹⁶ 195 (cont.) Which, in case you didn't realize, has everything to do with the story of Connaught B. N. S. Cape who observed four asses winnow the air . . . for as we know there can only be one conclusion, no matter the labor, the lasting trace, the letters or even the faith—no daytime, no starlight, not even a flashlight to the rescue—just, that's it, so long folks, one grand kerplunk, even if Mr. Cape really did come across four donkeys winnowing the air with their hooves. . . .

(149n196)

In this expanding jumble of nonsensical associations, we encounter an effort—Truant's effort—to concentrate on interpreting events *within* the text that, paradoxically, can only succeed to the extent that it abridges its own imperative. Put another way, what appears to happen from the moment the reader (with Truant as model) decides to concentrate on what's given, rather than on the veracity of what's given, is a shift in emphasis from the text (or film) as a referential object to, as Barthes might say, the "*necessarily* real" impact that it has on the embodied life of its reader.

Following this transformation, however, the intentionality of the "*necessarily* real" impact undergoes a basic shift of orientation: no longer fixated on the past, it becomes emphatically future-directed. In this sense, it is most significant that the digital—and the post-orthographic text—correlates with the body in a fundamentally different way than does, say, photography. Indeed, the flexibility of text—and hence its privilege—can be understood as an effect of this very difference: whereas the orthographic function of technical recording emerges from a preexistent analogy with the body, the digital (and the post-orthographic text) has no such ground.¹⁷

17. This claim forms the basis of my analysis of the digital in *New Philosophy for New Media*.

Barthes's depiction of the photograph as an emanation from the body simply cannot characterize recording in the digital age:

The photograph is literally an emanation of the referent. From a real body, which was there, proceed radiations which ultimately touch me, who am here; the duration of the transmission is insignificant; the photograph of the missing being, as Sontag says, will touch me like the delayed rays of a star. A sort of umbilical cord links the body of the photographed thing to my gaze: light, though impalpable, is here a carnal medium, a skin I share with anyone who has been photographed.

(80–81)

By contrast, what is at stake in technical recording today is no longer an analog registration rooted in the correlation between technology and the body. In the age of Photoshop, the very basis for Barthes's depiction—the profound tie linking the analog with the body—no longer holds.

Accordingly, we must fundamentally reconceptualize the relation between the body and technical recording. If, in Barthes's imagining, it is the body itself—direct carnal transmission—that insures the orthographic function of photography, today the body's no less fundamental mediating role must be introduced from the outside *as a supplement* to recording, and, indeed, in a way that reasserts analogy where there no longer is any, or, more exactly, where none is *pregiven*. Rather than an inscription of the body as a stable trace of the past, what mediation in a digital environment involves is a supplementary, future-directed process of embodiment, in which a carnal analogy with the digital is, as I put it elsewhere, forged as an "original" supplement (*New Philosophy*, chapter 6). Most important in this transformation is the liberation of the bodily from its function as a support or host for orthographesis. For this reason, it is hardly surprising that *House of Leaves* takes pains to champion the singularity of experience, whether of the characters *within* its several fictional frames or of readers situated *outside* some—but, importantly, not all—of these frames.¹⁸

18. As we shall see shortly, the text asserts the impossibility of being outside all frames—something that would amount to processing raw digital data directly, following the governing analogy with the digital, without any mediating interface.

Consider, for example, the text's assertion that the various explorations of the house should be viewed less as collective experiences than as a conjunction of a host of singular ones: "As with previous explorations," Zampanò informs us in chapter 9,

Exploration #4 can also be considered a personal journey. While some portions of the house, like the Great Hall for instance, seem to offer a communal experience, many inter-communicating passageways encountered by individual members, even with only a glance, will never be re-encountered by anyone else again. Therefore, in spite of, as well as in light of, future investigations, Holloway's descent remains singular.

