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CommentPress: New (Social) Structures for New (Networked) Texts

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> *...there are still many tricks that electronic technology is quite incapable of performing; still many structural, practical, and interpretative problems embedded in the new systems; still many radical and continuing limitations on the supposed electronic management of knowledge.* (Donaldson 2)

> *If 'digital natives' are the next audience for our scholarly resources, shouldn't we be thinking about new ways to organize, store, and deliver our content?* (Wittenberg)

On July 25, 2007, the Institute for the Future of the Book released version 1.0 of CommentPress, a theme for WordPress that facilitates the web publication of lengthy documents in a fashion that is both internally and externally networked, and that allows for reader commenting and discussion at a level of granularity ranging from the document as a whole to the individual paragraph. The goal of CommentPress, as the project's "about" page presents, stems from the desire

> to see whether a popular net-native publishing form, the blog, which, most would agree, is very good at covering the present moment in pithy, conversational bursts but lousy at handling larger, slow-developing works requiring more than chronological organization —whether this form might be refashioned to enable social interaction around long-form texts. (About CommentPress)

This connection, in CommentPress, of an experiment into the organization of digital text with a desire to promote social interaction within and around it offers us the opportunity to resituate the problem of electronic publishing in a potentially productive way, and in so doing compels a new perspective on certain aspects of the historical development of publishing. This paper will take that look backward as a means of considering the significance of a project like CommentPress — which should be understood not as the apotheosis of electronic publishing, but rather as one example of a fruitful avenue of development — for the future of textuality online.

Codex, Not Print

In December 2006, at the MLA in Philadelphia, I had the opportunity to hear Peter Stallybrass give a paper whose title indicated that it would focus on the relationship between textual studies — or the application of material culture approaches to the study of textual production — and the book. At the very outset of his presentation, however, he made a somewhat startling claim; in asking who, exactly, it is that produces the thing we know as the book, he overturned several basic assumptions about that form's production often unconsciously held by both literary scholars and textual critics. *Authors* do not

write books, he argued, suggesting that, actually, authors write sentences, or, on a larger scale, texts. But neither do *printers* produce books; printers, instead, produce pages. The primary argument that Stallybrass's paper sought to make was about the need for textual studies scholars to think in terms of pages, both bound and unbound, in order to escape what he called "the tyranny of the book" (Stallybrass 2006).

In setting up this argument, however, Stallybrass suggested, almost as an aside, that the book is a production, finally, of the binder. This is a point I'd like to dwell on a bit, as it suggests that the bookness of the book derives less from its material composition — ink-on-paper — than from its organization, the sequenced, bound, and cut leaves. As the conventional wisdom holds, it is the development of that form — the shift from the scroll to the codex — that, as Stallybrass argues in "Books and Scrolls: Navigating the Bible," enabled "the capacity for random access" (42), allowing a reader to turn immediately to any particular point in a text, thus facilitating the reader's active engagement in and manipulation of the textual object. Turning our material focus from print to binding as the source of bookness holds significant implications for scholars working on new, electronic modes of textuality, and in particular, on the future of the book. For if this is the case — that the formal properties of the book that have the greatest impact on our reading experience are derived not from print, but rather from the codex — one might suggest that researchers working on new ways of transforming ink-on-paper to pixels-on-screens may be working on the wrong problem, or at least the wrong aspect of a knottier problem than it has at moments appeared.

The problem, in other words, may not be one that is material, about the differing properties of bit versus atom, but instead structural, organizational. Stallybrass notes the irony in digital textuality's regression from the kinds of manipulation that the codex made possible, reimposing the limitations of the scroll on our reading practices. Despite having greater capacities for random access to texts via searching and other modes of linking, electronic publishing's reliance on scrolling text too often fails to take account of the ways that cognitive practices of reading are spatially organized. See, for instance, Geoffrey Nunberg's footnoted observation in "The Place of Books": "One ancillary effect of this homogenization of the appearance of electronic documents is to blur the sense of provenance that we ordinarily register subconsciously when we are reading. As a colleague said to me not long ago, 'Where did I see something about that the other day? I have a clear mental picture of a UNIX window'" (37, n31). Stallybrass similarly notes the dislocation that results from the inability to stick one's finger between the pages of an electronic text to mark one's place. None of this is to say that digital publishing ought to mimic the spatial arrangement of bound pages, but rather to suggest that those of us invested in the future of publishing online need to think in terms that are not just about page design, but rather about larger-scale textual structures.

What follows is one perspective on the necessity of a web-native replacement for the codex form, using CommentPress as an example of one approach that has been taken in addressing that problem. This paper has, moreover, benefited directly from the technology that it in part explores; a draft of the article was posted for comment and discussion in CommentPress, allowing me in some sense to practice what I am preaching. [1] [#N1] CommentPress should in this sense not be imagined as a conclusion to the issues I'm exploring, but instead as itself a mode of exploration, one way of approaching the issues involved in electronic publishing from a broader structural perspective. At stake is not the success or failure of one particular technology, but rather our ability to produce a reading experience that provides net-native principles of organization as compelling as those of the codex.

Documents, E-Books, Pages

Much of the work done on new systems of digital textuality in recent years has fallen into the trap of attempting all too literally to reproduce the printed page on digital screens, whether through the "portable document format" (PDF) originated by Adobe or through various forms of "e-book" readers. PDF technologies have of course been reasonably successful, primarily for the re-distribution online of materials that either were originally in print or that will wind up in print once again; except for their mode of distribution, however, there's almost never anything particularly "net-native" about these texts, with little in their form that makes use of the digital environment in which they exist. These documents are, until printed, like paper under glass: unmarkable, utterly resisting interaction with an active reader. Various modes of e-book readers, beginning with the Expanded Books of the early 1990s Voyager Company, all the way through the in-development dotReader platform, [2][#N2] have focused on becoming more genuinely digital in mode by providing readers with a set of tools that can be brought to bear on the text, including bookmarking, annotation, hyperlinking, and the like, all of which are simultaneously aimed at allowing the reader to traverse the text in ways that would be difficult, if not impossible, in print, while also providing the ability to mark the text so lamented by bibliophiles in contemplating on-screen reading. Thus far, however, no e-book reader has been terribly successful at luring readers away from pages and toward screens.

