

Availing the liberation struggle heritage to the public: some reflections on the use of Web 2.0 technologies in archives within ESARBICA¹

¹The final, definitive version of this paper has been published in <Information Development>, Vol. 28 (1), February 2012 by SAGE Publications Ltd, All rights reserved. © [as appropriate

The online version of this article can be found at: <http://idv.sagepub.com/content/28/1/22>

ABSTRACT

This article addresses the extent to which web technologies may be used to promote public programming activities in archival institutions. The advent of web technologies provides a window of opportunity for archival institutions within ESARBICA to improve their public image. The thesis of this paper is anchored in the proposition that while social media technologies can have a transformative influence; they have to be the right technology for the right place and the right people. In addition, archivists need to find innovative strategies to use these technologies depending on what is affordable on their part and for users.

Keywords, WEB 2.0, Public programming, Liberation struggle heritage, ESARBICA, Outreach, Archives

Archival institutions need to complement the digitization of the liberation heritage by employing social media technologies to promote access.

Introduction

Africa waged a century-long struggle against colonialism and this heritage needs to be bequeathed to future generations for the benefit of posterity. It thus becomes a gigantic challenge to heritage institutions to ensure that they remain technologically current and relevant in these changing times. It is indisputable that the legacy of the liberation struggle is sacrosanct hence the need for its proper documentation but this does not have to end there as strategies have to be in place to ensure the survival of this record and its accessibility to the public, in particular for this millennial generation which is technologically savvy.

Arguably, there is a wave of disillusionment on the political integrity of the liberation movements but the fact remains that the wealth of importance attached to this milestone remains unparalleled. The genre of the record so created was of national significance and belongs to everyone irrespective of class and hence heritage institutions should engage the public in ensuring that this record is jealously guarded from generation to generation. Harris (2011) rightly pointed out that public programming has been mostly about outreach and very little about in-reach – the public reaching in, participating in. Ngulube and Tafor (2006: 73) aptly remarked that one of the major challenges faced by archival institutions in the ESARBICA region is making archival resources available to society. The thesis of this paper is anchored in the proposition that while social media technologies can have a transformative influence; they have to be the right technology for the right place and the right people. In addition, archivists need to find innovative strategies to use these technologies depending on what is affordable on their part and for users.

The research story

A study was carried out between 2006 and 2009 in heritage institutions managing liberation struggle archives in east and southern Africaⁱⁱ. One of the objectives of this research was to examine to what extent ICTs have provided new opportunities for the management of the liberation struggle records. A questionnaire and an observation and interview schedule were the research instruments used to gather data. Within the context of this study, the set of specifications were the twelve

national archives repositories within the east and southern African region and archival repositories housing the records of former national liberation movements within east and southern Africa. As for the former, the countries were as follows: Angola, Botswana, Kenya, Lesotho, Malawi, Mozambique, Namibia, South Africa, Swaziland, Tanzania, Zambia and Zimbabwe.

The one set of specifications in the study population was the member-states of ESARBICA, derived from the ESARBICA website (ESARBICA 2004). The other set was the archival repositories housing the records of former national liberation movements within east and southern Africa and the focus here was on the ANC struggle records and archives (seven in all)ⁱⁱⁱ, as well as on the FRELIMO, MPLA, SWAPO, ZANU PF and ZIPRA archives. In total, twenty four institutions were identified and the census approach was thus found appropriate. A census involves a survey of the whole population (Bless, Higson-Smith and Kagee 2006:107) and a plus factor about this census approach is that it eliminates sampling error and provides data of all units of analysis in the population. For the purpose of this study, the census approach was adopted because only twenty four units of analysis were identified as discussed above. Leedy (1997:211) aptly noted that it is unnecessary to sample populations that are less than one hundred.

Definition of terms

The conclusions made in this study are based on professional literature, observations and interviews with personnel at the surveyed archival institutions. The definition of national liberation movement has been a source of considerable disagreement among scholars. It remains subject to confusion, doubt and disagreement and even elementary questions of definition, terminology and delimitation of the field to be explained are still not settled (Valentine 1987:43). The conceptualization of the term is a matter of interpretation and Wilson (1988) rightly pointed out that defining national liberation movement is a challenging task and argued that the label, as popularly used is imprecise. For the purpose of the present work, a national liberation movement is defined as a non-governmental organization which, through

violent or non-violent means, strives to win effective national independence in its crusade for emancipation.

