THE UNIVERSITY OF PRETORIA ARCHIVES VIRTUAL CLASSROOM: CONNECTING THE COMMUNITY'S PAST WITH THE VIRTUAL FUTURE'

RIA VAN DER MERWE

University of Pretoria Archives and Department of Historical and Heritage Studies, University of Pretoria, South Africa ria.vandermerwe@up.ac.za

KAREN HARRIS

University of Pretoria Archives and Department of Historical and Heritage Studies, University of Pretoria, South Africa karen.harris@up.ac.za

BRONWYN STRYDOM

University of Pretoria Archives and Department of Historical and Heritage Studies, University of Pretoria, South Africa bronwyn.strydom@gmail.co.za

ABSTRACT

Recent technological changes, as well as higher expectations from the constituencies they serve, have had major impacts on the realm of museums. The virtual environment and all it has to offer, along with the perception by a more democratic society that museums are community property, have made traditional museums reconsider their positions in order to remain viable. Within the financial and resource constraints of the museum domain, this article will focus on a response to these challenges, which utilises the new technology, works more closely with the broader museum audience and collaborates with other information-related institutions such as archives and libraries. It looks specifically at an exhibition project devised and developed by the University of Pretoria Archives, the "Virtual Classroom", as a practical and viable solution to the challenges posed.

KEYWORDS

Virtual museums, technology, collaboration, archives, learning, communities

1 PROBLEM, AIM AND METHODOLOGY

Over the past few decades, museums world-wide have continued to be confronted with significant changes and challenges on several fronts. Key among the developments they have recently had to contend with is increasingly rapid transformations in the technological sector, and in particular, the virtual environment and all it has to offer. Related to this are the concomitant changes in the expectations, demands and requirements of the museum visitor or client as part of a broader democratic community. In order to address this problem, museums have had to realign themselves in terms of these realities and respond to these challenges through a range of innovations that, in some cases, have involved closer working relationships with, for example, the communities they serve and other information-related institutions such as archives and libraries. This article will briefly consider both the challenges and opportunities that the virtual environment poses to the conventional museum, as well as the impact that the virtual world has had on the broader public as museum visitors. It will show how this has also posed significant problems to the place of the museum within society at large. In considering the responses and solutions to these new trajectories, this article aims to show how an exhibition project devised and developed by the University of Pretoria Archives goes some way to resolve this problem. This case study is significant in that it presents an exhibition where the virtual dimension, the client and the archive are integrated into a museum exhibition with a difference and, one could argue, a future. This combination is unique within the institutional domain, and we argue that it offers a potential safeguard to other museum environments against the threat of redundancy posed by new demands and circumstances.

2 MUSEUM CHALLENGES: TECHNOLOGIES AND COMMUNITIES

The greater availability of information in the electronic environment has challenged the traditional museum to prove its relevance in a rapidly changing world. The needs and expectations of museum visitors have become increasingly sophisticated, as new information technologies, including digitised collections, electronic databases, and online access, have made it possible to provide information in a more accessible format than the conventional physical exhibition (Marty 2007:98; Kirshenblatt-Gimblett 2000:1, 4). The traditional museum, archive and library all face stiff competition from media such as television, radio, newspapers and the internet in terms of public perception and use, at a time when there is a tendency towards favouring easily available and comprehendible information (Usherwood, Wilson & Bryson 2005:92–93). For example, to put it bluntly, museums have to "provide an experience in high contrast to clicking on a screen if visitors are to be drawn from their computers and into the galleries" (Kirshenblatt-Gimblett 2000:5) and thereby avoid being side-lined.

RIA VAN DER MERWE, KAREN HARRIS AND BRONWYN STRYDOM

This situation is further compounded by modern society placing a greater emphasis on leisure activities that has resulted in the entertainment industry blossoming into a highly developed, fiercely competitive and massively funded entity. This in itself is also partly related to the possibilities of the technological environment where entertainment has become three-dimensional and interactive. The museum is thus also confronted with the difficulty of negotiating the demands for entertainment, while at the same time maintaining its role as a cultural custodian and attracting attention to its services in a way that does not detract from the quality of the information it houses (Usherwood et al 2005:96–97). This dilemma has given rise to the following question being posed in a keynote address at the 2000 ICOM conference by leading museum specialist, Barbara Kirshenblatt-Gimblett (2000:7):

What can museums, by their very nature a slow medium paced in footsteps, an orderly place of quiet contemplation and focused attention, offer a [new] generation?