One of the problems with both the portable document format and the e-book reader — as well, for that matter, as the more generic HTTP/HTML-based web technologies that have produced billions upon billions of web pages — is visible in their very vocabulary: despite whatever innovations exists in "pages" or "documents" or "e-books," we remain tied to thinking about electronic texts in terms of print-based models. These print models have of course been critically important to the development of western culture over the last 600 years, and they are for that reason so deeply a part of the ways that we think that it becomes hard to imagine any alternatives to them. [3][#N3] However, simply translating texts from paper to screen misses the point. There's a reason, after all, why my students print the PDFs that I teach in my classes before they read them, and a reason why the response of many readers to e-book formats is to talk about the smell of paper or the use of a pencil or the comfort of reading in bed; each of these e-book forms loses the benefits of print in the process of trying desperately to retain them. These technologies have demonstrated that the format of print-on-paper can successfully be translated into pixel-on-screens, but at the cost of remaining trapped in what Paul Levinson, following Marshall McLuhan, has referred to as "rear-view mirrorism" (126), the difficulty we have defining new technologies except in terms of old ones. Take, for instance the example of the car: the first major insight of its inventors was the flash that one might produce a carriage that was able to move without the horse; had, however, the thinking about such an invention remained at the phase of the "horseless carriage," many of the later developments in automotive design would have been impossible. (In fact, there are remnants of such rear-view mirrorism still lingering in current automotive design, such as front-wheel steering. [4][#N4]) In the same fashion, while thinking about the electronic form of the book was necessary to its original invention, a project like CommentPress, with its fully networked textual structures and participatory reading environment, demonstrates why the concept of the "e-book" is destined to sound naïve in the future, a remnant of our tenuous toe-dipping into digital publishing.

Hypertext

Some part of that naïveté arises from the indication that we have not yet found the net-native structure that will be as flexible and inviting to individual readers as the codex has been. The absence that the "e-book" highlights is not the means of moving from imprinting ink on paper to arranging pixels on screens, but the means of organizing and presenting digital texts in a structural sense, in a way that

produces the greatest possible readerly and writerly engagement, that enables both the intensive development of an idea within the bounds of the electronic text and the extensive situation of that idea within a network of other such ideas and texts. Developing this format is of vital importance, not simply because the pleasure it can produce for readers will facilitate its adoption, but because it promises to have a dramatic impact on a wide range of our interactions with texts. As Roger Chartier has argued,

> If texts are emancipated from the form that has conveyed them since the first centuries of the Christian era — the codex, the book composed of signatures from which all printed objects with which we are familiar derive — by the same token all intellectual technologies and all operations working to produce meaning become similarly modified.... When it passes from the codex to the monitor screen the 'same' text is no longer truly the same because the new formal mechanisms that deliver it to the reader modify the conditions of its reception and its comprehension (48-49).

Those conditions of reception and comprehension, and the intellectual technologies that will be put to use in the production of further, future texts, are the true stakes of imagining new structures within which new kinds of digital texts can be published.

Hypertext is one of the few modes of radical experiment in textual form to which the digital has thus far given birth. This networked data structure, the invention of which is generally credited to Ted Nelson and Douglas Englebart, created the possibility of dramatically reorganizing text in net-native ways, de-linearizing and interlinking the text both within its own boundaries and in relation to other such texts. Numerous literary authors and critics saw the future in early hypertext publishing, envisioning a means of creating a new, more active relationship between the reader and the text. On the one hand, such thinkers pointed out the ways that hypertext's technologies succeeded in making manifest what had always been latent in the reader's encounter with print: "Hypertext only more consciously than other texts implicates the reader in writing at least its sequences by her choices" (Joyce 131). [5] [#N5] In this, hypertext became the fulfillment of the ideal form of the codex. On the other hand, however, hypertext also promised a radical restructuring of worldview, of "intellectual technologies," as Chartier suggests, by lending its readers a new set of metaphors through which to build a whole new epistemology. Thus, J. David Bolter suggested early on that hypertext's structure might affect not just the ways we understand texts, but the ways we understand the world in its entirety:

> There is nothing in an electronic book that quite corresponds to the printed table of contents.... In this sense, the electronic book reflects a different natural world, in which relationships are multiple and evolving: there is no great chain of being in an electronic world-book. For that very reason, an electronic book is a better analogy for contemporary views of nature, since nature today is often not regarded as a hierarchy, but rather as a network of interdependent species and systems (105).

In leaving behind the codex, in eliminating the "great chain of being" enforced by the book, such critics suggested, hypertext would enable a new enlightenment to dawn, resulting in, among other things, the leveling of the previously hierarchical relationship between author and reader, elevating the reader to full participation in the production of the text's meaning.

Anti-Hypertext

But — and this is one of the dirty little secrets of electronic textuality, one that doesn't get spoken terribly often — hypertext can often be painful to read. And to teach: the vast majority of my students have visceral reactions against hypertext every time I introduce them to it. Some of what they hate, of

course, may be attributed to a general appearance of datedness that most of the classic hypertexts now have, given that Eastgate hasn't ported the most crucial StorySpace composed texts to OS X-native formats, and thus they must be run in "Classic" mode, a mode decreasingly available and, when available, increasingly clunky on newer machines. [6] [#N6] But when pressed to think beyond the slowness, the small window, the pixelated fonts, what my students most often voice is their sense of disorientation, their lostness within the world of the text. They stab randomly at it, trying to find their way somewhere; they wander aimlessly, trying to make sense of their paths; they finally give up, not at all sure how much of the text they've actually read, or what they should have taken from it. As critics including Christopher Keep have pointed out, the disorientation produced by hypertext's apparent immateriality can have powerful physical and metaphysical effects; as Keep argues, "Hypertexts refigure our perception of ourselves as closed systems: sitting before the computer monitor, mouse in hand, and index finger twitching on the command button, we are engaged in a border experience, a moving back and forth across the lines which divide the human and the machine, culture and nature" (165). This "back and forth" cannot be experienced neutrally, as it suggests a profound dislocation of the self in the encounter with the machinic other.

