

# **An Embarrassingly Literal Embodiment? Travels Through Hypertext, Postmodernity, and Visitor Studies**

Kersti Krug  
Museum of Anthropology  
Vancouver, British Columbia, Canada

The term hypertext is used broadly to describe all linked, unbounded, and non-sequential computer projects (or electronic networks). In its more limiting sense, hypertext indicates the use of text only or primarily. When the project includes graphics, audio, and/or video, it is often called hypermedia. In this paper, I will use the term hypertext in its broadest sense to include all media.

Hypertext exists only in electronic form and can be transported via floppy disk, cd-rom, or modem. There can be no real comparison of works produced in hypertext and ones produced in print because print emphasizes text (or content), and hypertext, the links between textual elements -- relationships that are difficult or impossible to capture in print.

Movement through a hypertext network occurs via buttons or hot-points. Clicking a computer mouse on these links moves readers instantaneously to a new layer of text (or sound or video) which can appear beside the original text or in its place. From here, readers can choose to retrace their steps or continue linking forward -- or perhaps better outward -- to other layers. Hypertext authors (and different software programs) can provide greater or lesser linearity, interactivity, freedom of choice, or navigational help to readers.

To this exploration of how hypertext can contribute to postmodern issues in visitor research, I bring three perspectives: long experience in museum administration, recent experience conducting visitor research, and current experience as an interdisciplinary student producing a doctoral thesis in hypermedia.

As a museum insider, I recall that visitor studies did not enter our consciousness until recently. Visitors, we had assumed, were an undifferentiated public whose individual ways of understanding exhibitions and programs were inconsequential mysteries. But as financial constraints increased the relative importance of gate revenues, questions about visitors became worth pursuing. For answers, we turned to visitor studies professionals.

Soon information about visitor income, age, gender, residency, behavior, and values was pouring in from questionnaires, observations, and interviews. We now had the knowledge, researchers told us, to take positive action. However, to our embarrassment and frustration, massive amounts of

collected and summarized data were piling up on our shelves – some read, some used, many neither. Researcher knowledge was translating poorly into museum knowledge – and inconsistently into action. While museums were risking irrelevancy with visitors, the visitor studies profession was risking irrelevancy in the trenches.

The paradox for those of us who conduct research is that we are giving museums both too much and too little of the knowledge we pick up in the field: “too much” because huge text-bound reports are often daunting for readers whose interests and energies are focused elsewhere, and “too little” because the distillation of “real” visitors “out there” into number- or jargon-bound summaries is often incomprehensible to readers whose foundations in research theory, method, and analysis are thin.

At the heart of this paradox are methodological and reporting issues for the visitor studies profession – issues grounded in part in the technology of reporting. A two-dimensional, linear, and bounded print technology makes problematic the representation of multi-dimensional, changing, and enigmatic human beings. And although there is growing evidence that more visitor studies are drawing on multi-disciplinary, feminist, and postmodernist perspectives (Dufresne-Tassé, 1995; Lawrence, 1993; Roberts, 1993; Wallace, 1995; Worts, 1991), the central postmodern arguments for intertextuality and multivocality and against linear, author-centered narratives remain elusive for print. The introduction of hypertext technology, then, could launch a new stage in postmodern scholarship.

## **Hypertext and Crossings**

During my personal exploration of hypertext, visitor studies, and post-modernism, I became intrigued by the way some philosophers, anthropologists, feminists, sociologists, literary and cultural critics, artists, scientists, educators, and audience researchers have developed their multi-disciplinary theories to seemingly forecast the computer technology of hypertext. Yet it is unlikely, and in some cases even impossible, that these writers have developed their ideas with computers in mind (Bolter, 1991).