(118)

This insight on Zampanò's part mirrors the conclusion of contemporary scientific researchers who, we are told, "believe the house's mutations reflect the psychology of anyone who enters it." Thus "Dr. Haugeland asserts that the extraordinary absence of sensory information forces the individual to manufacture his or her own data." And "Ruby Dahl . . . calls the house on Ash Tree Lane 'a solipsistic heightener,' arguing that 'the house, the halls, and the rooms all become the self—collapsing, expanding, tilting, closing, but always in perfect relation to the mental state of the individual'" (165).¹⁹ All of this leads Zampanò to conclude that in the case of Navidson's house, "subjectivity seems more a matter of degree. The Infinite Corridor, the Anteroom, the Great Hall, and the Spiral Staircase, exist for all, though their respective size and even layout sometimes changes. Other areas of that place, however, never seem to replicate the same pattern twice, or so the film repeatedly demonstrates" (178).

Further evidence for this claim can be found, for example, in the chaotic and complexly mediated scene during which Tom, Navidson's brother, disappears for good as Navidson helplessly looks on. Here the correlation between singularity and spatial muta-

19. As if this were not sufficient to prove the point at hand, the narrative goes on to enumerate various instantiations of the theory of subjective space, including Günter Nitschke's notion of "experienced or concrete space," Michael Leonard's conception of the "sensation of space" where the final result "in the perceptual process is a single sensation—a 'feeling' about that particular place . . ." (175), Kevin Lynch's concept of the *personal* basis for the emotional cognition of environment, and Jean Piaget's understanding of the perception of space as "a gradual construction" (177).

tion creates a situation in which Tom's actions generate "spatial affects" that are subsequently countered by the variant spatial affects generated by Navidson's actions. Having retrieved Navidson's daughter, Daisy, from the house, Tom has "found his limit"; out of breath, he stops and kneels, "clutching his sides and heaving for air":

The floor carries him backwards ten or fifteen feet more and then for no apparent reason stops. Only the walls and ceiling continue their drunken dance around him, stretching, bending, even tilting.

When Navidson returns to the window, he cannot believe his brother is standing still. Unfortunately, as Tom demonstrates, whenever he takes one step forward, the floor drags him two steps back. Navidson quickly begins to crawl through the window, and oddly enough the walls and ceiling almost instantly cease their oscillations.

(346)

It is hardly insignificant that Tom's final disappearance is explicitly figured through photographic metaphors: "Only the after-effects create an image commensurate with the shutter like speed with which those walls snapped shut"; "In less time than it takes for a single frame of film to flash upon a screen, the linoleum floor dissolves, turning the kitchen into a vertical shaft. Tom tumbles into the blackness." Nor is it incidental that the narration of this event is itself tainted with the fragmentizing effects of mediation, as we learn from footnote 308: because of darkness and limitations of the Hi-8 video cameras here deployed, the film had to be supplemented by Billy Reston's narrative, which is itself simply the retelling of what Navidson had earlier recounted to Reston. One theory for why Navidson makes Reston "the sole authority" here is his (that is, Navidson's) insight into the incommensurability of past-oriented orthography and future-directed experience:

By relying on Reston as the sole narrative voice, [Navidson] subtly draws attention once again to the question of inadequacies in representation, no matter the medium, no matter how flawless. Here in particular, he mockingly emphasizes the fallen nature of any history by purposefully concocting an absurd number of generations. . . . A pointed reminder that representation does not replace. It only offers distance and in rare cases perspective.

(346n308)

As always in this text of ever-proliferating mediation, after the many layers have been sorted, the one thing that remains “true”—“indubitable” in a perversely Cartesian sense—is the bodily impact of the effort to interpret. Accordingly, just as the orthographic desire that forms the very motor of the novel’s plot sets the context for the singularity of embodied response, the figuration of the house’s subjective spatial mutations through media effects leads to an entirely different modality of conviction—the physiological. Consider, in this respect, how Zampanò directs the discussion of subjective space toward more primitive processes of proprioception and somatic expression:

No doubt speculation will continue for a long time over what force alters and orders the dimensions of that place. But even if the shifts turn out to be some kind of absurd interactive Rorschach test resulting from some peculiar and as yet undiscovered law of physics, Reston’s nausea still reflects how the often disturbing disorientation experienced within that place, whether acting directly upon the inner ear or the inner labyrinth of the psyche, can have physiological consequences.