In consequence, the few records that were created during the struggle for emancipation constitute the liberation struggle heritage and Dominy (2004) acutely observed that "Liberation Struggle" Archives are of differing types and status, reflecting the diverse nature of the struggle itself. On the other hand, Web 2.0 or social media technologies are technologically driven and designed to allow people to communicate, share information and create online communities.

The coining of the term "Web 2.0" has generally been attributed to Tim O'Reilly and Dale Dougherty of O'Reilly Media in 2004 (Boxen 2008: 23). The definition as given by O'Reilly (cited in Boxen 2008) is that Web 2.0 is:

the move to the Internet as platform, and an attempt to understand the rules of success on that new platform. Chief among those rules is this: Build applications that harness network effects to get better the more people use them.

Accordingly, the IRMT (2009) noted that in a computer environment, Web 2.0 is a term used to refer to changes in the way that World Wide Web technology is used, in order to enhance creativity, information sharing and functionality in a web-based environment. Computer tools created to support Web 2.0 information sharing include social networking sites, wikis, blogs, social bookmarking, collaborative editing tools, media sharing services and syndication and notification technologies. Theimer (2010) and Kwanya, Stilwell and Underwood (2009:72) agreed that the term Web 2.0 describes a confluence of changes in Web design and functionality that resulted in fundamental differences in the ways developers and users approach the Web. Samouelian (2009: 42) also stated that the Web is moving toward a shared environment that embraces collective intelligence and participation.

Findings of the study

The findings of the research revealed some significant insights with regard to the “transformative” influence of ICTs within ESARBICA and two are cited as they provide the paper’s departure point for their relevance to the subject under discussion:

- i. The majority of institutions were digitizing their collections though there was no written policy for managing digital records for this majority.
- ii. The use of automated finding aids was greatly assisting in their outreach activities. Finding aids are sign posts that lead researchers to the information they are seeking from or about archives. A combination of nearly all the types of finding aids including guides, indexes, catalogues, descriptive lists and inventories were prevalent in the surveyed institutions. Inventories or summary lists were the most popular. One institution was posting published guides on the Web in an effort to showcase what they had as a way of making themselves known thereby enhancing the institution’s profile.

Discussion

The need for archivists to embrace technology so as to remain vital and essential to current and future users in the digital needs no emphasis. The foregoing findings suggest that archival institutions are moving with the times in search of relevance. Indeed the onus is upon archivists to come up with imaginative and innovative ways of not only luring potential researchers to the institution but also informing the public on what the institution has in store. The new technologies if used creatively might help dismiss the long viewed perception of archives having an image problem. Accordingly, an assortment of terms has been used to refer to those activities in which the archival institution seeks user response to its services or in its bid to raise the profile of the organization either internally or externally. Educational programmes, external programmes, advocacy, developmental services, public programming and public service are other synonyms used as substitutes for the broad term “outreach”. Outreach has been defined as those activities whereby archival institutions ensure responsiveness to users, secure user participation and promote the use of archives (Harris 2000:26).

Outreach is an extension of reference work and, as Roe (1988:218) highlighted, while the purpose of archives is to preserve and make available historical resources, that goal lacks substance if the resources remain unused. This view has been shared by Harris (2000:26; See also Pederson 1993:306; Freeman 1984:282; Blais and Ennes 1990-91:107) who stated that public programming is arguably the clearest manifestation of archivists having embraced the notion that use is indeed the ultimate goal of all their endeavours. Considering that it is a perennial professional gripe that archivists have an image problem (Bailey 2007:123), it is imperative to develop outreach activities, inter alia, for the following reasons:

- i. expansion of basic archival functions through acquisition and preservation of records;
- ii. to increase and encourage the use of archival materials;
- iii. to raise awareness of archives and their holdings, as well as identifying the role and uses of records in society;
- iv. to encourage communication between archivists and the officials who allocate the resources (Roe 1988:219-220; Maher 1992:316; Williams 2006:147).

Possible outreach activity options are multiple and according to Pederson (1993:314), successful ones are characterised by a clear purpose, well defined scope and content. Ericson (1990-91:114) reinforced this view by pointing out that archives have a fundamental duty to undertake outreach projects on an ongoing basis, and the process should be clearly stated in archival mission statements, thereby, making the process one that has short and long term goals attached to it.