These scholars have sought to decenter the subject/author (Derrida, 1976); to connect complex and disconnected notions and facts in alternative literary forms (Wittgenstein, 1958); to situate author/researchers (Haraway, 1988); to explore particularity, complexity, and ambiguity (Foucault, 1980; Hooper-Greenhill, 1995); to increase access to a broad sample of texts (Clifford, 1990); to represent, interrogate, juxtapose, and construct conversations among individuals and ways of thinking (Flax, 1990); to involve both researcher/authors and their client/readers in a collective endeavour (Hood, 1991; Loomis, 1988); to encourage “unpredictable, individualistic, and uncontrollable experiences” which emphasize “learning not educating, and exploration not explanation” (McLean, 1995); to deepen descriptions of human activity (Geertz, 1973); to increase the acquisition of

knowledge by transforming stimuli into visual form (Bitgood, 1994); and to find new ways of seeing by juxtaposing media and shattering conventions (Barthes, 1977; Eco, 1983; McLuhan, 1962).

The ideas of these and other writers have come down through time as interweaving paths. At the crossing where they met we find ourselves today, poking through the tangle to make sense of its remarkable potential for research.

My own introduction to the potential of hypertext occurred over a year ago. Since then, I have been investigating the implications of this computer technology to studies of museum organizations and museum visitors. In the process, I became curious about the apparent lack of reflexivity within the visitor research discipline. Though researchers were developing theories on what visitors expect from museums and how they experience, remember, and learn from objects, texts, and images (Barnard and Loomis, 1994; Bitgood, 1994, 1992, 1991, 1989; Bitgood et al, 1986; Black, 1991; Perry, 1993; Screven, 1992; Shettel, 1976), and though many were concerned about the lack of response by museum administrators and professionals to what visitors were telling them (Hood, 1991, 1983; Krug, 1994; O'Neill, 1991; Shettel, 1989; Van-Praët, 1993), most research continues to be focused outward *at* the visitor. It seemed timely, therefore, to explore a new mechanism for reporting and presenting research — and shift the focus inward.

### **Hypertext and Theories**

Though hypertext is believed by many to launch far-reaching and dramatic changes for both readers and authors, the theories that are developing around this powerful computer technology arise principally out of literary criticism, education, and computer science. Its applicability for human science research in general and visitor studies in particular, remains untapped.

Among the most prolific and influential writers about hypertext are literary theorists Jay David Bolter and George P. Landow. Bolter proposes that hypertext constitutes “a textual medium of a new order [and] the fourth great technique of writing that will take its place beside the ancient papyrus roll, the medieval codes, and the printed book” (1991:6). George Landow of Brown University, a centre for hypertext research, goes further by suggesting that hypertext will cause a “paradigm shift, which marks a revolution in human thought” comparable to the changes set in motion by Gutenberg’s printing press (1992:2-3).

Although there are critics of their enthusiasm for this technology and its grand claims for democratizing scholarship, both writers have established strong and broad theoretical and practical foundations for understanding the relationship of hypertext to scholarship and knowledge creation. Hypertext, they describe, is essentially an intertextual system which permits one text to

be linked to a world of other texts. Unlike the fixity, easy reproducibility, linearity, and standardization of book or journal technology, hypertext offers each reader a unique reading experience, extends for all readers the kind of associative study that is done easily by subject experts, and facilitates for both readers (and authors) the making of new connections and meanings. Hypertext creates, to borrow Roland Barthes' expression, a "readerly" text which, unlike print technology, emphasizes the destination (or reader) of the work, not the origin (or author). Thus hypertext shifts power relationships between authors and readers.

The addition of media such as audio, images, and video contributes different ways of seeing significance and meaning, reflecting Clifford Geertz's theory of "thick descriptions". The capacity of computers to hold all field data and notes as text, audio, or video also permits participants to speak more directly to readers without the constant mediating influence of the author (Goldman-Segall, 1989). Thus hypermedia shifts power relationships between authors and participants.

For Landow and Delany, "hypertext creates an almost embarrassingly literal embodiment" (1994:6) of postmodern concepts such as decentering, intertextuality, and readerly versus writerly texts, and its rejection of sequential narratives, grand theories, and unitary perspectives. Because hypertext can mirror the complexities, ambiguities, similarities, and contradictions of visitors, and because it permits readers to choose their own paths and find their own meanings, hypertext changes the way we think about our studies and communicate findings to our clients and colleagues.