This technologically switched-on generation has also placed museums under greater scrutiny as a result of growing democratisation and greater access to better education. For one, some critics feel that museums do not adequately involve the community that they serve, and have in fact lost touch with the needs of modern society. Betty Farrell, the director of the Cultural Policy Centre at the University of Chicago, points out that: "Young people live today in a world that is dominated by racial, ethnic and multicultural diversity and more global perspectives" (Harms 2010). The question therefore arises: To what extent do or can museums address these issues?

Aligned to this question is the point made by museum specialist Mike Houlihan (2006:67), who claims that museums need to address the fact that they are seen by their users as community property and as a site for contemporary cultural development, dialogue and representation. There is general agreement among museum curators that the museums need to become more accommodating to minorities and provide more opportunities to interact with young people in order to remain relevant to the public in a rapidly changing world. Elizabeth Merritt, founding director of the American Association of Museums' Center for the Future of Museums, claims that the "preferred future" would be one in which "museums reflect the communities in which they live ... [and] benefit all segments of society" (Harms 2010). However, on a practical level it is not always possible, nor viable, to include a wider range of experiences and agendas into the actual planning of exhibits and the control of museum collections (Sandell 2007:104) and it is here that one of the major challenges lie.

Thus, of concern for museum professionals currently, is how to meet the changing needs and diverse expectations of the museum user, on the one the hand, and how to deal with the technological competition and advancement on the other.

3 MUSEUM COLLABORATION: ARCHIVES AND COMMUNITIES

One response to these challenges that has been noticeable since the 1980s is a paradigm shift where the conventional idea that "objects speak for themselves" was questioned. It was felt that the emphasis of museum work should be put on the information value of the objects, rather than the material objects themselves. It was argued that museums should no longer be thought of as being repositories of objects only, but as "storehouses of knowledge as well as storehouses of objects" (Schweibenz 1998:188). It was maintained that the communication and dissemination of knowledge had to be central to museum activities (Schweibenz 1998:187).

One of the most important outcomes of a more information-focused approach is that it has facilitated cooperation with other information institutions, such as archives. For a number of years there has been an increasing awareness of the fact that archives and museums share many common elements. These elements include their participation in the services of collecting, recording, preserving and conserving, interpreting and providing public access material in the heritage sector (Jones 1997:27). According to information scientists Tanackovic and Badurina (2009:299) the fundamental roles of museums and archives are very similar: "information, culture, education, leisure, and more recently. development of the local economy and democratic principles." Furthermore, "LAM [library, archives and museum] professionals worldwide have ... recognized that they can better serve their users and fulfil their mission of preserving and communicating the world's heritage if they collaborate with other agents within and outside their sectorial boundaries" (Tanackovic & Badurina 2009:300). They confirm that "collaboration is the strategy of the twenty-first century" (Tanackovic & Badurina 2009:302). In their study, they highlight the perceived benefits of the collaborative efforts of libraries, museums and archives, which include better service for users, a larger user community, increased visibility of the institution in the community and the possibility to get finances for collaborative activities (Tanackovic & Badurina 2009:301). Added to this is, of course, the collaborative advantage of pooling human, material and other resources in joint ventures that ultimately gain more prominent exposure.

Museums and archives can cultivate mutually beneficial relationships that raise the profile of both. In particular, the museum aspect of an archive can be mobilised as a vehicle for publicity and hence as an effective marketing tool. Furthermore, in communities with local funding, archives have a "moral obligation" to popular outreach, while such activities also justify further funding. Outreach also strengthens ties with the community served by both the archives and the museum (Jones 1997:32–33). The combining of museum and archive functions may promote awareness of an archive by bringing visitors to museum exhibits in contact with the archive – not only with its collections but also with its physical location (Jones 1997:32).