According to Freeman (1984:283), in developing any of these educational services we must first decide for whom we are producing them, at what level of sophistication they need to be produced and in what formats they can be supplied to the maximum number of people. Freeman (1984:283) further asserted that outreach can range at least from simple exhibits, media coverage, tours and curatorial talks to more sophisticated activity, including multilevel conferences, travelling exhibits, group instruction, teacher workshops, courses based on the archives using records

as text and archivists as facilitators, or cycles of activities focused on a theme or period. From this expansive list, only major activities will be discussed and these include internet access, exhibitions, publications, classes, seminars and workshops. More importantly, an attempt will be made to show how these can be enhanced by use of social media technologies.

Outreach and social media technologies

Theimer (2010) correctly noted that the professional discipline of archives has both an inward and an outward focus. Archivists are not only responsible for acquiring, processing and preserving their collections but they are also responsible for ensuring that those collections are used by as many people as possible. Harris (2000) agreed and noted that use remains the archival goal of all archival endeavours. Because archives exist to be found and used, for most archivists, the rise of the Internet and the World Wide Web has been a welcome means of expanding the audience for their collections. The Web is a powerful platform for promoting repositories, sharing information about collections and reaching out to potential new users (Theimer 2010) and the onset of this electronic caravan has transformed its interaction with the public.

One aspect of this transformation is remote access as the Web has made it easy for archives to share information about collections like finding aids and collection catalogs online. Wato (2002:130) remarked that many archives today have the opportunity to design their own websites with fully interactive databases that can be interrogated online. Such databases could include the finding aids of an institution. This opportunity has enabled users to discover with ease as to what information an archives has and with the digitization of holdings (Theimer 2010), users can get direct access not only to information about the records but also to some of the actual records themselves. Theimer (2010) further noted that the traditional model, in which the archivists processed collections, produced hard-copy finding aids, and then waited for users to come to them has transformed into archivists proactively producing and pushing out information and digitized content, trying to pull people in

rather than waiting for them to show up. This reinforces Harris's view (2011) that public programming should be about in-reach – user-centred that is.

In consequence, it means that today's archives must produce content for the Web – online exhibits, digitized collections, EAD (Encoded Archival Description) – encoded finding aids, and possibly blogs, which are essentially online journals. Archivists must respond not only to letters and phone calls but also to reference requests received via email and online chat (Theimer 2010).

Notwithstanding, a smorgasbord of social networking tools and services are in place and these will now be looked at individually. It should be pointed from the onset that due to the fact that many applications fall under the umbrella of Web 2.0, the list will be narrowed to a manageable size.

Face book

Face book, like blogging and wiki sites provides an easy way to create a Web presence for an archive and according to Theimer (2010), Face book is currently by far the most popular among potential users of archives. Millar (2010) agreed and noted that in 2010 for instance, the commercial networking site Face book was hugely popular with over 200 million active users worldwide. Archivists in many countries have created Face book pages to disseminate information about their institution's opening hours, address, contact information, Web site address, special events, exhibits or new acquisitions. Archivists add historical photographs to Face book photo pages and use the tool to circulate invitations to local history talks and walking tours. Archivists can also post answers to frequently asked questions on Face book discussion pages and use the technology to direct visitors to related web pages, historical videos, sound recordings or other information (Millar 2010).

To the contrary, as noted by Theimer (2010:169), most archives seem to be using Face book groups and pages more to promote their current activities than to share information about their historical collections. The reason primarily for this status quo could be because of widespread nervousness over raiding of intellectual property

especially in developing countries. There is one school of thought which holds the polemic view that schemes to digitise Africa's heritage per se are a form of neo-imperial information grab in the form of digital capitalism^{iv}.

Twitter or micro blogging

Micro blogging is blogging on a very small scale (Theimer 2010:121) and micro bloggers publish extremely short updates or messages. The platform provided by Twitter, a social networking service allows users to send and read messages using their cellular telephones. The messages called "tweets" are popularly synonymous with micro blogging and archivists have begun to use Twitter, often in conjunction with Face book, as a platform to advise their user community of news or current events. Tweets can let people know about upcoming workshops or seminars, new resources or acquisitions or changes in hours of services. Followers may then be directed to a Face book page or to the institution's web page for more information (Millar 2010:196). In short, tweets enable the institution to keep in touch with its established users and to reach out to new ones by promoting the archives.