The negative response to hypertext often gets dismissed as a kind of reactionary technophobia among traditionalist English majors, and not without reason; we've taught them, and they've learned well, to value the organizational strategies of the book, and students of mine who've been willing to rough it through the confusions of a text like *Gravity's Rainbow* have felt stymied by *Afternoon*, unable to discern from the text the most basic rules for its comprehension. But I'm unconvinced that the problem that this generation of students has with hypertext is entirely a retrograde one; one of the other issues that they point to, in their complaints about the hypertext form, is feeling manipulated. Hypertext isn't *really* interactive, they argue; it only gives the *illusion* of reader involvement. And certainly only the illusion that the hierarchy of author and reader has been leveled: *clicking*, they insist, is not the same as *writing*. In fact, hypertext caters not to the navigational and compositional desires of the reader, but to the thought processes of the author. Hypertext, after all, was originally imagined in Vannevar Bush's classic essay, "As We May Think," not as a technology through which readers would encounter a single text, but as a means for researchers to organize their thoughts about multiple texts, and to share those thoughts with other researchers. Similarly, Ted Nelson describes "the original idea" of his Xanadu project as having been the production of "a file for writers and scientists" (84). The "we" doing the thinking in both Bush's and Nelson's visions was the author and his descendants, not average readers. Insofar as hypertext attempts in its form to more accurately replicate the structures and processes of human thought, it is the processes of the *author's* thought that are represented, often leaving the reader with the task of determining what the author was thinking — thus effectively reinscribing the author-reader hierarchy at an even higher level. Given this focus on authorial desires, the languishing of Eastgate's titles in "Classic" mode begins to suggest the possibility that while readers who found themselves compelled by early "interactive fiction" titles such as *Zork* and *Adventure* included a number of technologists who produced a range of engines that have kept those texts alive through a wide range of platform changes, few readers felt themselves quite so included in the production of these StorySpace texts as to put their own labor into updating them to contemporary standards. [7] [#N7]

Experiments in hypertext thus pointed in the general direction of a digital publishing future, but were finally hampered by these difficulties in readerly engagement, as well as, I would argue, by having awakened in readers a desire for fuller participation that hypertext could not itself satisfy. For this reason, I want to suggest that if we are going to make any real headway in bridging the gap between our evident abilities with respect to arranging pixels on screens and the difficulties that remain with organizing texts in digital environments — in moving away from thinking about electronic publishing as

a problem revolving around the future of *print* and instead thinking of it as a problem related to the future of the *codex* — we need to refocus our attention on a different aspect of the digital network. This is where the structural innovations of a project like CommentPress become particularly important. Enormous amounts of research has been done on the means of situating the text within a *technological* network — on making text digitally transmissible, comfortably readable onscreen, and so forth. All this is of course necessary, and no doubt a necessary precursor to the problem on which the developers of CommentPress chose to focus: the need to situate the text within a *social* network, within the community of readers who wish to interact with that text, and with one another through and around that text. This is a particular need within electronic scholarly publishing (and even more so within the humanities), on which I'll focus much of what follows, as the very purpose of scholarly reading is the discursive exchange and development of ideas amongst peers.

Reading and the Communications Circuit

Scholars working on areas of material culture studies such as the history of the book, as well as those literary critics focused on reader reception, have long included among their interests this social network and its effects on both the dissemination and the reception of texts. [8] [#N8] On the one hand, as Leah Price notes in a review essay exploring the vast number of approaches to the study of reading as a cultural activity, some scholars trace an historical trajectory from "the open spaces of antiquity (gardens, porticoes, squares, streets) to the closed sites of the Middle Ages (churches, monks' cells, refectories, courts)," while also noting that the act of reading itself in fact "carved out privacy within communal institutions such as the coffee shop, the public library, and the railway carriage" (309-10), both trends suggesting an increasing privatization of the act of reading. However, Price also notes that even at its most solitary, reading has always had communal aspects. These social aspects of reading have been explored by scholars ranging from Robert Darnton, who in his essay "What Is the History of Books" focuses on books' circulation as a manifestation of a "communications circuit," to Elizabeth Long, whose "Textual Interpretation as Collective Action" argues that, in Price's words, "readers need others to set an example, to provide a sounding board for reactions to texts, to recommend and criticize and exchange books" (306), to, of course, Stanley Fish, who has argued most famously for the role of "interpretive communities" in shaping readers' potential responses to texts.

Texts have thus never really operated in isolation from their readers, and readers have never been fully isolated from one another, but different kinds of textual structures have given rise to and interacted within different kinds of communications circuits. Newspapers and pamphlets, as most famously studied by Jurgen Habermas and Benedict Anderson, developed their influence in close concert with the rise of coffee house culture, in which the events and polemics of the day were discussed and debated, giving rise not simply to a Habermasian sense of the "public sphere," but to a sense of the public inhabiting that sphere, the "imagined community" of the nation. [9] [#N9] Books, similarly, moved within a set of social and communal structures that greatly affected their reception and comprehension, including libraries and reading groups, which not only assisted readers in the selection of texts but also provided space for their discussion. That said, the technology of the book, and the literate public with which it interacted, produced a general trend toward individualizing the reader, shifting the predominant mode of reading from a communal reading-aloud to a more isolated, silent mode of consumption. [10] [#N10]

