

## Hypertext Structure Under Pressure

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### Abstract:

This essay reports on issues in hypertext rhetoric and presentation that arise in composing a large argumentative hypertext that is written along with a book version of the same project. It concerns not the old navigation problem for the lost reader, but the construction problem for the uncertain author. The essay discusses link patterns and the pressure of book upon the structure of the hypertext. A hypertext does not need to be associated with a book to feel these pressures from our habits with other media. How can a long expository hypertext be made accessible, and argue for its views, without sacrificing the virtues of hypertextual presentation?

### Hypertext and Book

This essay explores issues that arise in composing a long argumentative hypertext connected with a book on the same subject. It concerns not the old navigation problem for the lost reader, but the construction problem for the uncertain author who worries about possible readers. It reports on a practical experiment, and deals with issues in hypertext rhetoric and link structure that arise in the construction of a hypertext under pressure from a book version. Although the situation of the hypertext being discussed is somewhat unique, in fact hypertext structure is always under pressure from print habits of reading and writing, especially in scholarly writing, so the issues discussed here are widely relevant.

The large argumentative hypertext is associated with a book that presents similar argumentation. The project, with the title "Sprawling Places," discusses criticisms of contemporary places and develops a theory that might allow more creative responses to them.<sup>1</sup> The book and hypertext share material and ideas but the presentation is different in the two versions. What interests me here are those differences, and the pressure from the book on the hypertext.<sup>2</sup>

The book (Kolb 2008) expounds its argumentative points straightforwardly, with technical scholarly footnotes, and discusses rival views that the hypertext treats more briefly if at all. The

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<sup>1</sup> The *Sprawling Places* project discusses contemporary places such as shopping malls, theme parks, and suburban sprawl, which seem less humane than more traditional places such as Greenwich Village, Italian hill towns, or central Paris. The project reviews criticisms of contemporary places and argues that most such critiques make unjustified total claims, and depend on limited conceptions about the kind of unity places can possess. The book and hypertext develop a theory about what makes an area of space into a human place, and argue that contemporary places, despite their problems, show new modes of place unity. They suggest that complexity versus oversimplification is a better way to judge places than true versus false, or commodity versus use-value, or simulacra versus authenticity. They then apply this criterion to themed places and suburban sprawl.

<sup>2</sup> The present essay is a linear condensation containing about half the words of an original hypertext essay with examples presented at the ACM Hypertext 2004. The original hypertext is available at <http://www.dkolb.org/twin.media.ht04/coverse.html>. Written completely on its own, the hypertext can now be compared with this subsequent essay version.

hypertext (Kolb 2007), which is longer than the book, expounds the argument, expands some topics that the book only mentions, and offers set of scenes and first-person narrations about concrete places, together with hundreds of images.<sup>3</sup> About twenty-eight percent of the hypertext contains material that overlaps about thirty-five percent of the book.

Large, argumentative "single-author hypertexts that link to themselves" (Carter 2000, 86) pose compositional problems different from informational hypertexts and Web sites one consults to gather bits of information. The issues of linking and of author/reader balance are related to those in more literary hypertext, but have their own twists. The connection with a book brings out those aspects of argumentative hypertexts that differ from informational and literary hypertexts. My hypertext has theses to advance, polemics to mount, a view to defend. If the reader is to understand and evaluate the text's claims, then there are some paths and overviews that are more important than others. The book puts pressure on the hypertext.<sup>4</sup>

Both hypertext and book aim at opening up the reader to new ways of thinking about the topic. The book can do a very controlled presentation. The hypertext may do more for opening up the reader's horizons. It contains a greater variety of materials and voices, some of which do not come to any conclusion. It is open to more various types of readers and tries to offer them something wider than the book. It offers a space for wandering and reflecting without being as narrowly focused on the argumentative conclusions, yet it means to get the reader to and beyond those conclusions.

But how much should the author try to structure the reader's experience? Can the author do so? What about the interplay of authorial structure and creative reading? The result, in any case, is a large hypertext, containing more words than the book version. That length raises the question: What kind of expectations can the author reasonably have for the reader of a long text?