(179)

It is these very embodied, nonconscious, practically autonomous processes that, as Johnny’s response makes clear, confer the feeling of reality on mediated experience: “No doubt about that,” he adds with wry irony; “My fear’s gotten worse” (179n211).

This correlation between the house’s spatial mutations and the singularity of experience finds an apt emblem in the figure of the labyrinth: “in order to consider how distances within the Navidson house are radically distorted,” Zampanò notes at the beginning of chapter 9, “we must address the more complex ideation of convolution, interference, confusion, and even decentric ideas of design and construction. In other words the concept of a labyrinth” (109). Citing Penelope Reed Doob’s *The Idea of the Labyrinth from Classical Antiquity through the Middle Ages*, Zampanò notes how the distinction between those who are inside the labyrinth and those who view it from the outside breaks down in considering Navidson’s house, “simply because no one ever sees that labyrinth in its entirety.” As a result, “comprehension of its intricacies must always be derived from within,” that is, through the singular experience

of those inside it (114). If this is true for the film as well, it is because the film too is an unsolvable labyrinth: there simply is no transition possible from the “continually devolving discourse” of the film—a discourse that promises discovery “while all along dissolving into chaotic ambiguities too blurry to ever completely comprehend”—to an embodied navigation of the house it mediates (114). In a by now familiar pattern, this brush with the limits of technical orthography almost immediately shades into an account of the house as a figure for the digital. *This* house, Zampanò notes, defies the traditional means of escaping a labyrinth—by, say, keeping one hand on a wall and walking in one direction—since it “would probably require an infinite amount of time and resources” to be solved (115). *This* house, in other words, is a labyrinth of unprecedented impossibility: it presents truly irresolvable obstacles, rendering futile any “permanent,” that is to say, objectively mappable, solution: “Due to the wall-shifts and extraordinary size, any way out remains singular and applicable only to those on that path at that particular time. All solutions then are necessarily personal” (115).

This comparison of the house with the figure of an unobservable labyrinth furnishes the genetic schema for the novel’s critique of orthography. Crucial here is the move, exemplified in the comparison, to *flip over* an initial aporia between mediation and experience in a way that reinvests the very bodily dimension of experience that the aporia is designed to undermine. Thus if experience is necessarily mediated by orthographic recording (film as exact registration of the past), and if such recording is necessarily incomplete (film as labyrinth), then there simply can be no transition from mediation to embodied experience. However, if what we are dealing with in the first place (the house as a figure for the digital) is something that cannot *in principle* be recorded—and here is where the flipping over occurs—then the aporia is a vicious one: no more adequate recording apparatus could potentially reconcile mediation and experience, since the object in question absolutely resists orthographic capture to begin with. If the house-labyrinth comparison forms an exemplary instance of this schema of reversal, it is, ultimately, because it takes the reader through the very process (flipping over the aporia) that it thematizes: the act of recognizing

the house as a figure for the labyrinth of the digital—for an *impossible, unsolvable* labyrinth—catalyzes a fundamental shift of approach, an abandoning of the project of orthographesis thematized in the novel and a renewed concentration on the embodied, and thus necessarily partial, framing of information by the reader. To put it in the terminology of systems theory, which is all too germane here, the impossibility of an external, first-order observation of the entire system functions to ennoble second-order observations that take this very impossibility—always from their singular standpoint within the system—as their content.²⁰ No wonder, then, that Ruby Dahl, Zampanò's invented expert on space, "fails to consider why the house never opens into what is necessarily outside of itself" (165n202).