Due to the nature of the records they house, archives can produce very authentic and visually appealing exhibits (Jones 1997:30). Museum exhibits of archival material are also opportunities for the deconstruction and interpretation of records, a process which can be repeated again and again. According to Jacques Derrida, "every interpretation of the archive is an enrichment, and extension of the archive" (Ketelaar 2001:138). Thus the interpretation of the record, albeit subjective, may add meaning and value to the record (Ketelaar 2001:139).

There is however a mutual element of caution within these collaborative efforts. For an archive, bridging into the museum world as an exhibitor, could risk the loss of earnestness by association with leisure activities. Moreover, the emphasis on exhibits could lead to neglect of core archival functions. Traditional archivists are wary of being too closely associated with heritage and leisure, following the perception that there is a danger in "the shift from 'serious' academic work to the supposedly 'slight' brand of popular outreach" (Jones 1997:33). For a museum, a close alignment with the archival realm could also hold the possibility of being tainted with the negative stereotypes of what an archive is perceived to be. The image that "relegates archivists to the unknown echelons of disused spaces where they apparently dote on documents that no longer form part of an institution's core functioning" (Harris & Van der Merwe 2009:128) is one that has persisted. Moreover, the age-old belief that archives are the places where unobtrusive "mechanical processing and preservation" of "objective records" (Greene 2002:51-52) for "legal and administrative purposes" (Jones 1997:27) takes place, does not bode well for attracting an audience. Thus for both the archivist and museum curator, the challenge is in finding a balance between serious academic and administrative tasks, and innovative activities with popular appeal (Jones 1997:32–33). Moreover, it is generally conceded in both museum and archive forums that there is cause for serious concern in terms of the proportion of society that are museum-goers and archive-users. Unless concerted action is taken to reverse the current trends, both museums and archives will be serving an "ever-shrinking fragment of society" which means they face what Merritt terms a "probable future" as opposed to a "preferred future" (Harms 2010).

4 VIRTUAL MUSEUMS

The combination of the need for accessible knowledge in this information age and the challenge posed by the entertainment industry, has necessitated museums to move into the virtual environment. Archives and libraries have long embraced a more electronic environment when dealing with information, yet museums, for various reasons have been more wary about adopting this approach. In an electronic environment the way in which museum information has traditionally been organised as "taxonomic displays of specimens, developmental series of artifacts, and chronological and national arrangements of art" (Kirshenblatt-Gimblett 2000:1, 7) has had to make way for the use of complex

technologies (Marty 2007:98). The new virtual museum can essentially be defined as a "museum without walls". There are two key aspects: firstly, a virtual museum does not house actual objects, but instead provides multiple levels, perspectives, and dimensions of information about a particular topic, conveyed as digitally recorded images, sound files, text documents, and other data of historical, scientific, or cultural interest that are accessed through electronic media. Secondly, the application of interactivity and the connectedness it brings, allows the "virtual museum" to transcend the abilities of the traditional museum in presenting information. It opens itself to an interactive dialogue with visitors, thus offering them connected digital objects and information that is readily accessible from outside the museum (Schweibenz 1998:185–186, 190).

There is, however, consensus among some museum curators that a virtual environment has certain drawbacks, mainly concerning the way in which the visitor obtains information. By visiting a physical museum exhibition, the information is made available in a three-dimensional space. The fact that real artefacts are often more impressive than audiovisual versions, and that museum exhibitions allow the visitors to come within direct proximity of these artefacts, are some of the main concerns in the virtual environment. In contrast with the virtual environment where the viewer is stationary, the visitor has to "walk the plot" of the story while the exhibition remains stationary, creating a sense of exploration and discovery (Kirshenblatt-Gimblett 2000:6). Furthermore, it is felt that a certain element of excitement and social interaction created by an actual museum visit is lost in the virtual environment (Tsichritzis & Gibbs 1991:17, 24).

Despite these reservations, the use of electronic media has been embraced by an increasing number of institutions the world over. In an article on the "Virtual Museum", Werner Schweibenz (1998:185–186) points out that as early as 1991 the interest in the application of interactivity and multimedia in the museum community was apparent at the International Conference on Hypermedia and Interactivity in Museums (ICHIM). Since 1997 an annual conference on "Museums and the Web" has been held. In 1998, proponents of the use of electronic media pointed out that the museum experience, whether real or virtual, is centred on providing the necessary information to the visitor in order to create meaning and understanding (Teather 1998:6).