### **Book and Hypertext**

Books need not be so linear as supposed by some hypertext theorists, and expository and argumentative books are not always read in the linear mode more characteristic of novels and narratives. However, even if the organization of a book or the way it is read is not strictly linear, most

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<sup>3</sup> The initial version of the *Sprawling Places* hypertext was composed in Storyspace and exported to a preliminary HTML version. Later, using BBEdit, I made changes in the HTML version. For the next revision, I moved the file from Storyspace to Tinderbox, adding in changes that had been made in the HTML version. After further revisions the text was exported to CSS-controlled HTML. Tinderbox proved useful since it can define XML attributes for each node, which are helpful for keeping track of the stages of revision and for facilitating CSS markup using multiple templates. The program's spatial hypertext features allow for flexible groupings and tentative organizing. The map view and the roadmap tool allow the author to keep track of the link structure. However, a tool that would be helpful would be the ability to explore several steps in the network of connections reaching out from a chosen node. An overall map contains too much data, and the Tinderbox single-step roadmap tool is too limited for keeping track of connections in a large text.

<sup>4</sup> In the first version of the book text, I tried to bring a hypertext flavor into the book by inserting narrative "interludes" and by allowing the expository voice sometimes to become more personal. These attempts were resisted by reviewers, and in four succeeding versions of the book manuscript came to resemble more and more closely to the standard voice and organization of scholarly monographs. The pressure to conform came from evaluators who did not consider the book's mixed voices "serious," and from one reader who took a semi-ironic narrative as proof that I would be psychologically unable to understand the truth about suburban sprawl. It did not seem worthwhile to contest these obstacles, so the book became more "book-like" while the hypertext kept the "extra" voices and materials.

books strive for a kind of clarity aimed at a reader who will read page by page through the physical object.

The book was written and revised in parallel with the hypertext, and my effort to give the book a clear argumentative structure tended to spill over into the hypertext. There was a fine linear arrangement already set up for the book, which began to press on the hypertext, pushing it towards a branching tree structure that begins with one overall view and divides into subsidiary outlines for different regions of the text.

The Web has created expectations that all the "action" about a topic will be on a single page, which will then link to other relatively complete pages. This works well for informational hypertexts, poorly for literary hypertexts, and not very well for the kind of the *Sprawling Places* project was trying to be. Yet pressure from the book version and from the Web pushed the hypertext towards the step-by-step procedures of the book version.

The easiest ways of making a complex argument available in hypertext tends to move the text toward linear structures that do not take full advantage of the possibilities of linked text. I wanted the hypertext to present the argument, but also use linkage and juxtaposition to make the reader's engagement with the argument more creative, self-conscious, and self-critical.

I set out my original ideas for the interaction of the book and the hypertext parts of the project in a talk to the Knowledge Media Institute at the UK's Open University (Kolb 1998). One motive for presenting the argument both in a book and in a hypertext was to contrast the two media, and to take advantage of the strengths of each: the bounded inclusiveness and convenience of a book together with the open-ended digressiveness and multiple forms available in a hypertext. I also wanted the text to engage in maneuvers that would turn the reader's attention to the process of reading and make the reader's dealings with the argumentation more self-conscious and more self-critical.

Writing the hypertext showed how hard it is to achieve those goals. My experience developing the project showed that my worries about influence from the book version were justified, but that creating successful self-consciousness-raising maneuvers is more difficult than I had hoped.

The fact that the book was growing alongside the hypertext meant that there was a tempting outline and sequence of argument already being built. I did adopt the outline but worked it into a series of linked regions that can be encountered in any order. Yet no matter how much the outline was overlaid and complexified, its power remained.

There is a tension between wanting to argue for conclusions and wanting to offer the reader open paths for exploration and inquiry. In the hypertext, points are argued, then qualified, then linked to other points. Distant regions of the hypertext are put in relation to one another. The linking is arranged so that readers may find themselves jumping to a second region before they have finished the first; they should see the argument coming into focus gradually as a whole, rather than make one step perfectly clear and then advancing to the next step, which is the way the book proceeds.

Another goal was to produce self-distancing and encourage self-critical readings. To this end I created an opposing voice in the text that raises objections, and a suite of fictional dialogues with "the spirit of place." These work well, but do not offset the generally earnest and straightforward movements of the text. I also added to the argumentative and expository sections a large number

of descriptive nodes narrating scenes from places relevant to the discussion. But these narrative sections presented issues of their own about linearity and link patterns.

I had hoped to add nodes where the organization of the text is questioned and alternate movements and conclusions suggested. But I found no way to do this without either causing confusion or so avoiding confusion by explicit navigational devices that the consciousness-raising effect was lost.

The difficulty for all these maneuvers is the demand that they put on the reader's attention. The reader needs some signposts in the tangle of links. Otherwise any step in any direction will seem as good as any other, and the reader will be tempted to quit. This is not just a navigation problem, but a problem of motivation.