## Hypertext and Readers

My exploration of hypertext theory, however, did not fully prepare me for either the exhilaration or frustration of producing a real hypertext project which incorporates not only text and graphics but sound and video. To test the promises of hypertext writers, I began to gather together three visitor studies conducted recently by the Museum of Anthropology at The University of British Columbia in Vancouver, Canada. These included a survey of museum visitors, two focus groups of non-visitors, and a survey of members. Both quantitative and qualitative methods were used. To this core, I am adding several earlier, smaller studies, relevant theories, and related statistical, financial, and organizational information. The project remains a work in progress (typical of how hypertext avoids closure), but can be used here to illustrate how hypertext changes not only how our readers can see our studies, but also how we, the authors, can change our approach to research.

It is obviously impossible in print technology to recreate the complexity and richness of so many sources, but I can provide a sample reading by a fictional character through whom we might get a sense of it. This reader will be a museum professional — let's say a senior curator—

who, despite deep knowledge of more than one museum specialty and broad knowledge of the museum field, is unaware of the visitor studies literature. She has recently opened a new gallery which received mixed reviews by critics and visitors about its sparse labelling. Though she has never expressed interest in "the visitor", she is curious to know why her recent project is acclaimed by some and panned by others. She thinks it might be time to know more about these dissenting, baffling bodies wandering through her gallery.

Let's imagine then that I sit our uncertain but momentarily willing curator/reader in front of the computer screen which is open at the overview window (or page). I then give her one minute of orientation, as follows: click on any "button" with the computer mouse to link instantaneously to another page or another part of the current page; click on the "back" arrow at the bottom of the screen to return to the preceding page; click on the "overview screen" button within any page to return to the beginning; and open up a "history" pop-up box to keep track of where you've been. Always at the top of the screen is the descriptive file name of the current page.

There are many metaphors used to describe the elements of a hypertext network, including *file*, *page*, *block*, *window*, *card*, *layer*, *chunk*, or Roland Barthes' term *lexia* (1977). Robert Horn, who uses *node*, defines it as "the part of the network where text or other media are located" (1989: 9). Nodes can be as small as one sentence, a graph, or a footnote; nodes can also be as large as a multi-page document, a full-length video, or an entire book. In this description, I will use the more familiar term, *page*.

The overview screen (Figure 1) looks like a combined title page and table of contents. Its purpose is to suggest the range of subject matter pulled together in this project and how it has been organized. This orienting screen becomes an anchor or home base to readers, limiting their sense of vanishing into the massive network of pages that hypertext can accommodate. (This project, for example, will grow to hold over two thousand pages.) The reader can begin at any page by clicking the mouse on any of the buttons.

Let's say that our curator is adventurous, eschewing the author's introductory "context" and going directly to the data, and in her case to the most qualitative of the three main studies — the focus group discussions with non-visitors selected from two historically non-visiting communities. Not wanting to be swayed by the author's interpretation of these data, she goes directly to what the participants themselves contributed. (*Another reader might feel more comfortable first learning about the context or poring through theory and methodology before venturing into data.*)

Our curator/reader now wanders through several pages filled with case transcripts of the discussions which occurred in the focus groups. She finds links between the two groups, between related topics, and between similar and divergent points of view. One page (Figure 2) draws her interest because, as she skims transcripts, she finds participants talking about the

labelling issues with which she herself is struggling. She clicks on a graphics button that reveals the face of one of the participants, and then an audio button that brings her the participant's voice. As she listens, she re-reads the typed transcript and discovers new interpretations from the voice that were missing in the text. (*If this study had been videotaped, the reader could also "read" body language to further thicken the meanings she takes from the studies.*)

More confident and eager now, our reader wanders off to see if museum visitors and members also have something to say about the topic of labels. Following her own preference for qualitative information, she heads to the narrative portion of the members survey, specifically the question that asks members about labelling (Figure 3). She sorts through the responses and finds members who argue strongly for opposing views.