The reinvestment of what we might call bodily observation correlates directly with the reconfiguration of the novel as a copy with a difference. As yet another analog of the impossible, unrecordable house, the novel itself can only be said to exist through the series of embodied, second-order observations to which it gives rise. If *House of Leaves* is able to speak *exemplarily* of this reconfiguration, that is because it poses itself as one "medial presence" among others—as a specific medium (a house of leaves) with no pre-given privilege within the larger media ecology to which it necessarily belongs; *House of Leaves* thereby opens itself to the infinite matrix of information outside of it in a way that is almost unprecedented even among contemporary novels.²¹ In this way, moreover, the novel is able to take the question of its own specificity as its content.

This generic recursiveness appears most strikingly in the digression on echo that opens chapter 5. Initially presented as a consideration prerequisite for understanding the importance of space in the film (and hence, by implication, of the house as an impossible labyrinth), the analysis of echo leads into a consideration of the Borgesian technique of indiscernible difference, a foray into the

20. See Tabbi for an interesting account of contemporary fiction in the context of systems theory.

21. The term "medial presence" comes from Rick Poyner's review of the novel in *Artbyte*, as cited in Tabbi 145n3.

mythological resonances of echo, and a pseudoscientific exploration of the physiology of the echo before finally culminating in a synaesthetic transformation of the process of hearing itself—a recalibration of hearing as sight—which testifies to its strongly embodied basis.

Distributed across these various interpretive domains, the figure of echo begins to take form as a model for the very process of reading that is triggered by *House of Leaves*. Specifically, by articulating the mythic with the physical, Zampanò's analysis of echo correlates the act of reading with a hermeneutics of embodiment, where meaning simply *is* the entirety of the physiological impact of that act. In this articulation, the text's analysis of the physical conditions of echo functions to specify the embodied thresholds which serve to constrain the sonic phenomenon of the echo, while the analysis of Echo's mythic heritage—from Ovid to John Hollander—reenvisions echo as a mode of *analog* repetition, which is to say, a conception of response marked by the *différance* of the body. The figure of Echo serves, in short, to introduce the maxim that will guide our construction of the novel as a copy with a difference: find the analog within the digital; that is, let your body reenlive what is merely an exact copy, an orthographic inscription of the past as past.

Interweaving mythological and scientific accounts, the analysis of echo purports to unpack the “echoes reverberating within the word itself” (41). Together, the mythological and scientific accounts articulate “space” and “love” with one another:

Myth makes Echo the subject of longing and desire. Physics makes Echo the subject of distance and design. Where emotion and reason are concerned both claims are accurate.

And where there is no Echo there is no description of space or love.

There is only silence.

(50)

By articulating space and love, myth and physics open an alternative relationship to the house, one rooted less in its blanket resistance to recording (its “digital autonomy”) than in the concrete demands it makes on understanding. According to Zampanò, recognition of the imbrication of physics and myth is essential to the task posed to the novel's reader: “in order to even dimly comprehend the shape of the Navidson **house** it is . . . critical to recognize how the laws of

physics in tandem with echo's mythic inheritance serve to enhance echo's interpretive strength" (47). Indeed, as the text's exemplar for the strength of a bodily hermeneutics, echo forms a model for managing the impossible labyrinth of the house and thereby repudiates the supposed "descriptive limitations" that preface the analysis of the house as labyrinth. If the restriction of the echo "to large spaces" initially seems to restrict its capacity (as compared with a recording technology like film) to "consider how distances within the Navidson house are radically distorted" (109), following the analysis of the house as impossible labyrinth, where orthographic mediation is shown to be inadequate *in principle*, it is precisely this kind of restriction—insofar as it forms a correlate of embodied understanding—that is shown to be most necessary.

In what sense, then, can we understand Echo to be the precondition for the description of space? Zampanò's analysis of the physics of sound explains how echo "defines," "limits" and "temporarily inhabits" space (46): the sonic phenomenon of echo transpires through the conjunction of distance and time. What matters most, as Zampanò reminds us, is "a sound's delay":

[T]he human ear cannot distinguish one sound wave from the same sound wave if it returns in less than 50 milliseconds. Therefore for anyone to hear a reverberation requires a certain amount of space. At 68 degrees Fahrenheit sound travels at approximately 1,130ft per second. A reflective surface must stand at least 56 1/2ft away in order for a person to detect the doubling of her voice.