### **Navigation Devices**

As with any hypertext there is a tension between the overall network and the temporal sequence of reading.<sup>5</sup> Literary hypertexts play with this tension. It seems to me that expository hypertexts can do so as well, by being less obsessive about revealing overall structure, and using link patterns to have that structure emerge slowly in the reader's mind.

One of the difficult problems in composing an expository hypertext is to make sure that certain crucial nodes are visited by every reader, and that the reader is prepared for encountering those nodes. In an argumentative hypertext, merely indicating that certain nodes should be visited is not enough to assure that the reader comes to the nodes with the proper background understanding of their location in the overall argument.

While writing it is difficult to avoid having cross links grow among the branches of a tree structure. This means that some nodes, particularly nodes that are at important branch junctions but not at the top of the tree, may not be encountered. Making sure that crucial nodes are visited is more difficult if the overall hypertext purposefully has no clear tree structure.

A standard navigation solution is to provide devices that give a vision of the whole and suggest to the reader regions or nodes that might otherwise be missed. In the case of literary hypertexts, such devices can work against the author's goals. But it is usually assumed that navigation aids are a good thing for expository and argumentative hypertexts. Is this always true?

The *Sprawling Places* hypertext provides a navigation bar on the right with collapsible menus under the headings, as well as a set of machine generated links below the text that lead to "nearby" nodes (as defined on the Tinderbox spatial map), plus some link types that appear when the mouse hovers over a link.

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<sup>5</sup> The one or more spanning trees that will be present in any connected graph are not the same as the navigational tree structure often used to organize the reader's impression and experience. Issues of network design and efficiency are not the same as issues of cognitive mapping and understanding.

SPRAWLING PLACES

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[LIST OF PLACES](#)

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Tourism: a Waltz with Lucy Lippard

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IDEAS:

## The strip and the list

Travel out any distance, and soon you're on a suburban commercial strip. The strip combines land-gobbling sprawl with the artificiality of themed stores and malls, with its endless garish seductions and banal repetitions.

Despite its frequent ugliness, the commercial strip is showing us a new kind of order that can be found more and more in our world: the list with links. The street has become a list. Each item vies seductively for your attention. When you choose one item on the list and enter its building you find a mall, which is another list offering more seductions. But items on the list may have links that are invisible. You cannot understand the form of the strip – or anywhere in suburban sprawl – just by looking at it, because its form involves connections other than spatial proximity. The horizon within which the strip gets its meanings is far wider than its spatial neighborhood.

One branded island **abuts another**: McDonald's next to Staples next to Kinko's Copies. Strip transitions are abrupt and follow no order: food, lodging, Chinese food, tires, travel agency, burgers, book store, animal hospital. Nor is there continuity in time; substantial-looking enterprises suddenly disappear and are abruptly replaced.

Driving the strip **one scans a list** just as when reading the ads in the newspaper, or the Yellow Pages, or surfing the Web's lists. You travel facing discontinuity and seductions. Whether one scans for a purpose or for impulse the list remains.

*[Objection!]*

• [Nearby: [Places today outline](#) – [On the move](#) – [More than the surroundings](#) ]

[click on images for full-size:](#)



Commercial sprawl, Prince Edward Island, Canada



Commercial strip as a list of disparate items

This may tempt the reader to further exploration. But it may also encourage the impression that the text contains a series of discrete modules, and so work against complex textual effects that depend on the gradual and growing interaction of sections of the project with one another. In addition, the Web convention of marking "visited" links may undermine devices that depend on listing links, because the reader may not pay attention to the structural pointers but only to finding an unvisited link.

A tree of branching outlines provides a ready sense of overall organization, ease of survey, and a way of orienting oneself in the hypertext. This is helpful for the reader who may get confused about how the current set of nodes relates to larger structures of argument or exposition. In addition, access to a nearby overview becomes important when readers may drop into a Web site at any point as a result of Google references. On the other hand, a tree of outlines restricts the play of associations and "hypertextual" effects because it gives the reader a predefined map of the whole. It also puts pressure on the author to keep everything in a neat tree structure containing relatively independent groups of nodes.