In this particular respect, virtual museums are actually believed to transcend the abilities and overcome the limitations of the conventional museum in presenting information (Schweibenz 1998:188). Virtual museums enable visitors world-wide to connect with valuable information. This gives the viewer a "dynamic, interdisciplinary and multimedia approach" to a museum collection (Schweibenz 1998:191) and provides "multiple levels, perspectives and dimensions of information" about specific topics (Hoptman 1992:146). In addition, this mode of "exhibition" eliminates the need for the authentic object and the physical space to display it in, thereby overcoming security concerns and conservation demands. Moving beyond the boundaries of a fixed physical environment also makes it possible to display an entire collection economically and has

RIA VAN DER MERWE, KAREN HARRIS AND BRONWYN STRYDOM

the added advantage of allowing people with physical disabilities access (Tsichritzis & Gibbs 1991:24).

The criticism that the viewer remains "passive" in a virtual exhibition is also refuted, as electronic media allows visitors to manipulate virtual artefacts, enabling them active participation without the danger of damage (Tsichritzis & Gibbs 1991:17, 24). In educational terms, this means a move away from a "hard mastery learning style", which is the more traditional hierarchical museum approach of systematic arrangements and narratives, to "soft mastery", which allows for play, improvisation and exploration (Kirshenblatt-Gimblett 2000:8). Furthermore, it is pointed out that the setting in a museum is not the natural environment in which the artefact would be found, but is rather displayed there as 'this is the place where people are' (Tsichritzis & Gibbs 1991:17, 24). Electronic media by contrast, can simulate actual settings far more accurately, and proponents of this media point out that these simulated "tours" can give the viewers the impression of actively participating, rather than seeing a "canned representation" (Tsichritzis & Gibbs 1991:18; Schweibenz 1998:185). Although the value of traditional museums is still recognised, it is felt that the use of electronic media could enable museums to change from being "collection-driven" to "audience driven" (Miles & Zavala 1994:134; Davis 1994:70).

The virtual museum also allows museums to marry two apparently opposing aims, namely that of entertainment and education. Some museums have even gone as far as redefining themselves as sites of entertainment. This approach has had commercial success in many cases, but questions about the integrity of the original objects and the way in which information is selectively used to create a "crowd pleasing" story, have, however, been raised, not only by museologists, but also by certain members of the community, including minority groups (Kirshenblatt-Gimblett 2000:1, 7; Houlihan 2006:67).

Furthermore, museums and archives have increasingly begun to function within an outcomes-focused climate, where there is "the need to demonstrate accountability and social value" (Hooper-Greenhill 2004:151) and where education and learning are now seen as key to social inclusion (Hooper-Greenhill 2004:152). A research study entitled "The Learning Impact Research Project", which was carried out in the United Kingdom from 2001 to 2003, measured learning in archives, museums and libraries. The survey identified five outcomes for learning across the three domains:

- an increase in knowledge and understanding
- an increase in skills
- a change in attitudes or values
- enjoyment, inspiration, creativity
- action, behaviour, progression (Hooper-Greenhill 2004:151)

These new approaches now regard learning as a multi-dimensional process, and not merely as a product (Hooper-Greenhill 2004:154 & 156). "Museums, archives and libraries have immense resources that offer the possibility of innumerable and diverse experiences, many of which have the potential to enrich or change lives" (Hooper-Greenhill 2004:158). Museologist Eilean Hooper-Greenhill (2004:158) continues by stating:

Learning in cultural organisations has enormous potential: it is experiential and holistic, involving knowledge together with emotions, feelings, skills and actions. Learning in archives, libraries and museums is rich and multi-dimensional; people make their own meanings of their experience and the outcomes of their learning contribute to building individual and collective identities. Museums, archives and libraries form a vast reservoir of learning opportunities.

It is to the innovative combination of a number of the above-mentioned features that this article now turns to propose a practical solution that has been implemented with success.