Wikipedia

A wiki is a web site that allows many people to contribute by editing content and adding pages, working collaboratively to create an information resource (Boxen 2008: 25; Theimer 2010:137). According to Millar (2010:196), Wikipedia is an ever-holding web-based encyclopaedia that is developed through the interactions of thousands of people, who add and change encyclopaedia entries in order to create a dynamic, user-focused resource tool. Archivists can make great use of tools such as Wikipedia, adding information about archival collections along with links to institutional web pages, finding aids and other resources.

Millar (2010) further noted that the potential for disseminating archival information through Wikipedia is tremendous since it allows archivists to bypass archives-specific descriptive networks entirely in their quest to inform the public about their holdings. The wikis that archives have created fall into two distinct categories based on who the primary group of contributors is expected to be. The first category is composed

of wikis whose expected contributors are primarily the staff of the creating organization. The second category includes wikis from the general public. Both types of wikis are open to the public to view, and in most cases the public can contribute to either type of wiki (Theimer 2010).

As a matter of fact, archival institutions around the world are hiring “Wikipedians in Residence” to help extend their outreach activities. David Ferriero, archivist of the United States noted recently that having the permanent records of the federal government available through Wikipedia, the National Archives will be able to reach children, genealogists, educators, researchers, and members of the public who may never have come to the National Archives or seen our website to view our holdings (Connelly 2010). Wikis-in-residence are trying to help improve discoverability for the content online by building a knowledge repository and they are driving home the point that collections that remain sequestered from the public serve no purpose.

In a nutshell, the world of archives is evolving rapidly from a physical to a virtual world which is facilitating online access to documentary heritage stored in the form of digital data. Archivists have to keep abreast with these new technological developments to remain relevant in these changing times. When it comes to public programming, the onus is upon the archivists to devise innovative strategies and imaginative ideas that will endear the institution to the public. Wato (2002:131) correctly pointed out that archives have not traditionally been aggressive in publicizing their services. Face book, Twitter, Wikipedia and other communications and information technologies and tools can help break down the borders between the institution and the public (Millar 2010:196).

The very use of such high-tech tools by an archival institution is a signal to the public that the institution is not stuck in the past. Millar (2010) correctly noted that it has been argued that archival institutions can reach different, that is the younger generation by remaining technologically current. In so doing, they can employ the various social media technologies to avail the liberation struggle heritage to these so called “born frees”. Harvey and Sturges (2010) noted that technological enthusiasm

and trend consciousness have a large role to play in young people's consumption of new technologies.

Noble as this idea seems to be, the situation on the ground appears gloomy for most archival institutions within ESARBICA. Mnjama (2009) noted that most archival institutions within the region are confronted with a plethora of problems that threaten the realization of this technological dream. Ngulube and Tafor (2006) rightly pointed out that many countries in sub-Saharan Africa entered the digital age at a disadvantage in terms of education and resources.

The capacity in terms of coping with the ever changing technologies is non-existent due to budgetary handicaps and lack of qualified staff in ICTs who work in archival institutions. Not surprisingly, most of the archival institutions' websites are not accessible as some links do not work or lead to a dead end, are poorly constructed, not regularly updated and neither are they easily located as some are hosted by parent organizations. As a matter of fact, inadequate infrastructure remains a major impediment to effective access to online resources in most developing countries (Watts and Ibegbulam 2006; Alemna 1999). A random visit and search for instance, of ESARBICA archival institutions on 6 June 2011 revealed that six out of the thirteen member countries had accessible websites. This assessment was corroborated by a study carried out by Ngulube and Tafor (2006) in which they confirmed that only six of the 10 website addresses that were given were accessible at the time of their study. This stagnation could be a consequence of inadequate resources particularly when it comes to matters of funding.