Aware now that a typed transcript provides only limited information, she clicks on a button revealing the original handwritten questionnaire. She compares the handwritings of two divergent viewpoints and notes intriguing connections between what is said and how it is written. She is moved by respondents' passion and willingness to share thoughts — thoughts she finds more astute and insightful than she had ever expected of non-experts. (*With the increasing speed and memory capacity of computers, there is every likelihood that one day soon we can keep all the original raw data and relevant supportive documents in electronic form, connected to one another and to the world of information becoming available through the Internet.*)

Her mind is now drawn toward a new question. Why, she wonders, do people with such antithetical perspectives all become members of one museum? She returns to the overview screen and finds links to the membership survey which, she discovers, has posed this type of question to members (Figure 4). She reads the question and findings summarized in the text, but finds the heavily quantitative analysis hard to grasp. She clicks on one button to see the numbers organized into a table and then on another to see a graph. These help, and she returns to the text to read with better understanding. (*With some software, she could restructure the table or graph to focus on details or seek answers to questions not considered by the author.*)

Feeling now that she has gained some appreciation of non-visitors and members, she follows a path to the visitor survey. This time, she begins with the description of methodology (Figure 5). Knowing a little about questionnaires, she clicks on a button to scrutinize the questionnaire used. She notes how respondents completed the form and critiques how sequencing and spacing of questions opened up or closed off answers. Having concerns about the method, she digs deeper into the text which discusses sampling errors and other shortcomings. Here and there, she argues with the author's assessment and jots down a few notes. (*With some kinds of software, she could put her comments directly into pop-up boxes where the project author*

*and future readers could find and add to them ñ thus participating in a broader conversation.)*

After almost an hour, she is ready to quit, but not before returning to the label issues explored by both focus group participants and museum members. Forgetting where she was when she read them, she pulls down a "history" box and finds her way back. As one of the pages was quite long, she uses a word search to find the exact place. *(With some software, she could conduct word searches throughout the network or keep track of her personal reading history over days or months.)*

After another half hour, she ends her reading feeling "finished". Although most of the network remains unexplored, she has no sense of the unfulfillment she might experience had she quit part way through a bound book. She knows she can come back another day and start a new search when further reflections have evoked new questions. As she turns off the computer and wanders back down the hall, she thinks to herself that she might ask some visitors specific questions about why her gallery's labels produce good and bad experiences. She knows now that she will not get unitary or conclusive answers, but a variety of conflicting and thought-provoking opinions. But she also thinks that if she is very, very creative she might devise a way to improve the experience for those who are lost without more information without destroying what is aesthetically pleasing for others.

## **Hypertext and Authors**

What is missing from this tale of one reader's experience reading a hypertext network is the author's experience compiling it. Let's then create another character, here a museum marketing specialist who some years ago ventured into the visitor studies field.

This author, like almost all other researchers, has been trained since infancy to read and write linear, bounded, unlinked printed books and articles. Although print technology has always provided some flexibility, she and her colleagues have never released themselves from the narrowest of print conventions. Although her computer makes possible linking from one software program to another, working on two manuscripts at one time, searching for words in documents, reformatting text, and adding tables, graphs, and other images, she has continued to restrict its powers to manuscript production, and not to the framing of final reports. Although she uses tape recorders regularly and video cameras occasionally, she has never added these media to her text-laden reports. Although her mind naturally links earlier studies and a variety of other environmental and institutional information to current studies, she has carefully excluded such indirectly related material from study reports. Although she, like her research colleagues, frequently experiences the excitement that comes from organizing, disorganizing, and reorganizing raw data until it confesses

something interesting, she cannot recall ever having re-experienced that thrill of discovery after her data were analyzed. Once one study was finished, so was her own exploration of it. When a report or article was printed and bound, what was the point of revisiting original sources?

And although she regularly arranges presentations for museum staff, distributes summaries broadly, and makes full reports easily available to everyone, no one comes to read them and few express more than polite interest in their substance. Perceiving that her studies are having little or no impact on what the museum does, she finds herself increasingly discouraged.