In the *Sprawling Places* project, I combined a tree structure into a slowly developing whole that expands beyond that structure. The hypertext includes several maneuvers to counteract the dominance of the outline in the reader's experience. First, the tree of outlines links to only about a third of the text. There are lengthy expository and narrative regions that are outside the purview of the outline. Such regions may be listed in the navigation menus but are not summarized or outlined. Second, the nodes referenced by a given outline are linked with other expository nodes in a region that the outline lets you into but does not completely map. The links form what Mark Bernstein calls a "tangle" that seldom follows any obvious pattern (Bernstein 1998). Third, there are many cross-links that jump the reader sideways from one region to another. Fourth, the narra-

tive and descriptive nodes are not arranged in neat regions but rather in a linked net that follows no overall plan, with the individual narratives cut up and cross-linked.

These are all attempts to free the reader -- and the author -- from the pressure exerted by the outline and by the book version. I hoped that this would encourage a gradual and growing familiarity with the whole rather than a tight step-by-step progression. The question is whether they make the text too difficult for the reading styles that readers bring to the text. To what extent can a text like this develop new kinds of readers?

### **Self-Reflections**

For a long time I have been trying to create discursive space for multi-node argumentative and expository hypertexts that do not make each node into a complete argument, yet are not literary hyper-fictions or poems (see Kolb 1994, 1996, 1997).

Argumentation and exposition do need some structure. The structure may be arranged in a linear fashion to be encountered step by step, though it seldom written that way even in standard philosophical texts. Most authors distribute their argument in large chunks that may or may not be presented in a linear order, nor presented only once or only in one way.

Locke Carter remarks that hypertext "authors must overcome the expectation of order" (Carter 2000, 85). They must give up control to the temporal experience of the reader. For argumentative hypertext, Carter suggests a "stasis theory" of argument according to which it is not the temporal sequence of steps that is crucial, but the presence of a set of required elements within a space that the reader explores. Carter argues that authors should provide "friendly, memorable spaces and paths for readers to traverse. The grounds upon which an argument takes place must be constructed so that its readers feel like wandering around, and wherever they go, they learn about the topic, and are convinced" (Carter 2000, 89).

But Carter adds that "it is also important not to allow readers to wander aimlessly" (Carter 2000, 89). Random sequence soon becomes boring. As he says, "Readers assume the author will eventually reveal important parts of an argument and not waste our time, and the author expects that the readers will explore the entire hypertext, or at least those nodes that are easy to get to" (Carter 2000, 87).

Carter's first expectation, that the author will make the structure available, is standard for expository and argumentative hypertexts, but has its own ambiguities. The second expectation, that the reader will explore the whole, seems problematic for large hypertexts. Are such dedication and time from readers likely, especially from readers trained to dip into texts for bits of information, or those who arrive from Google with no plans to explore a large text? Should the author presume that the goal of the reader is to share the author's presumed total vision?

### **Author / Reader**

In a single-author hypertext, especially one composed with tools that provide visual maps, the author is tempted to omniscience. The author can see it all. The author works to create a space for reading, wandering, reflecting, and the author already knows its shape. But this is not enough.

The map is not the territory. The aerial observer can see all the paths but is not walking them. The map view shows the patterns but does not follow the paths one link at a time. Time is missing, and the unsureness of step-by-step progress, and the shifting contours and horizons of meaning that the reader builds as she moves along.

Even if the author has tried out walking the paths (all of them?), the author has not done so in ignorance of the whole. The author already "knows." Which means that the author will never be as creative as a reader of the text. The author should resist constructing devices designed to put the reader at the author's omniscient position. This would be to constrain the reader more than the author can realize.

How can we increase the reader's desire for complex linked structure and ability to encounter it? From my teaching experience I know how hard it can be to learn how to read complex argumentative books and essays. But there is hope. For one thing, the growing practice of making and following links in the blogosphere may help readers sustain attention across multiple nodes and produce a different sort of Web reading (but see my cautionary thoughts in Kolb 2008a.)

The *Sprawling Places* hypertext's cut up, cross-linked narratives and the tangled expository sections ask for a reader dedicated enough to spend time with the text and eventually encounter ideas in cut-up descriptions, dialogues and expositions scattered through different nodes. But is this realistic? Is it sensible for me as an author to expect that a complicated structure and a long text will be encountered in its entirety? Perhaps this would be more likely if the text was delivered on a CD that the reader purchased. If "afternoon" or "Victory Garden" were on the Web, would their complex structures and textual effects be as successful as they are on a CD? On the Web the reader never confronts only the work at hand.

Further, if a hypertext is on the Web with its pages already formed (as opposed to being generated from a data base on demand), then it will have been spidered by search engines and readers will be able to drop into the text at any point. From Google the reader arrives at some page in the middle of the text, with no knowledge about and no particular intention of reading the long complex text.