5 UPA: THE VIRTUAL CLASSROOM

The "Virtual Classroom" project was developed in 2007 by the University of Pretoria Archives (UPA). In essence it addressed a number of the issues raised above as regards technologies, communities and collaboration. Firstly, it combined skills pertaining to archival research with those related to museum exhibitions; secondly, it formed partnerships and obtained input from a range of academic departments as well as the diverse student body; and thirdly, it incorporated modern technology in such a way that it allowed the archival collection to be used and viewed by as wide an audience as possible. In the final analysis, the project succeeded in marrying an element of entertainment with an educational dimension, and has continued to do so in the subsequent years.

In 2008, the University of Pretoria (UP) was to celebrate its centenary and the UPA was expected to develop an appropriate exhibition to commemorate the event. However, not unlike many archival institutions, it had to contend with the typical constraints of limited available exhibition space, a lack of adequate finances, as well as the challenge of developing an exhibition that would attract and please a culturally diverse alumni audience that included individuals of some three generations. The solution devised by the three-member staff of the UPA was the "Virtual Classroom" project. In short, a relatively small standard-sized former classroom situated in the second oldest building on campus, the Old Arts building, was restored and furnished so as to resemble one of the original lecture rooms. Besides the restoration of its Oregon-pine floor, wooden wall panels, high ceiling and original full-length black board, old desks and chairs, an antique wall clock, hat stand and map hanger were sourced from the UP stores to recreate a

"period" ambiance. In addition, the venue was also equipped with three plasma screens, a sound system and three second-hand computers.

Having already produced a PowerPoint Flash presentation depicting the history of UP in four identifiable chronological phases, the UPA staff were intent on bringing in the creative abilities of the UP student to elevate the presentations in the "Virtual Classroom" to new imaginative heights. In consultation with staff members of the Department of Visual Arts³ a project was devised for the Multimedia Design component of the final year students enrolled for Information Design (IOW). This involves a four-member group production of an animated video clip using information provided by the UPA, as well as archival material such as documentation, photographs, student magazines, newspaper clippings and other archival memorabilia. With the intense assistance of the UPA staff, the students are given access to the archives and, within the matter of three weeks, have to research, write, design, animate and edit a motion piece on a selected theme about the UP. These are then screened and the students are graded on their productions as part of their final portfolio. As an added incentive, the UP Registrar's Office sponsors a prize for the winning group. The awards are made at an annual endof-year UPA function, and are also shown at the Industry evening of the Department of Visual Arts. The final productions become part of the UPA holdings and are screened on a regular basis to visiting schools, prospective students and their parents as well as visiting dignitaries, giving both the students creativity and the UPA greater and enduring exposure.

Admittedly, the UPA "Virtual Classroom" project is not a virtual museum in the full sense of the concept. For one, it does not utilise all the possibilities on offer in the virtual realm nor is it available through the World Wide Web. However, it does transcend physical objects by making a wide range of them available in electronic format. It also focuses on the visitors' experience by providing relevant and necessary information to enable them to gain an understanding of the institution and its past (Teather 1998). It also connects the viewer "with valuable information" and gives them a "dynamic, interdisciplinary and multimedia approach to the collection" (Schweibenz 1998:191). In addition, this is done in a vibrant, upbeat and innovative manner making it relevant to a very much wider audience than any conventional static glass-and-labelled exhibition.

In terms of the generic outcomes for learning in archives, libraries and museums devised by the aforementioned UK Learning Impact Research project (Hooper-Greenhill 2004:154), the "Virtual Classroom" project rates quite highly. The learning outcomes of the "Virtual Classroom" project are broader than the mere experience of working with principles of design based on archival material. Through the project, students increase their knowledge by engaging with their institution's history, as it is presented in a variety of ways in the Archives' records. Those students, who do not have an academic background in history, get firsthand experience and understanding of historical skills such as research and writing, as they select information to create a storyboard to produce their audiovisual presentations. The project, however, does not only introduce students

to new material and skills, but also offers them an enriching personal experience. Every year, students involved in the project, comment positively on the fact that they have learned something about their university and their campus. They are also given greater ownership in the representation of the institution. This is in line with the notion that "[k] nowledge and understanding includes the development of a more complex view of self, family, neighbourhood or personal world" (Hooper-Greenhill 2004:154).