It is this isolated mode of reading that overwhelmingly dominates our understanding of book-reading today, and particularly the form of reading done by scholars. The library model of textual circulation, once understood to be a communal enterprise, now comes to seem profoundly individualistic: books

are checked out and read by one person at a time, in retreat from interaction with the world. Indeed, when we imagine scholarly interactions with the bulk of printed texts today, particularly within the humanities, the primary images that arise are of isolation: individual scholars hunched over separately bound texts, each working individually, whether in their separate offices or even collectively, in the silent reading rooms of the major research libraries. Scholars of course need to read and reflect in relative silence and retreat, in order to understand and process the texts with which they work, as well as to produce more texts from those understandings. But the isolated aspect of this mode of reading has come to dominate our sense of the practice of reading as a whole, and in so doing the scholar has come to partake of the myth of individual genius, in which the great man produces noble ideas wholly from his own intellectual resources. [11] [#N11] As Walter Ong has suggested,

> Writing is a solipsistic operation. I am writing a book which I hope will be read by hundreds of thousands of people, so I must be isolated from everyone. While writing the present book, I have left word that I am 'out' for hours and days — so that no one, including persons who will presumably read the book, can interrupt my solitude. (100)

What such an understanding of the operation of scholarship ignores, of course, is the ways that the communal lingers in the circuit, if only in submerged ways; the scholar alone in his or her office with a book is never wholly alone, but is always in conversation with that book's author. Similarly, the products of this scholar's readings are likewise intended to contribute to an ongoing conversation with the other thinkers in the field. This conversation takes place at an often glacial pace, as years elapse between thought and utterance, in the form of the book's publication, and between utterance and response, in the form of reviews of or responses to that book, but it is a conversation nonetheless.

Scholarly Discourse Networks

This seeming digression into the practices of scholarly discourse is meant to suggest that, in attempting to reproduce the form of the book electronically, technologists have for too long focused on the isolated practices of reading — the individual reader, alone with a screen — rather than the communal practices of discussion and debate to which those practices are, on some level at least, meant to give rise. Scholars operate in a range of conversations, from classroom conversations with students to conference conversations with colleagues; scholars need to have available to them not simply the library model of texts circulating amongst individual readers but also the coffee house model of public reading and debate. This interconnection of individual nodes into a collective fabric is, of course, the strength of the network, which not only physically binds individual machines but also has the ability to bring together the users of those machines, at their separate workstations, into one communal whole.

There's nothing particularly revolutionary in this insight; "the network can create virtual connections amongst otherwise isolated individuals!" is little more than the kind of utopian thinking that's colored internet studies since Howard Rheingold's *The Virtual Community* was first published in 1993. My interest in thinking about the relationship between the social network and the structure of online texts should not be read as suggesting that such wired community will solve all of the problems of contemporary scholarly publishing, but I do want to argue that understanding the ways that texts circulate within and give rise to communities will be a necessary component of any successful electronic publishing venture. Given that the strength of the network with respect to the circulation of text is precisely its orientation toward the commons, that many can not only read a text individually but also interact with the same text at the same time, developers of textual technologies would do well to think about ways to situate those texts within a community, and to promote communal discussion and

debate within those texts' frames. This is the strength of CommentPress: the project recognizes that, on the one hand, simply publishing texts online, finding ways to replicate the structures of the book in digital form, is insufficient, because the network cannot, and should not, replicate the codex; and that, on the other hand, simply moving toward a more internally-networked form of publishing will likewise not revolutionize the circulation of texts, as the emphasis remains on the individual text, the individual author, the individual mind. As Richard Lanham noted in an early review essay on work in electronic textuality, "Digital electronic writing is a volatile, interactive, nonauthoritative medium which, of itself, alters the whole idea of scholarly originality, research, and production and publication" (Lanham 203) — but such transformations will only succeed if the medium's interactivity and nonauthoritative structures are fully mobilized. [12] [#N12] It's no paradox that my students resist hypertext while embracing Facebook; the generation celebrated by *Time* magazine as the "person of the year" in late 2006 — "you" — expects that the reader will likewise be allowed to write.

That scholars, and not just students, have a desire for such interaction might be seen in the speedy rise to popularity of academic blogging, and in particular in the success of a range of scholarly group blogs including *The Valve* in literary studies, *Crooked Timber* in political philosophy, *Cliopatria* in history, *Language Log* in linguistics, and so on. Many scholars feel themselves over-isolated, longing for new modes of collaboration and discussion, and such blogs have enabled a kind of conference-without-walls, in which new ideas and new texts can be discussed in something closer to real time. Moreover, contrary to the sense of some more curmudgeonly folks that the kinds of casual writing done on scholarly blogs can only detract from one's ability to produce "serious" work, whether by stealing time or focus, or by encouraging speed at the cost of deliberativeness, in fact, many academic bloggers have argued that their blogging, and the discussions on various blogs, have been productive of more substantive work. By revitalizing discourse among peers, blogs have helped enable a revival of the coffee house model of textual circulation.

But this coffee house model still largely revolves around the contemporary equivalent of newspaper and pamphlet publishing, rather than the longer, more deliberative form of the book. One question that remains is whether the library model of the circulation of single-author, long-form texts, meant to be consumed in relative isolation, over longer periods of time, might similarly benefit from the kinds of interaction that blogs produce, and if so, how. The library in such a model would become not simply a repository but instead fully part of a communications circuit, one that facilitates discourse rather than enforcing silence. Many libraries are already seeking ways to create more interaction within their walls; my institution's library, for instance, hosts a number of lecture series and has a weekly "game night," each designed to help some group of its users interact not simply with the library's holdings, but with one another. Games may seem a frivolous example of the contemporary academy's drive to cater to the younger generation's relatively nonintellectual interests, but it is in fact hoped that patrons who use the library in such a fashion would not only be more likely to use it in traditional ways — more likely, for instance, to feel comfortable approaching a research librarian for help with a project — but also more empowered to collaborate with one another, breaking the library's stereotypical hush.