The way forward

Cellular technology, the telephone and video screen are relatively affordable for the majority of archival institutions within ESARBICA and these need to be exploited fully in order to make the liberation heritage available to the public. Sturges and Sharma (2007:17) noted for instance that communication technology needs not be sophisticated to use in order to promote access. Growth in mobile phone usage in Sub-Saharan Africa for instance has been explosive and now reaches more than a

third of the population. Harvey and Sturges (2010:149) observed that in regions such as Sub-Saharan Africa, which has a well documented history of inadequate communication infrastructure, the wireless feature of the cell phone is indeed very attractive. In fact, cell phones are more widely diffused in Sub-Saharan Africa than any other ICT. Harvey and Sturges (2010) further noted that the cell phone's combination of basic, practical usability and rapid potential for advanced functionality has enabled it to surpass all other new ICTs in popularity.

The use of cellular phone applications such as "Tweets" or short message service (SMS) is one of the most important emerging ICT applications in Africa. Mobile phone technology is versatile or multi-media that is, as it can support other voice, image and video applications which makes it handy for archival institutions within ESARBICA. In addition, the use of community radio stations is an important mechanism for disseminating information about the archives to the public. Following the liberalization of airwaves in most Africa countries, there has been a mushrooming of radio stations and the United Nations Educational, Scientific and Cultural Organization (UNESCO) has provided support to a number of community radio stations in Africa.

Conclusion

Public programming can be enhanced through use of social media technologies. The responsibility is upon the archivist to ensure that these are tailor-made to suit the targeted audience which calls for innovative and imaginative strategies largely shaped by the dictates of the situation. Due to its affordability and versatility, cellular technology remains the most economical means of communicating with the public, particularly for this millennial generation. By employing this communicating tool, the liberation heritage can be disseminated widely for the benefit of posterity. In addition, the digitization of this heritage currently underway is emblematic of the fact that archival institutions with this record are endeavouring to promote access and they need to complement these efforts by employing the omnipresent social media technologies.

REFERENCES

Alemna, A. A. 1999. The impact of new Information Technology in Africa. *Information Development* 15:167-170.

Bailey, S. 2007. Taking the road less travelled by: the future of the archive and records management profession in the digital age. *Journal of the Society of Archivists* 28(2):117-124.

Blais, G. And Ennes, D. 1990-91. From paper archives to people archives: public programming in the management of archives. *Archivaria* 31:101-113.

Bless, C., Higson-Smith, C. and Kagee, A. 2006. *Fundamentals of social research methods: an African perspective*. 4th ed. Cape Town: Juta and Company Ltd

Boxen, J. F. 2008. Library 2.0: a review of the literature. *Reference Librarian* 49 (1): 21 – 34.

Connelly, P. 3 June 2011. The US National Archives hires its first Wikipedian to push its digital reach. ESARBICA List-serv. skatuu@gmail.com (Accessed 3 June 2011).

Dominy, G. 2004. Proposals on "liberation Struggle" archives in Africa at the East and Southern Africa Regional Branch of the International Council on Archives (ESARBICA) Executive Board meeting held in Malawi, 21-23 June 2004.

Ericson, T. 1990-91. Preoccupied with our own gardens: outreach and archivists. *Archivaria* 31:114-122.

ESARBICA. 2004. Archival institutions. Available: <http://www.geocities.com/esarbica/> . Accessed 23 March 2007.

Freeman, E. 1984. In the eye of the beholder: archives administration from the user's point of view. *American Archivist* 47:111-23.

Harris, V. 2000. *Exploring archives: an introduction to archival ideas and practice in South Africa*. Pretoria: National Archives of South Africa.

Harris, V. 2011. Madiba, memory and the work of justice. Paper presented at the Alan Paton lecture 2011. Organized by the Alan Paton Centre & Struggle Archives: University of KwaZulu-Natal, Pietermaritzburg campus, 5 May 2011.

Harvey, J. and Sturges, P. 2010. The cell phone as appropriate information technology: evidence from The Gambia. *Information Development* 26 (2): 148 – 159.

Kwanya, T., Stilwell, C. and Underwood, P. G. 2009. Library 2.0: revolution or evolution? *South African Journal of Library and Information science* 75 (1):70 – 75.

International Records Management Trust (IRMT). 2009. Glossary of Terms. Available: <http://www.irmt.org/educationTrainMaterials.php> Accessed 20 April 2011.

Leedy, P. D. 1997. *Practical research: planning and design*. 6th ed. Upper Saddle River, NJ: Merrill/Prentice Hall.

Maher, W. J. 1992. *The management of college and university archives*. Metuchen, N. J. & London: The Society of American Archivists and the Scarecrow Press, Inc.