(50)

The production of echo, the doubling of sound—sound's *différance*, as it were—requires that certain empirical conditions be met: the space inhabited by sound must be neither too small nor too large (there is no echo in a space of infinite dimensions, just as there is none in a vacuum). Otherwise put, the sonic phenomenon must be calibrated to the thresholds and constraints of embodied hearing—hearing as it occurs both in a concrete context and through a concrete apparatus.

These imperatives inform the double synaesthetic transformation of hearing at issue in Zampanò's analysis. To describe the "descriptive ability of the audible," Zampanò offers the formula "Sound +

Time = Acoustic Light" (47). As a medium for measuring space, sound provides an acoustic analogy for light: like light, it is omnispacial and pervasive. For this reason, concludes Zampanò, "speaking can result in a form of 'seeing.'" Following a contrast with animals who, we are told, use sound to create acoustic images, who literally "see" the shape of sound, Zampanò modifies this formula. More accurate to the mode of imaging of the human eye, which is neither active nor passive and which merely requires an object to be illuminated, is the formula "Sound + Time = Acoustic Touch" (47). Sound measures distance and so approximates the function of vision by translating distance into touch, by opening a bodily modality in which seeing is feeling. That is why, "to hear an echo, regardless of whether eyes are open or closed, is to have already 'seen' a sizable space" (50).

To grasp how this synaesthetic transformation and reembodiment of vision reconfigures the task of reading, we must turn to the mythological history. Myth, Zampanò notes, testifies to the insurgency of Echo who, despite suffering "total negation" of body and "near negation of voice," still manages "to subvert the gods' ruling." In so doing, Echo offers herself as a model for the reader, who is, after all, faced with the task of inhabiting an impossible spatial object, an object whose impossibility is a function of the disembodied logic of digital replication. Her example introduces the principle for the conversion that reading must effect, for, as Zampanò stresses, "her repetitions are far from digital, much closer to analog. Echo colours the words with faint traces of sorrow (The Narcissus myth) or accusation (The Pan myth) never present in the original" (41). Like Echo, the reader must breathe life into the orthographic, transforming it from an exact inscription of the past into the catalyst for the new, the unpredictable, the future.

Indeed, Echo furnishes an example of how—to adopt the language of information theory—information is turned into meaning: "[H]er voice has life. It possesses a quality not present in the original, revealing how a nymph can return a different and more meaningful story, in spite of telling the same story" (42). Just like Pierre Menard's echo of *Don Quixote* in the famous Borges story to which Zampanò compares it, the "exquisite variation" introduced by Echo marks the difference between information in a purely technical

sense and information as intrinsically imbued with embodied meaning. It is British cyberneticist Donald MacKay who first introduced this important difference in his attempt to supplement Claude Shannon's mathematical theory of information with a theory of meaning. According to MacKay, there are two constituents of a unit of information: selection and construction. Selection corresponds to Shannon's technical conception of information and designates the probability of a message's likelihood given the formal repertoire of choices.²² Construction, on the other hand, specifies a larger context for selection—namely the behavioral state of the receiver, by which MacKay means not simply her cognitive predispositions but her "visceral responses and hormonal secretions," that is, her most primitive embodied faculties (54).²³ For MacKay, information cannot be divorced from meaning because selection necessarily occurs in dirty, real-world situations where embodied tendencies contaminate and, in so doing, actively contribute to the production of information.