Then one day she stumbles on hypertext as a tool for authoring and speculates how it might contribute to the work she is doing. As she immerses herself in hypertext literature, she becomes progressively more excited about the potential of this technology for human science scholarship. As she immerses herself in the technology, however, she loses much of that enthusiasm because nothing, it seems, comes simply or cheaply on this technological frontier. Software that offers flexibility has too steep a learning curve; software that is simpler is too constraining. Adding multi-media capacity to her existing computer causes incompatibilities and stalls her progress. Though she is spending more time finding and creating her authoring tool than doing any authoring, she is now too committed to turn back to paper.

Finally, when she has gathered together enough theoretical and practical knowledge and bought enough hardware and software to commence, she sits down to frame the architecture for her massive hypertext project. She is faced immediately with a range of choices which will determine the fundamental nature of her network. At one extreme (as suggested in Figure 6), she can reproduce electronically the conventional linear narrative, but then weave in footnotes, endnotes, diagrams, references, appendices, and other supportive information around that linear development in the form of text, graphics, audio, and video. Though such a network would be rich in detail and more familiar to readers, it would not use the full potential of the technology.

At the other extreme (as depicted in Figure 7), she can produce a virtually random potpourri of information pages in all media, including the raw data, her own analyses, original passages of other writers' works, attendance and tourism statistics, and contextual and institutional information. She can even link her network to all that is "out there" in the Internet and WorldWideWeb. Between these pages, she can create the maximum number of links and let readers go freely wherever they please. This maximizes the capacity of the technology, but overwhelms most readers with too many choices and too few familiar landmarks.

Or, our author can find a compromise between electronic linearity and textual chaos. Aware that either of the two extremes would be a great deal easier to produce than a blend of freedom and constraint, she nonetheless elects to seek that balance.



She begins by sketching a crude framework made up of standard report headings: introduction, context, theory, method, data, analysis, conclusion, and bibliography. This two-dimensional structure can then be depicted on the overview screen. But when she adds sub-topics to each main topic, the network swells quickly to three dimensions. And when she begins attaching links, she finds the network transforming into four dimensions because the element of time is added. For if readers begin somewhere other than at “the beginning” and if they are to advance efficiently, they should be able to find navigational clues wherever they are in the network. She must therefore imagine how a variety of readers would wander through the maze of pages and links. Curious, she thinks, but in the process of producing this visitor studies network, she has been drawing deeply on her visitor studies experience, taking comfort from her disciplinary knowledge about how people experience, learn, and remember.

With readers now atop her mind, she returns to the overview structure to rethink paths and relationships. In the process, she struggles with issues of control: is she leaving enough flexibility for the reader, or is she reverting to the more familiar author-controlled production? She finds no easy answers, but reflects critically on what she has assumed until now is a “natural” need for authorial control.

When the basic navigational structure is organized to her satisfaction, she faces decisions about authenticity, voice, and ethics. Should she use all original sources and let readers make whatever they want of them, or should she summarize, comment on, and interpret these data? She decides to both compromise and take a different approach. She incorporates, wherever available, original sources, but adds her own author voice — less as a kind of authoritarian “voice-over” than as another “original source”.

But should she stick to text transcripts or attach the actual audio/video recordings and handwritten responses in their original media? Here the answer is more problematic because some of the studies were done before she had developed this hypertext/multi-media capacity. She had not informed participants that their handwritten comments, voices, and faces might be read, heard, or seen by more people than just the research team. Is it ethical, then, to expose them now, and how many more people become too many? She concludes that, in some cases, using these sources is not ethical; in other cases, she can add original sources if she takes extra steps to provide anonymity; and in still other cases, she can still seek permissions. For her next study, she reminds herself, she will have to think about all this at the beginning and inform participants about how very differently their involvement could be presented.

When she has created hundreds of pages and links, she invites colleagues to explore the work in progress. Each reading produces questions, arguments, and new interpretations; and as she adds them, the project grows in size, complexity, and apparent interest and relevance to museum staff. When she conducts a new study, she adds it to the network and discovers

connections to earlier studies and new meanings from old findings. She catches herself rediscovering the richness of long-forgotten data and references, particularly where she has been able to include original audio/video and computer-scanned sources. Her printed reports have never stimulated such useful conversations nor kept old studies alive. Instead of progressing incrementally "forward" from one study to another, she finds herself moving forward and backward, outward and inward — each time strengthening her associative thinking and challenging her past conclusions.