For hypertexts that deliver information, search engine random access provides no problem. The reader looks and finds and leaves. But the situation is different for some expository and most literary hypertexts, where meaning arises over sequences of nodes. This situation is very different from the controlled environment of stand-alone hypertexts presented with special software. This frustrates authorial attempts to define paths and starting points, and to create rhetorical effects that take multiple movements for their performance. Hypertext has been celebrated as freeing the reader, making them co-authors, "wreaders," yet that presumes a kind of dedication in the reader that the Web does not encourage. Web reading habits tend toward scanning rather than in-depth investigation.

An author can try to meet this by providing interesting, visually engaging material with clear navigation. If the author wants search engine drop-in visitors to keep on reading the text, rather than collecting tidbits from one or two pages and then departing, then the author needs to provide some vision of the whole that might change the reader's intentions, as well as navigation aids that suggest where to go next. Navigation devices become instruments of seduction. But this tends to get in the way of producing complexly linked textual effects that demand passage across multiple nodes.

In composing the long text I found myself wondering if any reader would ever encounter the whole. In that respect I found it comforting to have the book version as well, though it does not contain any of the narrative materials or expanded treatments found in the hypertext.

### **Linking Issues**

The narratives included in *Sprawling Places* present problems of their own. I did not want each description or narrative to occupy a single node. I wanted them to refer to and interleave one another rather than link like pearls on a string. So I composed each of them in linked groups of nodes with cross-links to other groups. Following the links disrupts the current narrative and puts it in context with others, or with expository materials.

It seemed worthwhile to have the different descriptions collide with one another and intermingle rather than stand as self-complete examples each tied to a particular point in the argument. So there are more links connecting the different narratives than there are links across to or from the expository sections. This helps the narrative descriptions to qualify one another, but it threatens to divide the hypertext into two separate large regions.

This is a situation where the issue of typed links becomes important. How many clues do I want to give that a link will move to another narrative, or to an expository section "far away"? If none, will the reader be confused? If too many, will the reader ignore the links that are meant to contextualize the current node?<sup>6</sup>

An advantage I sought for the *Sprawling Places* hypertext was that one document could speak in different voices, and be available to different audiences. (Of course, the notion of "one document" becomes much looser when what exists is a network of nodes where readers can find different paths.) Several different voices appear: a patient, sincere expositor, a more technical philosophical arguer, a freer but opinionated narrator of autobiographical descriptions, real and fictional, an ironic objector, and the voices of several "spirits of place" that appear in dialogues with the narrator.

An important issue, not fully resolved in the text, was whether there should be distinctive link structures for different voices and different kinds of readers. This seems a good idea, but it runs up against the problem of typed links.

The visual design of the pages subtly varies the color scheme for different types of pages (exposition, narrative, reflections), so that readers will have a sense of what they are reading. But should more be done to help readers locate themselves and know where links might lead them? Should links indicate the various voices? My decision was against that scheme, since I wanted the voices to collide and not be separated out.

A second possible use of typed links was to indicate paths appropriate to different purposes and different sorts of readers. Though this was part of the original plan, in the end I felt that it would be better to offer the reader a highly linked space to explore but not marked roads that tried to predefine the available types of readings.

As Richard Kopak points out (Kopak 1999), there are at least two different kinds of information that a reader might want when deciding which link to follow. One is the nature of the destination, the other is the discursive move or discourse function the link is asserting between the two nodes. While in general I agree with Kopak that discourse function is the more useful, I thought that in a project with its multiple regions, navigational information about the location and kind of node on the other end of the link would seem most immediately useful.

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<sup>6</sup> Dalgaard 2001 discusses the way that other texts, and para-parts alongside the main text, form an unpredictable contour around the text one is reading. See Rosenberg 1996 and 2001 for insightful treatments of the intersection of space and time in the event of hypertext reading.

I first experimented with simple markings: Links staying within a region were unmarked, links to other regions of the same general sort (narrative, exposition) were marked by an appended "\*", and links to the other sort of text were marked by an appended "#". This seemed more visually confusing than useful. In the final version, links show tool tips when the reader hovers over a link. There is a limited set of such labels, indicating the general destination of the link.

