Museum Collections and the Information Superhighway

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The Digital Superhighway and the Curator

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We have heard something of the promise and prospects for museums presented by the information superhighway. There have been other promises and other dawns similarly acclaimed. In the early 1980s conferences on interactive video and optical disk filled the conference halls of Olympia at Earl's Court, London. Video disk offered the possibility of random-accessing data and images. It allowed branching through information at the point of delivery, and offered new pedagogic and presentational possibilities. In fact, by the mid-1980s, interactive video offered most of the essential presentational and educational features of what is now called multimedia technology.

Yet interactive video did not revolutionise the visitor experience. In museums video-disk technology is used mainly quite mundanely—primarily as a more reliable form of video-tape player and the random-access features are used largely to present simple menu options for visitor programme choices. You might still come across video disk if your particular interest is industrial training for handling hazardous chemicals, or perhaps management training courseware with programmes on interviewing skills or annual appraisal techniques, rendered with the same appeal of wooden artificiality as an episode of *Thunderbirds*. With notable exceptions, such has been the dismal fate of a once-promising medium. Though interactive video technology is capable of arbitrary routing through data it did not stimulate any significantly new genre of non-linear narrative which was one of its more interesting promises. The mantle of interactive video has been inherited by CDI (interactive compact disk). But it took nearly a decade for this technology to establish any significant presence as an educational, reference, or presentational medium.

Hypertext, with its web of interlinked pages offered another opportunity for breaking the monopoly of the linear presentational routing. Again, hypertext, has not been widely adopted in museums although it has found useful application in university departments and elsewhere. There are at least two factors operating against hypertext and interactive video/CDI in museums. In the first instance they tend to be 'educationally intensive'. Discounting time for familiarisation, visitor sessions need to be relatively long—5 minutes to half an hour. Secondly, there is an unfavourable ratio between visitor throughput and the intellectual investment required to develop appropriate material, as well as the additional capital investment in the hardware delivery system. Throughput figures of 10–20 visitors per day per station would be regarded as good. With average visitor attention spans being measured at 30 seconds and the shift towards family groups and school parties, by and large museums are not in the business of long, deep educational engagements. Increasingly, exhibition planners are forced (or prefer) to adopt a hit-and-run approach to screen-based displays in response to the inherent constraints of the visitor–display relationship in a busy museum environment.

I do not wish to dwell on interactive video and hypertext. In the context of the information superhighway they would doubtless be regarded as largely passe. I have used them as a convenience for making a point: these were technologies that promised much but did not revolutionise the visitor experience. We should therefore not accept unquestioningly or uncritically the prospects offered by a new revolutionary medium of the kind we are here to consider.

The most common screen-based-information delivery system is still the video or computer station alongside an exhibit or display. In traditional geographical museums (i.e. a physical place with flesh-and-blood visitors) screen-based information delivery systems of all kinds, have rarely (until the recent incipient use of local-area networks) performed more than a supplementary display function. In literary terms they have the status of commentary, annotation or explanatory footnote. In the culture of object-rich traditional geographical museum the primacy of original objects both as the ultimate historical source and as the focus of visitor appeal remains unchallenged. In the geographical museum the physical object is the primary artefact. Information is epistemic garnish.

What is potentially novel about the networked museum is that in presentational terms, the primary artefact is information. Information no longer competes with artefact. It *is* the artefact. The immediate visual appeal of a physical object cannot now serve as the primary attention-getter to which information plays second fiddle. Information has now to command and retain attention through deliberate contrivance. This places new burdens and creates new opportunities for creative inventiveness in free-standing appeal in purely presentational and information-based terms.

It seems that there are at least two features of the networked museum which challenge conventional perceptions of geographical museums.

- Presentational shift: primacy of object to information
- Economics of the market

What is driving the interest in the information highway is a potential market in the form of millions of non-geographical users. Al Gore will doubtless be immortalised, if for nothing else, then for his comment that 'the superhighway will be the most important market of the twenty-first century'. The sudden interest and impetus to develop multimedia material is not for stand-alone stations in geographical museums. Such displays will be spin-offs. The technology was available 10 years ago and was indifferently regarded. The impetus is the potential for networking to a vast population of remote users.