In the study of repositories of public knowledge in the UK, it was found that "feelings of ownership [towards archives, museums and libraries] were hindered by lack of awareness as to what museums, libraries and archives (MLAs) can offer ..." (Usherwood, Wilson & Bryson 2005:94). In the case of the "Virtual Classroom" project each year some of the students involved have asked questions regarding the general use of the Archives during the project. It brings them into contact with a wide range of records from various UPA collections and exposes them to the users of the holdings. In this way their handson contact with the Archives opens their eyes to what an archive is, and to the possibility of using the Archives as a resource. In a sense this complies with a change in attitude towards what was formally an unknown arena which they, as students, would not have utilised. Lastly, in terms of enjoyment and inspiration, the IOW students as well as the visitors to the "Virtual Classroom" are testimony to the success thereof.

The "Virtual Classroom" is thus an example of an exhibition created from the archival record by the community in which it is situated. In this way it fits the definition of an "inclusive museum" as one that interacts with the community that it serves (Woods 1995:1113), and accords with the matter of increasing its relevance to a "greater segments of society" (Harms 2010). Various studies indicate that "the academic community has difficulty attracting a large public audience because academic historians approach history differently than the public" (Woods 1995:1112). The "Virtual Classroom" is an exhibit that has a wide popular public appeal as it is in fact produced by members of that very "public". In addition, opening the Archives to the interpretation of such "outsiders" has produced original and imaginative results – what Derrida has referred to as the enrichment and extension of the archives (Ouzman 2006:271). The feedback and comments received from visitors ranging from school educators, visiting international academics as well as dignitaries, reflects very positively. (UPAAC reports 2007-2009).

The best way to appeal to a wide general audience is with an approach that is concrete and experiential (Woods 1995:1112). The "Virtual Classroom" presentations are a combination of audio-visual material that literally animates the historical record, creating a more experiential encounter with the University's record and hence with its past.

Lastly, besides the student body, which is an indispensable component of the "Virtual Classroom" project, it has also brought the UPA into collaboration with other stakeholders in the broader university environment. These include, among others, the Department of Visual Arts, the Registrar's office, UP Campus Tours of the Department of Historical

and Heritage Studies as well as some of the Rectors. These collaborative relationships bear out the aforementioned benefits on a number of levels. The "Virtual Classroom" exhibition has given visitors an opportunity to engage with the University's past which they would not have had previously and the existence of the exhibit has brought more visitors to the UPA exhibition areas, reading room and repositories on campus. At a more material level the successful appeal of the "Virtual Classroom" project has increased the UPA's profile to such an extent that it has resulted in additional funding in the forms of donations from two of its former Rectors.4

6 CONCLUSION

In the final analysis, it appears that the "Virtual Classroom" showcases the Archives using an innovative combination of archival resources in an exhibition within a virtual environment. This is a case of resolving the virtual challenge by actually embracing it. The involvement of both the staff from other departments as well as the wider student community makes it that more relevant to the broader institutional community and beyond. This, in turn, addresses the community as participatory stakeholders. The significance of this collaboration between archives, museums and the community it serves shows that a balance can be achieved between serious scholarly research, skills development and entertainment, and in a manner that moves beyond the museum visitor being merely a passive bystander to an active participant in creating an exhibition. Using the terminology of Merritt, one can safely say, that the picture this paints is not one of a "probable future", but rather a "preferred future" in terms of the "resources [UPA] cares for" as they do, to a degree, "benefit all segments of society". In a word, the UPA "Virtual Classroom" is indeed educational entertainment, providing future shapers of society with an awareness of the rich past in which they are anchored. It is this successful combination of the virtual dimension with the wider community on a micro scale that has the potential for development in other domains.

NOTES

- This article is written with the acknowledgement of the ongoing collaboration between the UP Archives and the IOW module in the Department of Visual Arts at the University of Pretoria.
- 2. It is interesting to note that in his article W. Schweibenz (1998:185) uses the term in inverted commas as he claims there is "no accepted definition of the term" and believes the "term in itself is an oxymoron".
- Over the past four years the lecturers responsible were Isobel Lubbe, Ria van Zyl and Fatima Cassim.
- 4. Donations made by former Vice-Chancellors: Prof J. van Zyl (2008) and Prof CWI Pistorius (2009).