My fear, though, was that even my limited set of types might warn readers away from cross-links, pushing the reader toward a "finish one section at a time" approach and so decreasing the mixing and collision of sections that I hope to bring about. The book structure would win again. On the other hand, evidence from reader comments (quoted below) indicates that typed links may be useful.<sup>7</sup>

Do typed links increase or restrict the freedom of the reader? Do they increase or restrict the ability of the author to create complex linked structures? Do they indicate to the reader which links can be safely ignored? Would such indications increase the reader's freedom or insulate her from literary effects? But should such worries lead the author to leave the reader without guidance as to what kind of jump a link will make?

As Adrian Miles points out, "sequence can only be constituted as a sequence retrospectively" (Miles 2002, 65). Understanding comes as readers work towards closure. Absolutely open reading is impossible since to perform a reading is to seek sequence and connection rather than isolated moments, and that demands retrospective unification and definition of the sequence, and so a certain finality, even if that is defined as "open-ended."

The other side of Miles' point is that an author cannot fully determine how readers will unify sequences as they read. He argues that since "the relation between parts can only be interpreted by virtue of an end", and since the sequential synthesis is constructed *by the readers* during their reading, authors can never set up textual devices that will guarantee their desired view of the text will be adopted by the reader. "Any methodology that assumes specific interpretative outcomes from formal practices will be rendered historically irrelevant" (Miles 2002, 66).

He has in mind, for instance, the attempt to specify a thorough and stable set of link types. He argues that it is wrong to try and discipline the possibilities of reading. But this does not imply that there should be no authorial guidance for the reader.<sup>8</sup>

Miles employs familiar anti-system rhetoric when he charges that the efforts an author puts into making a large argumentative hypertext navigable and clear will tend to "domesticate the link" (Miles 2001, 61). They will keep the text a "domesticated and quiet machine" that "misunder-

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<sup>7</sup> In the original hypertext version of this present essay I used such link titles, but with no fixed set of types. I found myself adding types beyond the kind of information suggested in Landow 1991 and Carter 2000. Some link titles offered chances for ironic commentary. This proliferation of uses for link titles -- even in a short essay -- continued and extended the multiplication and inconsistent usage long discussed in the literature. (See Bernstein 2000 and Bernstein (undated) for the history of typed links.)

<sup>8</sup> Miles would prefer devices that were semantically open rather than linguistically defined. So, for instance, he approves of spatial hypertext's accumulation of implicit structure. (See Marshall and Shipman 1993, Marshall, Shipman and Coombs 1994, and Marshall and Shipman 1999.) For the same reason, the "cinematic" enactments that Clara Mancini has analyzed (see Mancini 2000 and Mancini and Shum 2001) seem promising because they need not be restricted to preset explicit semantic categories.

stand[s] links as merely aids on the way to clarity" and performs a "retrospective erasure of this excess in teleological determination that is the site of hypertext" (Miles 2002, 67).

But the situation is more complex than such rhetoric suggests. In the kind of argumentative hypertext discussed in this essay, policing the excess lurking in the link gap serves a liberating purpose: It stops reading a large hypertext from becoming a random walk. Ideally, the mix of general structure and local tangles with cross-links lets the various regions of the text collide in ways that will be undomesticated, but these need a level of policing in order to happen at all. The hope is to open up the reader to possibilities undreamt of in the author's philosophy.

This goal has proved difficult to achieve, and becomes harder when there is pressure from a book version of the argument.

### **Publishers' Puzzlement**

Most publishers I approached had no idea what I was talking about when I proposed a combination hypertext and book. I worried about intellectual property issues and they worried about cost retrieval, and I found it difficult to explain the joint project to them.

Publishers tended to interpret the proposal in terms of two inadequate models that they were already familiar with. The first model was a book accompanied by a Web site that functions as an advertisement. (For instance the University of Chicago Press puts single chapters of some books on the Web as a way of enticing readers to buy the whole book. This subordinates the hypertext, whereas I was proposing two co-equal presentations.

The second model was a textbook that has supplementary materials available on a CD inserted in the book, or on a password-protected Website. A music or art textbook might have examples provided on a website; a logic or math textbook might have exercises and testing. This makes the hypertext a secondary adjunct.

One publisher did understand the potential for a work that existed in two equally weighted versions, one in print, one electronic. The University Press of Virginia has established a separate Electronic Imprint, and was willing to consider the joint project. In the end, though, their book arm found the manuscript too theoretical for their series, while their electronic arm is concentrating on scholarly databases and compendia rather than expository/narrative texts.

An additional hurdle for scholarly hypertext in general, was a worry about how to find peer reviewers for such a text. However, only Virginia even attempted to review the hypertext. The panel included one person who was familiar with hypertext methods of presentation and two experts on the subject matter. It was encouraging for the future of hypertext reading that the most helpful commentary on the form of the presentation came from one of the subject matter experts who had never dealt with a long hypertext before.