Marketing culture, which is relatively new to national museums, remains committed to the philosophy of expanding markets. It is doubtful whether visitor numbers could be doubled or trebled through special visitor attractions even if affordable. The appeal of millions of remote users who would not wear out carpets or require loo and cafeteria facilities is compelling. Returning to our mundane example of interactive video we can see that the constraints on use are highly specific to the geographical museum. If the selfsame material was networked then 'education intensity' becomes an asset (value for money) not a handicap that over-invests in the favoured few, and the intellectual investment in authoring and generation becomes instantly justifiable either in terms of the institutional mandate to promote appreciation of science and technology, or because of prospective revenues. And let us be clear—it is the revenue-earning capacity of the exercise that is likely to release the massive investments needed to capture images of 3D objects in machine-readable form on any appreciable scale.

I do not offer these perceptions some startling new thesis about the nature of a networked future. But it seems to me that the shift from object to information and the attractions of the market have significant consequences to the political welfare of curators. The non-geographical networked museum offers a

formerly unforeseen opportunity to revalue curatorial expertise. This conclusion was propelled from behind, as it were, by the calamitous events of the last decade during which the welfare of curators suffered the severest reversal of fortune in the history of the profession.

So let me back-track into some of the cultural and political events of the last decade. I do not believe anyone here was unaffected by the cultural revolution of the 1980s. The revolution in national museums involved a transition from the public service ethos of the civil service to the ethos of the market and of the manager. With the revolution came reorganisation, at least in the Science Museum. Departments formerly providing support services (administration, workshops, design) all of which were subordinated to curatorial function were elevated into new divisions having organisational parity with the curatorial division. Marketing Division, Projects Division, Communications, and Resource Management are artefacts of the managerist movement. These new divisions were endowed with controls formerly enjoyed by curators—a wide range of financial and management controls including responsibility for interpretation, gallery development, publicity and to some extent fund-raising initiatives. Curators were organisationally dispossessed of many of these powers and long-standing assumptions about the primacy of curatorial values in the organisational landscape were rudely shattered.

Before the cultural changes of the 1980s care of objects involved an undifferentiated cluster of curatorial responsibilities. In the unfragmented model these responsibilities consisted of a mix of research, acquisition, public service, documentation, conservation, interpretation, exhibition/display, and gallery development. In the new world many of these functions were transferred out of curatorial control. Interpretation was identified as a distinct activity and an Interpretation Unit was established that would mediate between curators and the visiting public. Exhibitions and Gallery Development became the responsibility of the newly formed Public Services Division now known as Projects Division. These functions were exported out of the curatorial community which was itself renamed the Collections Division. The remaining curatorial functions were further factorised within the Collections Division. Documentation and Conservation were separated out and conferred on to a newly created group called Collections Services (now Collections Management).

The details are unimportant. Organisational redefinition is no longer regarded as a period of temporary turmoil to be followed by long periods of steady-state productivity but rather as a way of life of which constant change is a vital sign. Under the dome of these changes, I am concerned specifically with the effect on one specific group—the curatorial subject specialist, the 'collecting officer'. The curatorial subject specialist is left with responsibility for Research, Acquisition and Public Service. This in not to say that the curatorial subject specialist was not involved in his/her former responsibilities. The Institution still relies heavily on curators for many of the functions organisationally re-allocated but the role is an advisory one often without executive power.

So for the small group of curatorial subject specialists, whose welfare is my sole and narrow concern right now, the last decade has seen a radical restriction of responsibility, power and influence, by the appropriation of all but core curatorial functions which were themselves organisationally marginalised. Here as elsewhere curatorial subject specialism ceased to be at the heart of the institutional system of values. The same cultural pressures were felt in the wider museum world.

To return to the information highway and the networked museum. I do not know to what extent the information highway will be realised in practical terms. But if it develops as many predict then the international status and prestige of museum-like institutions will increasingly depend on the quality and credibility of its networked material as non-geographical users become a major constituency in the market. I believe that curators have an essential role to play as creative agents and are, moreover, indispensable to the process. There are several intellectual assets that uniquely qualify curators to become information providers in the networked museum.

- Subject specialism
- Mental addressee
- Interpretation
- Multimedia authoring

Subject specialism

Major permanent exhibitions are almost invariably backed by very substantial curatorial knowledge and often highly sophisticated historical perspectives of which very little is publicly visible. *Per contra* non-trivial networked treatment of subjects will routinely require the depth of factual and thematic backup ordinarily presupposed in large gallery projects but which conventional display media are too constrained to present. What is distinctive about a curatorial treatment is invariably constructed from interpretations of the specific aggregations of artefacts that constitute the specialist collections. *This collections-specific knowledge cannot be bought in and is unique to the domestic curatorial culture of the host institution.*

Mental addressee

The emphasis on management during the last decade excited new research into visitor population and created a new self-consciousness about audience. The utilitarian use of visitor statistics inclined museums to adopt as their mental addressees the family group and the school party, this with the possible exception of major permanent galleries which are now relatively rare events. Temporary, topical and quick-turnover exhibitions belong to a distinctly successful genre of public display. *Blue Peter* visitors may well form a significant user group in both the geographical and the networked museum. However, I suspect that the demographics of users of the networked museum will alter the current balance in favour of students and professionals who are likely form a larger constituency than is presently targeted in geographical museum. Curators are the only group capable of credibly addressing this new user group.