### **Hypertext and Exploding Theories**

I am not suggesting in these fictional tales of readers and authors that hypertext will present more faithfully the complexity and diversity of our visitors, or make us unflinchingly reflexive, or cause museum administrators and professionals to rush to read our reports, or dramatically transform museum/visitor relations, or wipe out the printed report, or replace old theories with new ones, or bury quantitative, positivist, and modernist research under an avalanche of qualitative, constructivist, and postmodernist studies. I am, however, suggesting a new way of seeing and influencing change by enhancing access to knowledge about visitors. If positive change requires a shift from an exclusively external focus to a more integrated internal/external focus, then hypertext encourages us to make that shift.

For by pulling together the disparate and disconnected fragments of knowledge, hypertext prods us to find new connections, new significance, new meanings, and new theories for the visitor studies field. By making qualitative studies easier to produce, hypertext loosens the grip on scholarly research by positivist ontologies and quantitative methodologies. By giving readers access to what has been silenced in print technology, hypertext motivates readership. And by altering the power relationships between knower and known, hypertext advances the epistemological shift that is already occurring in the human sciences.

But if the grand notion of linking hypertextuality with postmodernity is more embarrassing than literally embodying, then hypertext can at least offer a more welcoming environment for new conversations.

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**Figure 1**  
Overview Screen