### **What's do the readers want?**

Many theorists tend to oversimplify reader's intentions. Rosenblatt's distinction between "efferent" and "aesthetic" reading (Rosenblatt 1978), is one example of the tendency to picture readers as either wanting to take some definite piece of information away from their reading, or to be absorbed into the structure and movement of the piece as an object of aesthetic contemplation.

Information-seeking is not the only non-aesthetic intention for reading. Besides looking up train times and bus schedules, I might want to be convinced by an argument, or to explore a set of ideas with the intention of applying them elsewhere. On the artistic side, the notion of "aesthetic

contemplation" ties reading too tightly to modernist notions of pure aesthetic experience, which have been under artistic and philosophical attack for many decades now. Andy Warhol and Robert Rauschenberg, even modernist poets such as T. S. Eliot and Wallace Stevens, are not about providing objects for disinterested contemplation. The idea of a purely contemplative aesthetic experience -- which is a late eighteenth century notion -- denies the long tradition of the moral influence of literature, elides the critical functions of literature, and reduces the reader to a pure ego seeing absorption rather than a real person with complex contexts and projects.

The division between efferent and aesthetic purposes presupposes that I am well defined and unchanging as I come to the text. But I might be seeking a new version of myself, with my outlook or my sensibility, or my conceptual tools, or my purposes transformed by the encounter with the argument or the poem or the religious text. These are not about picking up some information useful for a predefined purpose, nor are they a matter of disinterested contemplation. Texts change readers, even as readers recreate texts.

My project aimed at what Susanna Tosca calls a "non-fictional hypertext that allows for a poetically pragmatic reading" (Tosca 2000, 82). Tosca distinguishes two different goals for navigation and link structure. In the first case "we want a clear-cut structure where the reader knows where she is and where she can go at all times" in order to get maximum informational cognitive return for minimum processing effort. This goal asks for efficient clear links and navigational aids.

In the second case "we want a structure where the relevance is determined by the cognitive effects of exploring a context made up of a wide range of weak implicatures" for maximum lyrical-poetic cognitive return from an increased processing effort that is itself pleasurable and meaningful. This goal asks for links that are more evocative than efficient, playing with the reader's expectations, and leaving it to the reader to make out the overall structure. (Tosca 2000, 82-3.)

She points out that hypertexts can mix these goals and strategies. The kind of text I am writing about here attempts such a mix. It wants the reader to understand what is being argued for, and why, but also to find new directions and dimensions of thought that might be explored in ways the author cannot predict.

### **So What Happened?**

In the end the *Sprawling Places* hypertext was placed on the Web in the autumn of 2007 and the *Sprawling Places* book was published by the University of Georgia Press in January 2008. Their standard publishing contract was modified to allow the partial textual overlap of the two versions. The book contains references to sections of the hypertext that treat various matters at greater length. In the Web version a special menu item links to sections referenced in the book. At the same time the hypertext contains references to the book version.

A reader one of my hypertext essays remarked that

The text, as was intended, was asking me to read it in a way that I don't normally approach scholarly work. . . . the traditional structure of scholarly papers . . . is designed to short cut the reading experience to get to 'the meat' as quickly as the reader desires. . . . I don't always want to spend hours cruising to read an academic text. Unlike other forms of reading, there are often time constraints on the reader that have led to . . . the more rigid structures that are commonly used. This essay is a very different type of text that requires a commitment to it that most academic literature does not demand.

I have been trying to create a kind of hypertext scholarly writing that does indeed demand more time and a different kind of concentration. There is no 'meat' immediately available; things come into focus gradually. The aim is to raise questions and introduce concepts; the effort is not easily summarized. What I have been trying to create is a hypertext version of a kind of reading that is familiar to those in philosophy and literary studies, but is not the mode of the "research report" more common in scientific and social science writing. Key texts in philosophy -- a chapter of Aristotle, a deceptively simple-looking essay by Quine -- cannot be read for quick summaries. Their arguments are often difficult to discern, and the difficulty is functional in the sense that it opens up new ways of thinking. This will be less true of secondary writing about those key texts, but even there the most influential commentary and analysis will have its own rich texture, rather than quick isolatable conclusions.