Interpretation

Curators are, *inter alia*, storytellers. They often have a strong and highly evolved narrative sense of their subject. And it is from this narrative richness that objects acquire much of their meaning. Curatorial subject specialists are not only indispensable for the provision of reference data in the form of inventory records, chronology lists and the like, but are indispensable to the provision of interpretative subject treatments both for the geographical museum as before, as well as for the educational market now represented by the non-geographical user. They also have a crucial role to play in the creation of new subject-related visitor experiences that capitalise on the potential of the new medium. But here there is a new danger: once curators cease to rely on the direct power of physical objects, they come into competition with another very skilled population of storytellers—university lecturers. It is no accident that most of the major initiatives to develop electronic authoring, presentational and retrieval techniques have originated in

university departments all of which have access as users to our artefactual sources and images, for the production of screen-based material.

Multimedia authoring

The integration of media and the psycho-perceptual balance between text, graphics, sound and vision is familiar territory to any curator who has presented his/her subject in an exhibition. These are precisely the skills that are to be adapted to the new medium—content-specific adaptation using a variety of integrated media.

The thesis, in short, is that the information highway represents opportunities for curators to re-establish in the overall museum arena respect for the values they represent—commitment to their subject, commitment to objects as primary historical and cultural sources, scholarship and storytelling. *Museum managers should ask themselves who, if not curatorial subject specialists, will be the primary information providers for the new constituency of non-geographical users, as the international standing of museum-like institutions becomes increasingly dependent on networked sources.*

The networked medium is new and presentational techniques for its use are still in their infancy. The ability of curators to use the new opportunities to advantage will depend to a large extent on their inventiveness in creating authoritative and captivating multimedia material. So what in practical terms should a curator do?

Recommendations

- Engage with the medium
- Start story-boarding own material
- Establish partnerships
- Actively redefine publisher/author relations
- Ensure that gallery project budgets include multimedia

Engage

Familiarise yourself with the medium and its capabilities. Learn its ways. Creatively consider expressive possibilities not yet realised.

Story-boarding

Identify what is of special interest in the specialist subject or object holdings and story-board a treatment as a paper exercise in the first instance. This is an authoring rehearsal to explore the relationships between text, graphics, sound, and quick-time visuals. There are fascinating things to explore. Interactivity has led to the modularisation of information into 'knowledge quanta' each of which needs to be free standing to some extent to accommodate user-directed routing. The notion of non-linear narrative violates every shred of academic training which relies in its external expression on linear routing through ideas interconnected in highly complex ways. The implications to the notion of narrative, of non-linear user-directed routing through modularised information, is unclear. The challenges to devise new ways of using a new medium are immense in practical as well as philosophical terms.

Partnerships

Establish partnerships with other players—publishers conventional and electronic, CD-ROM producers, multi-media companies. All of them are in a state of high agitation about the implications of electronic publishing. Most want to talk and will be receptive to new markets. This is the most promising avenue for financial support. Many publishers are busting to get access to get their hands on 2D and 3D sources. Drive hard bargains—get them to invest the horrible sums of money required to capture and digitise images in exchange for use (but not copyright).

Redefine publisher/author relations

In conventional publishing the relationships between authors, editors, picture researchers and publishers is complex but relatively well demarcated. Or at least the margins of negotiation are well-understood. In the multimedia world of networking, everything is up for grabs. Ensure that your interests are represented by actively engaging in issues of intellectual ownership, copyright and authors' fees. Assume that outside bodies will press for the most exploitative deal. Commercially driven factions within the host museum will not necessarily be immune from the same self-interest. Do not assume that internal commercially-driven factions will protect curatorial interests.

Budgets

Prevail upon the powers that be to include in a gallery budget the production of a multimedia publication as an integral part of the project whether or not this is used on the gallery. For obvious reasons gallery-production time is the optimum time for this—the material is fresh and much of the effort of marshalling objects for image capture for panel work and catalogues is common to both ventures. It is also tends to be easier to secure financial support if the multimedia project is a component in a larger scheme.

The URL for the Science Museum's Web pages is http://www.nmsi.ac.uk/