Given that libraries are already interested in establishing themselves as part of a scholarly discursive network, putting the emphasis in the development of electronic publishing technologies on an individualist sense of the book's circulation — on the retreat into isolation that accompanies our stereotypical imaginings of the library — threatens to miss the point entirely, ignoring the ways that the book itself has always served as an object of discussion, and thus overlooking the real benefit to be derived from liberating the book's content from the form of the codex. Network interactions and connections of the types provided by blog engines can, I'd argue, revitalize academic discourse not just

in its pamphlet/coffee-house mode, but also in its book/library mode, by facilitating discussion of a text, by promoting that discussion within the text's own frame, and by manifesting the ways that each individual text is, and has always been, in dialogue with numerous texts that have preceded it, and that are yet to come.

CommentPress seeks to promote that dialogue within and around long-form texts in two primary ways: first, by structuring those texts around chunks of text that can be interlinked in linear and non-linear fashions, and that can take advantage of the ability to link to (and receive links from) other such texts in the network; and second, by allowing those chunks of texts to be commented and discussed at various levels of granularity, ranging from the document as a whole, to the page, all the way down to the paragraph. Such interconnections and discussions are possible in large part because CommentPress builds upon a popular blogging engine, WordPress. Blogs are arguably the first successful web-native mode of electronic publishing, [13] [#N13] and their rapid spread and relative robustness suggest that their tools might be applicable to a range of other potential digital publishing modes. The structure of a blog of course privileges immediacy — the newest posts appear first on the screen, and older posts quickly lose currency, moving down the blog's front page and eventually falling off it entirely, relegated to the archives. Such a presentist emphasis works at cross purposes with much long-form scholarship, which needs stability and longevity in order to make its points. But, as I've argued elsewhere, [14] [#N14] such scholarship might adopt from blogs their community-oriented structure, in which posts are generally made to elicit comment, and in which responses from other authors produce links on the original posts to which they refer. CommentPress allows commenting technologies to be usefully appropriated to a number of forms of scholarly publishing, ranging from the article to the long-form monograph, making manifest the recognition that readers of scholarly texts are nearly always themselves authors in other venues.

The Future of the Book

Many experiments focused on the adaptation of such web-based technologies to scholarly publishing are currently underway, including, of course, my own project, MediaCommons. MediaCommons has grown out of two parallel convictions: first, that something in the current system of academic publishing is broken, and that radical change will be necessary to fix it; and second, that the purposes of such publishing must be regrounded in the desire for communication amongst a body of scholarly peers. My co-coordinating editor, Avi Santo, and I have partnered with the Institute for the Future of the Book in the development of MediaCommons, an electronic scholarly network focused on media studies, that hopes to address both of these issues by placing the technological network at the service of the social network, enabling scholars, students, and other interested members of the community to read, write, discuss, and develop new projects together. There are a number of problems that MediaCommons must work out, however, before it can spring fully to life; among these number, of course, the problem of peer-review in an open network environment, the problem of institutional acceptance of experimental publishing models as sufficiently prestigious for hiring and tenure purposes, and, most crucially for the purposes of this article, the problem of structure — devising ways to publish long articles and even monographs online in engaging, readable formats.

The Institute for the Future of the Book has proven an ideal partner in this venture, as their collective thinking about publishing's future has circled around ways to facilitate the transition from pages to screens, imagining new structures that can, among other things, enable conversation in and around digitally published texts. As Bob Stein suggested to a reporter from *The Chronicle of Higher Education*, the electronic text can powerfully overcome the codex's isolation:

best of all would be if readers could talk to each other, and if readers could talk to the author, because the reason for a book is to afford conversation across space and time, and so why shouldn't some of that conversation take place literally within the book itself? (Young)

CommentPress, of course, is primary among the projects through which the Institute hopes to facilitate some of that conversation. CommentPress, has its deep origins in a project with McKenzie Wark who, in preparing the manuscript for his 2007 book, *Gamer Theory*, was persuaded to collaborate with the Institute in putting a draft of the text online. The online version, titled *GAM3R 7H30RY* (so that Wark could distinguish Google hits mentioning the online text from those mentioning the print book), easily adapted itself to publication through a blogging engine, but Wark and the Institute early expressed an interest in subverting one of the basic structures of the blogging hierarchy: rather than keeping each chunk of his text up top, with comments relegated to a spot further down the screen, Wark and the Institute's developers collaborated on a design that would place the text and the comments side-by-side, emphasizing the conversational principle that the publication hoped to foster. [15] [#N15]
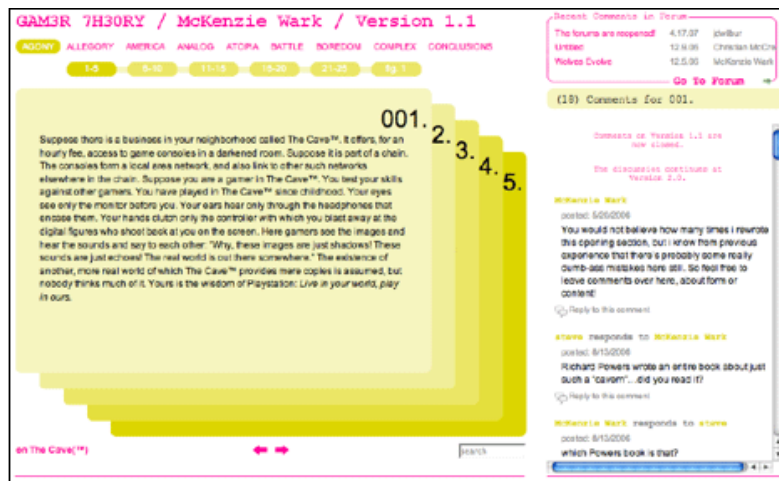
G4M3R 7H30RY lent itself to being published in this fashion in part because the text was already "chunked," written in a hyper-structured, rigidly algorithmic structure, with 9 alphabetically sequential chapters, each containing 25 paragraphs, with a strict 250-word limit per paragraph; as the paragraphs themselves were often aphoristic, many of them stood alone well, and reader comments were thus able to be closely associated with each paragraph of the text. However, the translation of what was originally intended to be a traditional codex book into this nonlinear structure nonetheless created some complications: each paragraph looked a bit more free-standing than it really was; a reader couldn't simply enter and exit the text at any random point; readers often left questions or comments on early chunks about issues that were addressed in later parts of the text. Moreover, publishing Wark's text online was extraordinarily labor-intensive, requiring too much manual tweaking to be readily adaptable for more general publishing purposes.

