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Finding the Funhouse:

A Method for the Spatial Modeling of Annotated Narrative

For the Spatial Hypertext Workshop, I propose to present an artistic and critical project currently in development, *Finding the Funhouse*. The project takes its inspiration from John Barth's pioneering metafiction, "Lost in the Funhouse" (1968). As a parody of the quest motif, Barth's narrative pits the linear time-space of the heroic adventure against the convoluted motif of the labyrinth. Its complex interweaving of the prosaic and heroic tropes, of traditional descriptive narrative and metafictional self-reflection, and of numerous varieties of oral and literary discourse make it a perfect test case for spatial modeling.

I am proposing to present our method for the spatial presentation of an annotated hypertext version of Barth's story. We began this project by marking up a digitized version of Barth's text using various qualitative discourse analysis (QDA) applications (TACT, ATLASti, NUD*IST, The Observer). Our textual coding was based on several discursive parameters (thematic, rhetorical, narratological, spatio-temporal, discursive, etc.). Each QDA application can output the resulting data relationships in a particular spatial structure. For instance, NUD*IST can produce a clickable Tree Display, in which each node is linked to the corresponding coded text. With other applications, we can produce 3D graphs using a variety of parameters (e.g. x-axis = *indirectness of discourse*, y-axis = *time of the narration*, z-axis = *time of the story*). In the current phase of the research, to be completed in July, we will determine which analytical parameters and output styles produce the most visually coherent and aesthetically compelling spatial models of Barth's narrative.

In the final stage of our project, to begin in August, we will transform the most satisfying spatial models into 3D walkthroughs of Barth's narrative. These models will be superimposed as layers in Sketch-It, and rendered as a 3D VRML labyrinth--the basic structure of our Funhouse. We will then map the original text back onto the interior walls of our labyrinth at every relevant point. In this way, we hope to produce a navigable walkthrough of Barth's original text, rearranged to reflect its thematic, discursive, narratological and structural principles.

Finally, we will add hotspots to our narrative labyrinth, so that explorers can click through to relevant secondary criticism about Barth and his oeuvre at relevant loci. Ultimately, we hope to add a web graffiti function, on the model of Adobe Acrobat's web annotations for workgroups. Ideally, each navigator will be able to add his or her own

critical commentaries or hyperlinks, transforming the labyrinth into an asynchronously collaborative hypertext. Plans for future improvements to the navigation interface also include the addition of audio-visual landmarks, dynamic site maps, and other wayfinding tools.

We do not claim that this spatializing process will reduce Barth's text to any intrinsic spatial form. However, we do hypothesize that the spatial models of the text which readers consider most coherent and satisfying will correspond in significant measures with the mental maps they produce by reading Barth's narrative in its original, linear form. We see the spatial Funhouse as an anamorphic transformation of a linear text, a critical supplement that models the verbal, discursive, narratological and ideological complexity of Barth's textual labyrinth.

The choice of Barth's story is, of course, deliberate: "Lost in the Funhouse" has already inspired hyperfictional experimentation, most notably John McDaid's *Uncle Buddy's Phantom Funhouse*. As a self-conscious, "mixed media" interrogation of the traditional literary interface, Barth's story anticipated the art of the hyperfictional interface. Navigating the story and its critical apparatus spatially will help to ascertain the fuzzy relationship between metafiction and hyperfiction, and allow a comparison of fictional and virtual spaces. Some other questions we hope to address include:

• What kinds of narratives lend themselves most readily to spatial modeling?

• Do spatial models of narratives enable interpretive moves not possible with linear printed text?

• What is the user experience of navigating annotated text in 3D?

• What visual features (colour, landmarks, earcons, etc.) increase the usability of 3D walkthroughs of annotated text? Do indices, search engines or site maps add functionality or not?

• Does the addition of information-rich content, such as visual metaphors or audio text files, improve the navigability of abstract spatial hypertexts?

• Which interpretive parameters and analytic applications produce the most efficient and effective spatial hypertexts?

• How do the visual outputs of QDA applications compare with spatial hypertext systems such as VIKI or Storyspace?

• What tools or interfaces best enable the collaborative asynchronous annotation of spatially rendered narrative?

• How can the process of textual analysis and 3D modeling be made more dynamic? Can it be automated for either real-time rendering, or the batch processing of digitized narratives?

• Do narrative descriptions of real spaces enable or confound the production of mental maps for the navigation of virtual spaces?

• How can the *chronotopes* (represented space-times) of literary narratives best be modeled to reveal their spatial, visual or semantic distinctiveness?

Project Background

Finding the Funhouse grew out of our ongoing collaborative research initiative, **"Cybercartography and the New Economy"** (*http://www.carleton.ca/geography/ geography/Taylor_research.html#Cyber*). This multi-million dollar international initiative bridges the domains of geographic information science, human-computer interaction research and new media studies. The project's four-year goal is to establish a proof-of-concept for digital map interfaces, which will enable the creation of two innovative cybercartographic products, the *Atlas of Antarctica* and *Canada's Trade with the World*.

Though grounded in computer technology and the social sciences, cybercartography is an aesthetic project in every sense: we aim to produce maps that talk, make music, are touchable, and even emit odors to stimulate navigational memory. The project will ultimately be housed in our future **HCI Institute**, an expansion of our Human-Oriented Technology Lab (*http://www.carleton.ca/hotlab/news_Articles/ CFI_grant.html*). Scheduled for completion next year, this research facility will house custom labs for user needs analyses and testing, multimodal experimentation, teleconferencing, virtual navigation experiments, and audio-visual production.

Our own Project Team is exploring the various strategies which individual users have for navigation in new narrative media, including hypertext and interactive digital entertainments. Researchers in the field of geovisualization have already identified numerous cognitive and usability research issues, including spatial perception, cognitive overhead, metaphors for non-spatial data, the design of navigation tools to assist cognitive wayfinding strategies, and the linking of disparate and spatially dispersed datasets. We will be developing tools and interfaces for mapping texts and stories, along with critical explanations of the new reading practices these tools demand. To do so, we need to determine the usability issues faced by the reading subject through a variety of investigative methods, including user testing and user needs analyses grounded in current theories of cognitive mapping. We expect *Found in the Funhouse* to provide us with a hands-on tool for testing spatial orientation, navigation and comprehension in virtual textual spaces.