REFERENCES

- Davis, B. 1994. Digital museums. Aperture 136:68-70.
- Greene, MA. 2002. The power of meaning: the archival mission in the postmodern age. *The American Archivist* 65(1):42–55.
- Harms, W. 2010. On view: tomorrow's multicultural museum. Society and Culture, 26 May 2010. http://futurity.org/society-culture/on-view-tomorrows-multicultural-museum/ (Accessed 9 September 2010).
- Harris, K & Van der Merwe, R. 2009. Accessible archives: students as active users. ESARBICA Journal 28:128–145.
- Hooper-Greenhill, E. 2004. Measuring learning outcomes in museums, archives and libraries: the Learning Impact Research Project (LIRP). *International Journal of Heritage Studies* 10(2):151–174.
- Hoptman, GH. 1992. The virtual museum and related epistemological concerns. In Barrett, E (ed), *Sociomedia: multimedia, hypermedia and the social construction of knowledge*. Cambridge Massachussets: MIT Press, 141–159.
- Houlihan, M. 2006. City museum, society and conflict: the Belfast experience. *Museum International* 58(3):64–70.
- Jones, M. 1997. Archives and museums threat or opportunity? *Journal of the Society of Archivists* 18(1):27–35.
- Ketelaar, E. 2001. Tacit narratives: the meaning of archives. *Archival Science* 1:131–141.
- Kirshenblatt-Gimblett, B. 2000. The museum as catalyst. Keynote address, Museums 2000: Confirmation or Challenge, ICOM Sweden, The Swedish Museum Association and the Swedish Travelling Exhibition/Riksutstallningar in Vadstena, 29 September 2000.
- Marty, PF. 2007. The changing nature of information work in museums. *Journal of the American Society for Information Science and Technology* 58(1):97–107.
- Miles, R & Zavala, L. 1994. Towards the museum of the future. London and New York: Routledge.
- Ouzman, S. 2006. The beauty of letting go: fragmentary museums and archaeologies of archive. In Edwards, E, Gosden, C & Phillips, RB (eds), *Sensible objects: colonialism, museums and material culture*. Oxford and New York: Berg, 269–301.
- Sandell, R. 2007. Museums and the combating of social inequality: roles, responsibilities, resistance. In Watson, S (ed), *Museums and their communities*. London: Routledge, 95–111.
- Schweibenz, W. 1998. The "Virtual Museum": new perspectives for museums to present objects and information using the internet as a knowledge base and communication system. In Zimmerman, HH & Volker, S (eds), Knowledge management und kommunikationssysteme, workflow management, multimedia, knowledge transfer, Proceedings des 6. Internationalen Symposiums für Informationswissenschaft (ISI 1998), 3–7 November 1998, Konstanz: UVK Verlagsgesellschaft mbH, 185–200.
- Tanackovic, SJ & Badurina, B. 2009. Collaboration of Croatian cultural heritage institutions: experiences from museums. *Museum Management and Curatorship* 24(4):299–321.
- Teather, L. 1998. A museum is a museum ... or is it? Exploring museology and the web. In Bearman, D & Trant, J (eds), *Museums and the Web: Proceedings of the 2nd International*

RIA VAN DER MERWE, KAREN HARRIS AND BRONWYN STRYDOM

- *Conference Toronto.* http://www.archimuse.com/mw98/articles/teather/teather_article.html (Accessed 26 October 2010).
- Tsichritzis, D & Gibbs, S. 1991. Virtual museums and virtual realities. *Proceedings of the International Conference on Hypermedia and Interactivity in Museums*:17–25.
- University of Pretoria Archives Advisory Committee reports 2007–2009. Pretoria: University of Pretoria.
- Usherwood, B, Wilson, K & Bryson, J. 2005. Relevant repositories of public knowledge? Libraries, museums and archives in 'the information age'. *Journal of Librarianship and Information Science* 37(2):89–98.
- Woods, TA. 1995. Museums and the public: doing history together. *The Journal of American History* 82(3):1111–1115.