The next phase in the Institute's development of CommentPress was its publication of Mitchell Stephens's article "Holy of Holies: On the Constituents of Emptiness" as what they termed a "networked working paper," imagining this paper, as their blog entry announcing its publication suggested, as "small steps toward an n-dimensional reading/writing space" (Vershbow, "Small Steps"). In part, this new experiment was designed to help develop means for publishing texts that aren't as quite so self-chunking as Wark's manuscript was, so that a reader could simultaneously have a sense of the text's whole and pay close attention to its individual parts. In the design for "Holy of Holies," the

Institute gave each paragraph of the text its own comment stream, allowing the comment area to the right of Stephens's text to become dynamic, changing as the user selects the comment icon next to each paragraph.
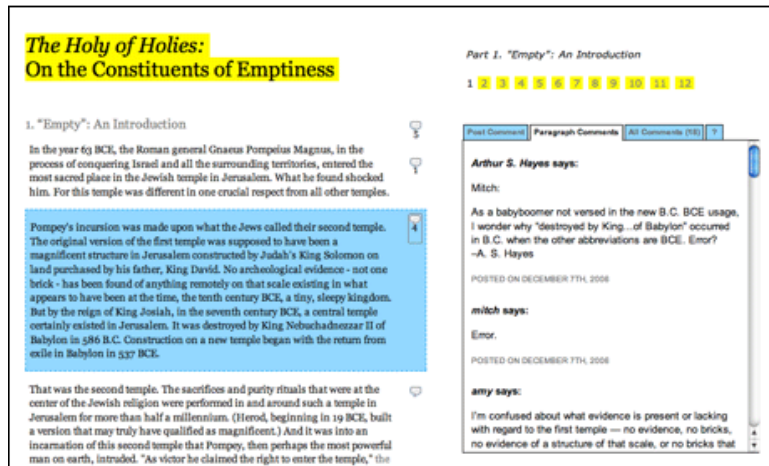
Each section of the text likewise allows for more general comments, which can be found by selecting the comment icon next to the section title; all comments that have been made on any section can be read by clicking on the "All Comments" tab above the comment window. Moreover, clicking on the small icon to the right of a commenter's name highlights the paragraph to which the comment is attached.

The comments Stephens received on the paper — 104 of them — were by and large substantive, and they included a number of technical comments that allowed the Institute to continue developing the templates for publications with this kind of fine-grained commenting ability. The such next venture was, in certain ways, the most ambitious, and in other ways the most traditional: the Institute teamed up with Lewis Lapham, of *Lapham's Quarterly*, to publish a commentable version of the Iraq Study Group Report. This version of the CommentPress templates carried over from "Holy of Holies" the ability of readers to discuss full sections of the text as well as comment at the more fine-grained paragraph level, but added two important innovations: first, a space for general comments about the report as a whole, and second, and most importantly, the ability to read comments organized not just by section of the primary text but also by *commenter* , enabling a reader interested in the responses of another particular reader to see those comments as a group.

The Institute followed this with a treatment of President Bush's televised address to the nation responding to the report, interweaving the transcribed text of the address with streaming video of the speech, opening the content and the delivery both to discussion.

Interestingly, however, the entire Iraq Study Group Report received a total of 92 comments, fewer than did Mitchell Stephens's much shorter — and arguably much less pressing — paper. The reasons why in no small part have to do with the structure of the two social networks into which the texts were released: Stephens put his paper into CommentPress as a means of presenting it to a working group at the Center for Religion and Media at New York University; this group was organized around the discussion of texts like Stephens's, and so the technology facilitated the interactions and exchanges some members of the group already wanted to have. However, the majority of commenters on the paper were in fact not affiliated with the working group, but had instead been following Stephens's blog, hosted by the Institute, in which he had for some months been thinking out loud about the process and progress of his research. These readers were not simply interested in the same subject matter as Wark — as were the members of the working group, many of whom resisted online discussion — but were ready to use the technologies to facilitate that conversation.

By contrast, Lapham's project brought together what the site referred to as "a quorum of informed sources (historians, generals, politicians both foreign and domestic)," as well as a number of writers and reporters, all of whom had a vested interest in the material, but most of whom were unaccustomed to working either in such a mediated or in such an interactive vein. (In fact, over 1/3 of the comments on the report came from one participant, novelist and political writer Kevin Baker, who maintains an extensive web presence.) Other mitigating factors have to be considered, of course; for one thing, the Iraq Study Group Report had, at least initially, a closed commenter base, as opposed to Stephens's paper, which was open to community input. Moreover, the timing of the report's release by the study group — December 6, 2006 — meant that the Institute's commentable version went online precariously close to the holidays. And even worse, by the time the commentable version was released, the Bush administration had already dismissed the report, making discussion of its proposals a significantly less compelling exercise. [16] [#N16] I would hold, however, that the readiness for online interaction is the most compelling reason for the relative quiet on the Iraq report's discussion channel; Stephens's commenters were, by and large, not just attuned to the issues he presented, but actively engaged in other online reading and writing practices, which prepared them to be active contributors.

All this is to say that no technology, whether CommentPress or another system, will be a panacea; even the most ingenious new structures for publishing a text online will not automatically get any randomly selected group talking. Technologies like these can, however, facilitate discussions among those who are both motivated and prepared to have them.

