

# Digital Convergence and the Information Profession in Cultural Heritage Organizations: Reconciling Internal and External Demands

Paul F. Marty\*

*School of Library and Information Studies, College of Communication and Information, Florida State University, Tallahassee, FL 32306-2100*

*Abstract.* Nearly twenty years ago, W. Boyd Rayward became one of the first academics to examine the past, present, and future of how “electronic information and the functional integration of libraries, archives, and museums” would affect the information profession, laying the groundwork for an entire research agenda on the topic of “digital convergence,” where the increased use of and reliance on digital resources in libraries, archives, and museums has increasingly blurred the traditional distinctions between these institutions. This paper explores how Rayward’s early work in this area influenced the development of this topic over time, focusing on how information professionals in cultural heritage organizations can and should reconcile their internal perceptions of identity with the external expectations of their users, particularly those who do not or cannot clearly distinguish between different institutions or the information resources they manage. In a world where the traditional assumptions we take for granted about information organization and access in libraries, archives, and museums are simply not shared by our users, the future of the information profession depends on the ability of cultural heritage information professionals to transcend the traditional boundaries between libraries, archives, and museums to meet information needs in the digital age.

## Introduction

In the mid-1990s, W. Boyd Rayward opened the door to an ongoing conversation about “electronic information and the functional integration of libraries, archives, and museums.” From his keynote address at the National Conference of the National Preservation Office in Australia (1995) to his frequently-cited chapter in *History and Electronic Artefacts* (1998), Rayward was one of the first academics to stress how the growing demand for electronic access to information in libraries, archives, museums, and other cultural heritage organizations would place a strain on information professionals, particularly as they struggled to maintain their unique institutional identities while grappling with the changing nature of information work in the digital age. As Rayward (1998) wrote,

“[T]he advent of electronic sources of information and their ever-increasing volume and variety will require a major redefinition and integration of the role of archives, museums and research libraries. It is my view that the distinctions between all of these apparently different types of institutions eventually will make little sense, though we can anticipate continuing turf battles between the professional groups that manage them as we get to this point. [...] New kinds of functional re-alignments between the agencies involved

---

\* Corresponding author. Email: [marty@fsu.edu](mailto:marty@fsu.edu), Telephone: 850-644-5133

with electronic information sources, a new approach to understanding the kind of market in which they operate, are needed” (p.207-208).

Rayward’s early work in this area inspired many researchers and professionals to study the impact of digitization on such topics as the similarities and differences of collecting institutions (Hedstrom & King, 2003), the importance of collaboration between libraries, archives, and museums (Waibel & Erway, 2009), and the professional preparation of information professionals in the digital age (Trant, 2009). The idea that the availability of information in electronic format (digitized and born-digital resources alike) has prompted a “digital convergence” of libraries, archives, and museums, has been the subject of countless publications and presentations that have left many hashing over the “continuing turf battles” Rayward predicted. At stake is no small prize—how collecting agencies and academic institutions react to the digital transformation of the world’s information resources will affect the future of the information profession, and the very identity of libraries, archives, and museums in the 21st century.

The key question facing individuals engaged in these discussions can be summarized as follows: How can (or should) information professionals in libraries, archives, museums, and other cultural heritage organizations maintain the traditional distinctions between their collecting institutions while simultaneously providing access to information in ways that increasingly blur those distinctions for the users of their resources? Naturally, this is not a new question—collecting institutions have wrestled with issues of institutional identity for centuries, and much of what is happening today with the increased availability of digital resources is simply returning us to a pre-existing world of more natural relationships and organizational schemes (Given & McTavish, 2010). Finding an answer to this question that works across libraries, archives, and museums writ large, however, is essential for the survival of cultural heritage organizations.

Given the frequently conflicting and ever-changing nature of the internal and external demands placed on information professionals today, any workable answer to this question needs to address balancing differences between the motivations and expectations of information providers and information consumers. Such an approach leads us inevitably to a much broader question: How can (or should) information professionals in cultural heritage organizations reconcile their internal perceptions of identity (which may or may not involve maintaining “traditional distinctions” between libraries, archives, and museums) with the external expectations of their users (who may or may not have any idea about the identities of the institutions from whence they receive their information). “Turf battles” over the purpose of libraries, archives, and museums in the information age may help delineate key academic issues, but will do little to solve problems in an era where funding decisions affecting the future of information institutions are increasingly made by individuals who have no interest in academic disputes. The goal of this paper, therefore, is to draw attention to, and suggest approaches to bridging, the ever-widening gulf between what we as information professionals *actually* do inside our respective institutions, and what the users of our resources outside of our institutions *believe* we do in light of “electronic information and the functional integration of libraries, archives, and museums.”