One reviewer read both the book manuscript and a version of the hypertext that had some but not all the navigation devices of the final version. He wanted more navigational help:

I find that the [book] presents a more compelling argument, but I think this is only because the hypertext ... [is] a bit too fragmented in its presentation. . . . Larger chunks of text . . . would allow an idea to be more fully developed without having to click through several pages. . . . I have to say that I really enjoy the intertextuality of the Web version. In many ways, the presentation comes off as being playful. One doesn't read it straight through; one surfs. The form itself encourages us to experience the material this way: a few paragraphs on Disney World, then a few on place grammar, then a few on Tokyo. How did I end up reading about this?!? It's frustrating sometimes because individual pages don't always feel like they're leading up to anything; and one can't peek ahead to read the conclusion in order to understand how and why a given digression fits into the larger framework. . . . Although I can consume and digest much larger and more satisfying chunks of the [book], it lumbers by comparison. . . . I might have chosen to treat your topics in a different order. The hypertext version permits me the freedom to explore the topics in many different orders; but longer excursions into the hypertext leaves me feeling a bit disoriented. Is it possible to remain oriented within a network of ideas, yet leave enough wiggle room to play freely and joyfully?

This reader would like more navigation to cut down the "piecemeal" quality, but he enjoys the intertextual and playful effects of the Web version. He reads to discover how each piece "fits into the larger framework," but he also wants to create paths of his own. For him the link patterns are too confusingly intertextual, and I worked to make the final version more comprehensible by adding the link typing discussed above. In a series of emails this reader took up, extended, and disputed points made in the hypertext, and related them to other authors, so the text did seem to be stimulating thought in ways I had hoped.

This reader would also prefer longer, more self-contained pages. Page length was a difficult issue. I worried about readers' willingness to scroll down long pages. Also, the visual design for this project's Web site worked best if individual pages were at most four or five hundred words. The average length for pages is 200 words, but with many outliers in both directions. About a third of the nodes in the hypertext contain less than a hundred words. One reason was that my earliest hypertexts were written not for the Web but for presentation in Storyspace, which encourages short nodes in multiple windows open together. Perhaps I need to outgrow that habit, though it is a mode of emphasis that stimulates thought.

On the other hand, another reader disagreed with the request for longer pages.

Unlike your first reader . . . I do tend to prefer shorter nodes . . . following the development of an idea not within the page, but along the linked fragments that make up the many reading paths. I always find that, when the medium is taken all the way for what it is, it ends up communicating more efficiently and all the fragmentation finds its cognitive re-composition in my mind. If I am to follow a link, I don't like the idea of leaving behind me a lot of unread text . . . To me the combination of small nodes, a good amount of links, and navigational aids, is the best.

Three other readers evaluated the *Sprawling Places* hypertext for a publisher. None of them had seen the book version. Their comments were mostly content-related, but they also discussed their experiences in reading the text. One said that the book and the hypertext “are very different intellectual experiences that only add to each other, rather than detract or compete . . . . When I randomly entered the site, I initially found the screens to be fragmented and somewhat frustrating. This is because I judged them in isolation. . . . After some hours of ‘cruising’ the site, however, it began to hang together. It is the cumulative experience of the site . . . that adds up to making sense. In this manner the organization is most effective.” Another said “I could imagine teaching a course in which I made use of both book and hypertext. In many ways this coordination or parallelism of the two modes, the consecutively written book and the ramifying hypertext, reflects in the medium of writing the very fundamental aesthetic issue that Kolb confronts in both places, namely the contrast between a more conventional, centered, striated space and one that allows for a freer kind of movement, a patchwork or smooth space, to use a term of Deleuze and Guattari.” A third remarked that the hypertext was “very well elaborated as an electronic reading. It is not just a book or text laid out on the net, but very intriguing in its system of links. It, moreover, keeps a personal approach towards the set of problems presented as net publication, which is not always easy when it comes to theoretical texts, but which is one of internet's main qualities. As an electronic reading project I also think that central concepts like social grammar, place complexity and themed places come out very well, since they are approached many times at different locations, and from different aspects.”

These reactions were encouraging, but since the site went public, most visitors measured by Google Analytics come from search engines seeking images or information on specific topics such as Disneyland or Frank Lloyd Wright's Broadacre City proposals, and only a few visitors spend more than a brief time on the site. Only a few dozen readers have lingered long enough to perhaps achieve a complex hypertext reading experience (see Kolb 2008a). It may be that giving the hypertext to individuals on a disc may still be the mode that encourages the most committed and complex reading. The future will determine whether if the hoped-for interaction of the book and the hypertext can actually take place.

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