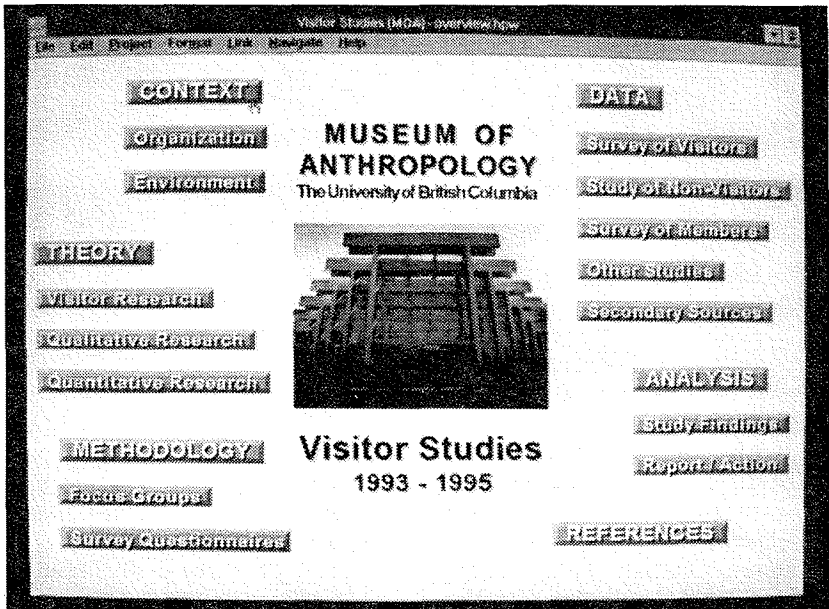


Figure 2  
Focus Groups

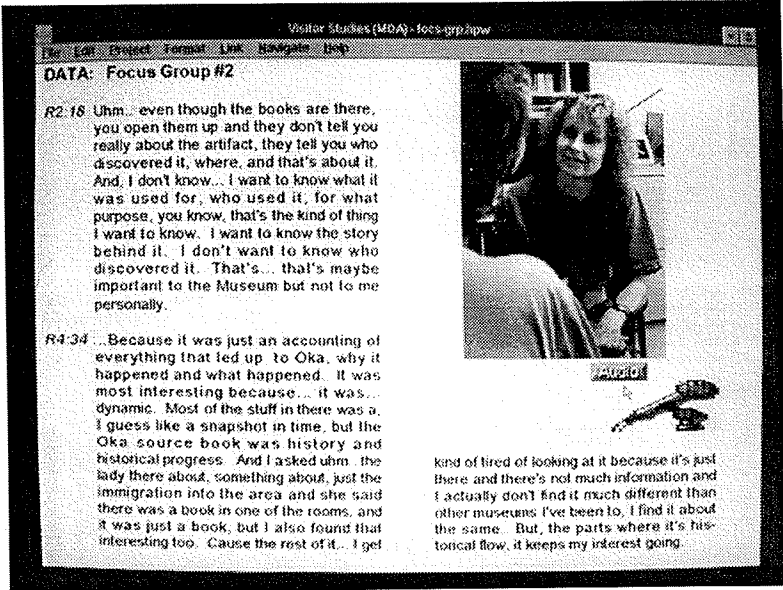
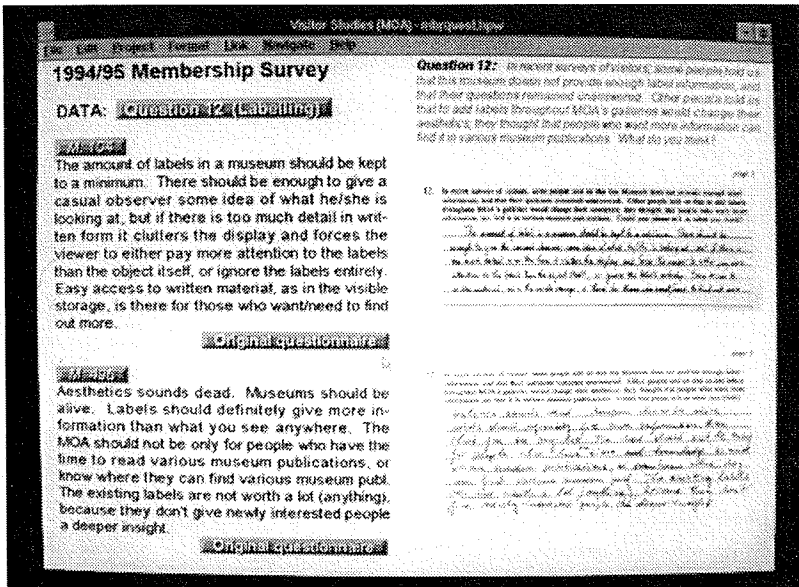
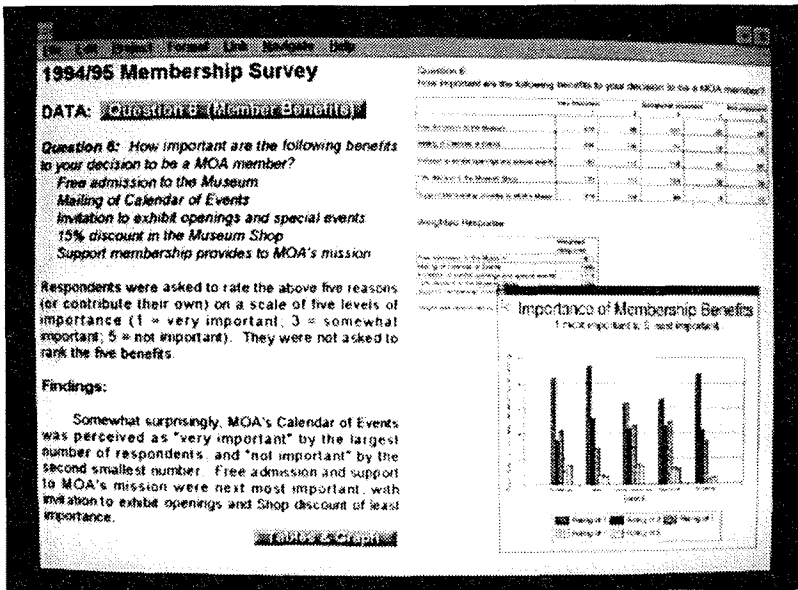


Figure 3  
Members Survey (Labelling)



**Figure 4**  
Members Survey (Member Benefits)



**Figure 5**  
Visitor Survey (Method & Reading History)