CommentPress

And academics, unsurprisingly, often want to talk. After their first successful experiments with CommentPress, the Institute began receiving numerous requests from academics and other authors hoping to use the templates to publish their papers. They agreed in a few cases, using CommentPress to help Cathy Davidson and David Theo Goldberg publish a HASTAC working paper, as well as using a modification of the theme as the engine behind MediaCommons's ongoing video discussion feature, *In Media Res* .
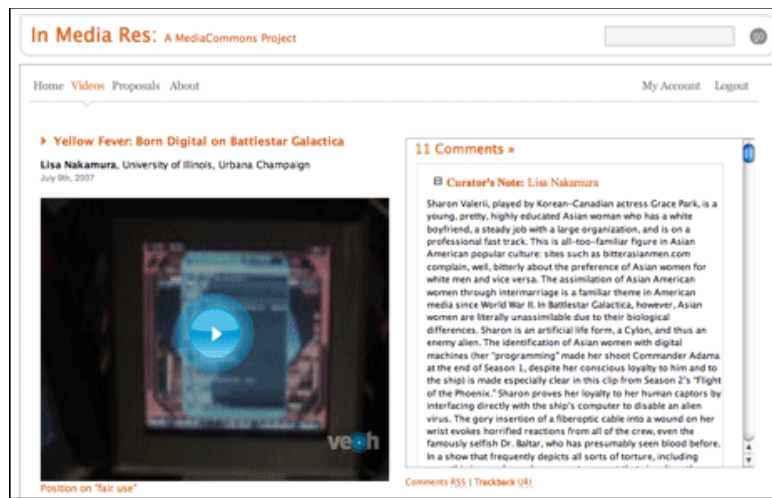
This growing demand spurred the Institute on to further development, working on compiling the various hacks and templates that, to this point, they had been tweaking manually into a releasable, documented, open-source theme easily installable and usable with any WordPress installation. CommentPress 0.9, a development release, was first made available to testers on 21 July 2007. The following day, I used my web hosting provider's one-click install function to load a new installation of WordPress, installed and set up the CommentPress theme, loaded in the draft text of this article, and did a bit of tinkering with formatting and the like, taking this article from a draft Word document to "published" (including, arguably, founding the publisher!) in under three hours.

Since July, the Institute has advanced CommentPress to release 1.4, adding a number of features along the way. CommentPress provides two "skins" from which users can select: one more traditionally blog-like, in which excerpts from posts appear in reverse-chronological order on the site's front page, but full post pages provide paragraph-level commenting parallel to the original text; and one for "documents," which presents a table of contents on the front page linked to each of the document's sections. In either skin, comments may be read in multiple modes: a reader can click on a small dialogue bubble to the right of a paragraph to read comments on that paragraph, or a combination page/bubble icon to the right of a page's title to read comments on the whole page. Readers can also browse all comments, either organized by commenter or by section of the text; browsing in this way provides links back to the portion of the original text on which the comments were made. CommentPress is also now "widgetized," which allows users to rapidly customize their site's sidebar. Most excitingly, however, CommentPress has been released as an open-source project, which has not only helped get the theme quickly into use — one might see, for instance, the CommentPress version of the recent Ithaka report, "University Publishing in a Digital Age" [17] [#N17] — but will also no doubt encourage other developers to modify the theme in ways that will enrich the possibilities that CommentPress presents for electronic publishing.

Among those possibilities, one might imagine a slight modification of CommentPress that would allow for the coordinated publication of multiple texts, whether by individuals or by groups of authors, permitting the development of electronic "journals" in which individual essays are linked together into "issues," and issues into series. The discussion spaces provided by CommentPress could be used by authors who want feedback while a text is in draft form, but they could also be used by authors who have completed a text and are seeking peer review, thus helping to create the sort of peer-to-peer review system that we at MediaCommons hope to develop. Moreover, though the "pingback" feature of WordPress is not, as yet, fully implemented in CommentPress, with a bit of future tinkering texts published in this format will be easily linked to one another, with inbound links visible as another mode

of commentary on a text, and another metric of its significance within its field. A more difficult but extremely desirable feature for the project's future development would be the merger of true wiki-style versioning with the blog's format; such a merger is a problem that certainly needs to be solved at a higher level than that of a WordPress theme, but the implementation of versioning would allow authors of CommentPress texts to continue revising and updating them, while maintaining the availability of previously published versions within the text's history. And finally, though CommentPress has gone some distance toward imagining social interaction within and around texts, it can't yet displace the pleasures of the codex; the fact that CommentPress still relies upon scrolling text windows suggests that, though we're beginning to solve those larger-scale structural problems of native digital textuality, we still have miles to go before our interactions with the screen have the ease of our interactions with the book. [18] [#N18]

Toward the Future

However, what shouldn't be overlooked in any evaluation of a new publishing form such as CommentPress is the quantity of labor that it requires, not just in the development, installation, and implementation of the templates themselves, or in the design and release of texts through them, but in the maintenance of the texts post-publication, and in the active participation that discussion requires of the texts' authors. Comments and trackbacks are, at least at present, relatively insecure technologies that demand a certain degree of moderation in order to ensure spam prevention; such technologies of interaction, moreover, function best when the author desires that interaction. Publishing systems like CommentPress thus won't relieve institutions of the infrastructural demands posed by current, analog press and library systems. They'll also create more work for authors, who won't be quite so able to walk away from a text in manuscript form and leave its publication to the labor of others.

That said, CommentPress demonstrates the fruitfulness of reimagining the technologies of electronic publishing in service to the social interconnections of authors and readers. The success of the electronic publishing ventures of the future will likely hinge on the liveliness of the conversations and interactions that they can produce, and the further new writing that those interactions can inspire. CommentPress grows out of an understanding that the chief problem involved in creating the future of the book is not simply placing the words on the screen, but structuring their delivery in an engaging manner; the issue of engagement, moreover, is not simply about locating the text within the technological network, but also, and primarily, about locating it within the social network. These are the problems that developers must focus on in seeking the electronic form that can not just rival but outdo the codex, as a form that invites the reader in, that acknowledges that the reader wants to respond, and that understands all publication as part of an ongoing series of public conversations, conducted in multiple time registers, across multiple texts. Making those conversations as accessible and inviting as possible should be the goal in imagining the textual communications circuit of the future.