Millar, L. 2010. *Archives principles and practices*. London: Facet Publishing.

Mnjama, N. 2009. Archival programming in the digital era: the challenge for ESARBICA archivists. Paper presented at the XX Bi-Annual East and Southern Africa Regional Branch of the International Council on Archives (ESARBICA) General

Conference on “Documentary Heritage Management in the Digital Age: Beauty and the Beast”, Namibia, National Archives of Namibia (Windhoek), 1-3 July 2009.

Ngulube, P. and Tafor, V. F. 2006. The management of public records and archives in the member countries of ESARBICA. *Journal of the Society of Archivists* 27(1):57-83.

Pederson, A. 1993. User education and public relations. In: Ellis, J. (ed). *Keeping archives*. 2nd ed. Pout Melbourne, Victoria: D W Thorpe. pp. 306 - 349.

Roe, K. D. 1988. Public programs. In: Bradsher, J. G. (ed). *Managing archival institutions*. London: Mansell Publishing Limited. pp.218 – 227.

Samouelian, M. 2009. Embracing Web 2.0: archives and the newest generation of web applications. *American Archivist* 72 (Spring/Summer): 42 – 71.

Sturges, R. P. and Sharma, G. 2007. Using ICT to help the poor access public services. *Information Development* 23(1): 15-24.

Theimer, K. 2010. *Web 2.0 tools and strategies for archives and local history collections*. London: Facet Publishing.

Valentine, S. F. N. V. 1987. The image of African National Liberation Movements in the West German and Soviet Press: 1972 – 1982. Focusing on the South West Africa People’s Organization (SWAPO of Namibia) and the African National Congress (ANC of South Africa). Inaugural – Dissertation. Bonn: Rheinischen Fredrich – Wilhelms – Universitat.

Wato, R. 2002. Challenges and opportunities of Information Technology for archival practices in the 21st century. *ESARBICA Journal* 21: 125-134.

Watts, C. and Ibegbulam, I. 2006. Access to electronic healthcare information resources in developing countries: experiences from the Medical Library, College of Medicine, University of Nigeria. *IFLA Journal* 32:54-61.

Williams, C. 2006. *Managing archives: foundations, principles and practice*. Oxford: Chandos publishing.

Wilson, H. A. 1988. *International law and the use of force by national liberation movements*. Oxford: Clarendon Press

ⁱ ESARBICA was established in 1969, in Kenya and is the regional arm of the International Council on Archives (ICA). It brings together individuals and institutions concerned with the creation, use, preservation and management of recorded information in Eastern and Southern Africa. It is made up of fourteen member states namely; Angola, Botswana, Kenya, Lesotho, Malawi, Mozambique, Namibia, South Africa, Swaziland, Tanzania, Uganda, Zambia, Zanzibar and Zimbabwe (ESARBICA 2004). The mission of ESARBICA is the advancement of archives through regional co-operation.

ⁱⁱ This paper is drawn from a PhD study by Garaba, F. 2010, titled, An investigation into the management of the records and archives of former liberation movements in east and southern Africa held by national and private archival institutions.

ⁱⁱⁱ The seven archival institutions housing ANC archives are:

African National Congress Archives

Alan Paton Centre and Struggle Archives (University of KwaZulu-Natal, Pietermaritzburg)

Digital Innovation South Africa (DISA)

Gandhi-Luthuli Documentation Centre (University of KwaZulu-Natal, Westville)

Liberation Archives - University of Fort Hare

Nelson Mandela Foundation

UWC-Robben Island Mayibuye Archives

^{iv} P.J. Lor, "Digital Libraries and Archiving Knowledge: Some Critical Questions", *South African Journal of Libraries and Information Science* 74, 2, 2008, p 119.

P. Limb, "Ethical Issues in Southern African Archives and Libraries", *Innovation: Journal of Appropriate Librarianship and Information Work in Southern Africa*, 24, 2002, pp 51-57.

P. Limb, "The Politics of Digital "Reform and Revolution": Towards Mainstreaming and African Control of African Digitization", *Innovation: Journal of Appropriate Librarianship and Information Work in Southern Africa*, 34, 2007, p 19.

J.J. Britz and P.J. Lor, "A Moral Reflection on the Information Flow From South to North: An African Perspective", *Libri: International Journal of Libraries and Information Services*, 53, 2003, pp 160-173;