Now it just so happens that MacKay's theory furnishes an explanation for the very difference Zampanò has built into the phenomenon of the echo. By correlating meaning not with an observable change in the behavior of the recipient but with her being in a particular behavioral state, MacKay's theory encompasses situations involving the repetition of a message. Despite lacking informational value, a repeated message retains its meaning, since this simply is the behavioral state it specifies and is it regardless of whether the receiver is already in that state or not. By allegorizing this correlation of information with meaning, the myth of Echo operates an *epochè* of the phonocentric exactly opposite to that informing orthographic recording: rather than preserving the past as a trace of the unlived (the past not lived by me), it serves to open the present

22. Accordingly, information in the technical sense can be defined as a statistical measure of uncertainty equal to the logarithm taken to base 2 of the number of available choices. Thus if a message can be specified following five binary steps or choices, the statistical measure of uncertainty (or information) can be specified as $C = \log_2 32 = 5$. This logarithm allows the message to be specified probabilistically, without any recourse being made to its meaning. See Hayles, *Chaos Bound*, chapter 2.

23. I discuss MacKay's "whole theory of information" in "Cinema beyond Cybernetics."

moment of enunciation onto its uncanny doubling, to discover within it the possibility for an *analog* echoing that does not so much preserve the trace of the past as carry its force into the future in a way that is as unpredictable and singular as is this or that reader's set of embodied predispositions.

Not surprisingly in this novel of endless mediations, *House of Leaves* itself proffers a model for reading as analog echoing. In a footnote added to Zampanò's discussion of echo, Truant recounts his own self-transformation as an experience of the double synaesthetic crossing effected by the institution of echo as the mythicophysical condition of possibility for hearing. Musing on the "intensely personal nature" of Zampanò's consideration of echo in the orientation of the blind, Truant goes on to recount his own expanded and heightened visual capacities: "But I saw a strange glimmer everywhere, confined to the sharp oscillations of yellow & blue, as if my retinal view suddenly included along with the reflective blessings of light, an unearthly collusion with scent & sound, registering all possibilities of harm, every threat, every move, even with all that grinning and meeting and din" (49). This synaesthetic transfiguration gives Truant the possibility to hear and see in a noisy environment where, we are told, he and his friend Lude were prevented "from hearing correctly," and where Lude remained "blind."

Truant's modeling of his response on the analogics of echo anticipates later sections of the book where he is led to postulate his symbiotic relationship with Zampanò's narrative. In the most striking of these, Truant depicts himself as the nurturer and provider for the text, the very source without which it would not even exist:

I wash the sweat off my face, do my best to suppress a shiver, can't, return to the body, spread out across the table like papers—and let me tell you there's more than just *The Navidson Record* lying there—bloodless and still but not at all dead, calling me to it, needing me now like a child, depending on me despite its age. After all, I'm its source, the one who feeds it, nurses it back to health—but not life, I fear—bones of bond paper, transfusions of ink, genetic encryption in xerox; monstrous, maybe inaccurate correlates, but nonetheless there. And necessary to animate it all? For is that not an ultimate, *the* ultimate goal? Not some heaven sent

blast of electricity but me, and not me unto me, but me unto it, if those two things are really at all different, which is still to say—to state the obvious—without me it would perish.

(326)

Almost immediately, however—in yet another testament to the text’s medial self-reflexivity—this thought is abruptly turned around:

There’s something else.

More and more often, I’ve been overcome by the strangest feeling that I’ve gotten it all turned around, by which I mean to say—to state the not-so-obvious—without it I would perish. A moment comes where suddenly everything seems impossibly far and confused, my sense of self derealized & depersonalized, the disorientation so severe I actually believe—and let me tell you it is an intensely strange instance of belief—that this terrible sense of relatedness to Zampanò’s work implies something that just can’t be, namely that this thing has created me; not me unto it, but now it unto me, where I am nothing more than the matter of some other voice, intruding through the folds of what even now lies there agape, possessing me with histories I should never recognize as my own; inventing me, defining me, directing me until finally every association I can claim as my own ... is relegated to nothing; forcing me to face the most terrible suspicion of all, that all of this has just been made up and what’s worse, not made up by me or even for that matter Zampanò.

Though by whom I have no idea.