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NOTES

1. The commentable draft of this article remains available at http://new.plannedobsolescence.net [http://new.plannedobsolescence.net] . Thanks are due to Bob Stein, Ben Vershbow, Jesse Wilbur, and Eddie Tejeda, for making the technology available for this experiment, and to Bob, Ben, Dan Visel, K.G. Schneider, Mark Bernstein, Richard Pinneau, and Sebastian Mary for their helpful comments on the draft.⚜ [#N1-ptr1]

2. For more on the history of Voyager's Expanded Books project, one might begin with the Wikipedia entry (http://en.wikipedia.org/wiki/Expanded_Books [http://en.wikipedia.org/wiki/Expanded_Books]); on the dotReader platform, see http://www.dotreader.com [http://www.dotreader.com] .⚜ [#N2-ptr1]

3. Moreover, the attempt to imagine such alternatives often results in a profound anti-technological backlash; one might see, for instance, Alvin Kernan or Sven Birkerts, among any number of other such sources.⚜ [#N3-ptr1]

4. Thanks to Dan Visel for this insight; see "Horseless Carriages."⚜ [#N4-ptr1]

5. See as well George Landow's argument that "hypertext promises to embody and test aspects of theory, particularly those concerning textuality, narrative, and the roles or functions of reader and writer" (2), suggesting hypertext's more thorough fulfillment of earlier arguments about print-based texts.⚜ [#N5-ptr1]

6. Mark Bernstein of Eastgate left a comment on the draft of this paper noting that "[a]ll Storyspace hypertexts will soon be available today for MacOS X. And, of course, they run fine on Windows XP and Vista." This is of course excellent news, though news that does raise an additional conundrum for electronic textuality more generally: it's rare that one needs to pay for an upgrade, in the codex realm; a new edition might have corrections or features that a reader might prefer, but the old edition rarely stops working. Moreover, the codex is platform-independent; it's all but impossible to imagine a circumstance in which readers of the hardcover are left behind while the paperback remains up-to-date. ⚜ [#N6-ptr1]

7. There are two obvious points to make here, each of which significantly complicates the assertion above: first, the proprietary publisher, Eastgate, bears most of the responsibility for the stuckness of such early hypertexts, indicating that one of the dangers in translating traditional publishing industry models to the digital realm is precisely the problem of remaindered texts; while a book that has gone out of print, released by a publisher that has gone out of business, remains readable in such research libraries where it may be housed, a digital title that loses currency runs the risk of becoming technologically illegible. As Robert Coover pointed out in the early days of hypertext, "even though the basic technology of hypertext may be with us for centuries to come, perhaps even as long as the technology of the book, its hardware and software seem to be fragile and short-lived" (Coover). The second point arises in no small part in response to that first: the Electronic Literature Organization has of late put significant energy into the preservation and protection of texts such as these, through its committee for the Preservation, Archiving, and Dissemination of electronic literature. See Montfort and Wardrip-Fruin and Liu et al.⚜ [#N7-ptr1]

8. What follows is a series of wholly inadequate attempts to summarize a vast field of work, in the service of a particular point about the social networks involved in reading; please see some of the sources cited for more thorough, and no doubt more accurate, explorations of their arguments.⚜ [#N8-ptr1]

9. See Anderson and Habermas. There are certain obvious criticisms to be leveled at both theorists, most notably that the public sphere that they describe somewhat overstates its universality, given that only those admitted to the coffee houses — white men of a certain economic standing — were able to become part of that public. It is nonetheless key that the technologies of reading played a crucial role in developing that public's sense, however faulty, of itself. [#N9-ptr1]

10. See, in addition to Price as cited earlier, Darnton: "Reading itself has changed over time. It was often done aloud and in groups, or in secret and with an intensity we may not be able to imagine today" (78). [#N10-ptr1]

11. See Carla Hesse, who in "Books in Time" ties the individualism associated with the book and its author not to the technologies of print or the codex but rather to the philosophical and political debates of the Enlightenment, which were staked upon understanding the individual thinker as the origin of knowledge. [#N11-ptr1]

12. There of course remains a place for the individual author and the individual text, even within such a networked environment; as Sebastian Mary commented on the draft of this paper, "I'd argue that the net makes visible the activity that takes place prior to a text being enshrined in a form evoking the tradition of the book. Hence, dynamic community-based net activity doesn't replace in-depth, fixed, authoritative scholarly work but rather facilitates those aspects of scholarship that are plainly more fluid and mutable, speeding up conversation and removing the shackles of Authority from kinds of print that chafe under its yoke. Or, to put it another way, I think there always comes a point where you want to write a book — but not everything works best when published that way." [#N12-ptr1]

13. So argued Howard Owens recently on his blog: "Blogs are arguably the first web-native publishing model, so it only makes sense that blogs would provide a template for how to publish online" (Owens), as did Michele Tepper well before that, in the September 2003 issue of *netWorker*, describing blogs as "perhaps the first native publishing format for the Web" (20). This point always seems to be made with "arguably" inserted, as I have done, which suggests that the idea has managed to enter the conventional wisdom without anyone ever having done an empirical study to back it up. Interestingly, I posed the question of support for such a statement on my own blog, and provoked in return a compelling discussion about what the true value of blogging's "firstness" would be and about the erasure of Usenet from histories of the digital in the wake of the web. See Fitzpatrick, "Again with the Blegging" and Fitzpatrick, "Blogging." [#N13-ptr1]

14. See Fitzpatrick, "MediaCommons." [#N14-ptr1]

15. "Doing the comments this way (next to, not below, the parent posts) came out of a desire to break out of the usual top-down hierarchy of blog-based discussion" (Vershbow, "G4M3R 7H30RY"). [#N15-ptr1]

16. Thanks for Ben Vershbow and Bob Stein for their additions to my thinking about the issues revolving around discussion of these two projects. [#N16-ptr1]

17. See "University Publishing." [#N17-ptr1]

18. Thanks to Shana Kimball for sharing this observation with me. [#N18-ptr1]

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