(326)

Here, then, is the traditional equation of novel and body, now reconfigured for a media—or more precisely, for a post-orthographic—age. In place of the epistemological frisson generated by the *mise en abyme* of, say, Borges’s “Garden of Forking Paths,” what we encounter here is a thorough recursivity between text and body, where it makes no difference which is the container and which the contained, since in either case the fictional narrative garners its “reality effect” through the reality *affects* it stimulates its readers to produce.

From this subtle reconfiguration of postmodern reflexivity, we can draw two important conclusions. First, Truant’s transformation figures the response of every reader, showing both how it encompasses the entirety of the bodily processing involved in reading the text and

also how it is, necessarily, undocumentable, utterly singular. Second, Truant's experience locates the correlation of the novel and the body *outside the frame of the novel* traditionally considered, thereby transforming it into something like an index of the creativity of embodied reading: just as the novel undergoes bodily deformation as a result of its confrontation with recording media, so too does the reader undergo an embodied transformation which, in this most curious of mediations, manages to stand in for the referential absence at the core of the novel and thereby to confer reality on the physically, materially—and perhaps even logically—impossible fictional world projected by this truly curious house of leaves.

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WORKS CITED

- Barthes, Roland. *Camera Lucida: Reflections on Photography*. Trans. R. Howard. New York: Hill, 1981.
- Bolter, Jay David, and Richard Grusin. *Remediation: Understanding New Media*. Cambridge, MA: MIT P, 1999.
- Borges, Jorge Luis. "The Garden of Forking Paths." *Collected Fictions*. Trans. A. Hurley. New York: Viking, 1998.
- Danielewski, Mark Z. "A Conversation with Mark Danielewski." Conducted by Sophie Cottrell. 28 Apr. 2002 <<http://www.randomhouse.com/boldtype/0400/danielewski/interview.html>>.
- . "Haunted House—An Interview with Mark Z. Danielewski." Conducted by Larry McCaffery and Sinda Gregory. *Critique* 44.2 (2003): 99–135.
- . *House of Leaves*. New York: Pantheon, 2000.
- Doob, Penelope Reed. *The Idea of the Labyrinth from Classical Antiquity through the Middle Ages*. Ithaca, NY: Cornell UP, 1990.
- Hansen, Mark. "Cinema beyond Cybernetics, or How to Frame the Digital-Image." *Configurations* 10.1 (2002): 51–90.
- . *New Philosophy for New Media*. Cambridge, MA: MIT P, 2004.
- . "The Time of Affect, or Bearing Witness to Life." *Critical Inquiry* 30 (2004): 584–626.
- Hayles, N. Katherine. *Chaos Bound: Orderly Disorder in Contemporary Literature and Science*. Ithaca, NY: Cornell UP, 1990.
- . "Saving the Subject: Remediation in *House of Leaves*." *American Literature* 74 (2002): 779–806.
- Kittler, Friedrich. *Discourse Networks 1800/1900*. Trans. M. Metteer and C. Cullens. Stanford, CA: Stanford UP, 1990.
- . *Gramophone, Film, Typewriter*. Trans. G. Winthrop-Young and M. Wutz. Stanford, CA: Stanford UP, 1999.

- . *Literature, Media, Information Systems: Essays*. Ed. J. Johnston. Amsterdam: G + B Arts International, 1997.
- Kloft, Harald. *Digital Real: First Built Projects*. Basel: Birkhäuser, 2001.
- MacKay, Donald. *Information, Mechanism, Meaning*. Cambridge, MA: MIT P, 1969.
- McLuhan, Marshall. *Understanding Media: The Extensions of Man*. New York: McGraw, 1964.
- Stiegler, Bernard. *Technics and Time, Volume 1: The Fault of Epimetheus*. Trans. G. Collins and R. Beardsworth. Stanford, CA: Stanford UP, 1998.
- . *La technique et le temps, Volume 2: La désorientation*. Paris: Editions Galilée, 1996.
- . *La technique et le temps, Volume 3: Le temps du cinéma et la question du mal-être*. Paris: Editions Galilée, 2001.
- Tabbi, Joseph. *Cognitive Fictions*. Minneapolis: U of Minnesota P, 2002.