## Digital Convergence

“[T]he functional differentiation of libraries, museums and archives as reflected in different institutional practices, physical locations, and the specialist work of professional cadres of personnel is a relatively recent phenomenon. [...] It does not reflect the needs of the individual scholars or even the member of the educated public interested in some aspect of learning or life. For the individual, the ideal is still the personal cabinet of curiosities that contains whatever is needed for a particular purpose [...] How to regain this functional integrity has been an implicit theme in speculations over the recent centuries” (Rayward, 1998, p.213).

There is no denying that the creation, access, evaluation, and use of information resources in libraries, archives, and museums has been profoundly transformed over the past few decades (Dempsey, 2000). The increased use of and reliance on digital resources has increasingly blurred traditional distinctions between information organizations, prompting what many have called a “digital convergence” of libraries, archives, and museums—a term that encapsulates the functional integration predicted by Rayward fifteen years ago (Marty, 2010). This sort of convergence does not necessarily mean these institutions are becoming the same thing, or that there is a need to physically merge their collections and their professional responsibilities, but it does mean that libraries, archives, and museums increasingly face the same problems, challenges, assumptions, and expectations from their users.

This topic has manifested in a variety of forms and been addressed in a variety of areas, and it is beyond the scope of this paper to review these in detail. The commonalities of libraries, archives, and museums have been the subject of conferences such as the 2005 RLG conference on “Libraries, Archives, & Museums—Three-Ring Circus, One Big Show?” and the 2006 RBMS conference on “Libraries, Archives, and Museums in the Twenty-First Century: Intersecting Missions, Converging Futures?” (Dupont, 2007). There have been special issues examining the shared needs and challenges facing libraries, archives, and museums in the information age in such journals as *Library Quarterly* 80(1), *Archival Science* 8(4), *Museum Management and Curatorship* 24(4), and *Library Trends* 59(4). There have been workshops focused on the shared educational goals of library and information studies, archival studies, and museum studies programs such as the Cultural Heritage Information Professionals Workshop (Marty, 2008).

Journal articles and other publications have approached the concept of digital convergence from a variety of different angles, examining the challenges facing cultural heritage information professionals as they work together to meet the information needs of all users. Some authors have explored the importance of collaboration among libraries, archives, and museums (Waibel & Erway, 2009; Zorich, Waibel, & Erway, 2008). Others have examined the education and professional preparation of the next generation of information professionals, encouraging a closer relationship between education and practice in LIS, museum studies, and archival studies programs (Martin, 1994; Ray, 2009; Trant, 2009). One theme that recurs frequently throughout these publications is the recognition is that what is happening is not really a new phenomenon, but an old one (Given & McTavish, 2010).

Traditional divisions between libraries, archives, and museums, while clearly important, are also essentially arbitrary, and arguments about the structure of our collecting agencies have returned to the forefront with the digitization of collections and the rise of born-digital materials (Doucet, 2007; Dupont, 2007; Martin, 2007). Not everyone agrees, however, about the extent to which libraries, archives, and museums should converge—physically or digitally—and the result has been a series of “continuing turf battles” about the importance of traditional distinctions between libraries, archives, and museums, the challenges posed by digital convergence, and the dangers of taking information records out of context (Hedstrom & King, 2003; Robinson, 2012). Every person participating in these conversations invariably raises excellent points, and the discussions among academics working in this area are fascinating to follow, but the truth is that these arguments are increasingly centered on very small differences of opinion. And while these differences may be important to library, archives, and museum professionals internally, they are essentially meaningless to the audience that really matters—the users.

It is critically important for information professionals in cultural heritage organizations to recognize that most of the assumptions that we take for granted about information organization and access in libraries, archives, and museums are simply not shared by our users, particularly those who do not or cannot clearly distinguish among different institutions or the information resources they manage (Martin, 2007). We have to find new ways of meeting the information needs of a public that is not only constantly changing, but also rarely pays attention to the aspects of our information sources, provision, and organization that we consider most important. As Doucet (2007) writes, “Library, museum, and archival professionals care about the distinctions between different kinds of collections and documents, but most users do not” (p.65). How we reconcile the differences between these internal and external needs, motivations, and expectations will shape the future of information profession in cultural heritage organizations.

### **Changing Expectations**

“Increasingly, ‘information-as-thing’, as text, image, object, datum, specimen, record group, or file, is represented or representable electronically or indeed may be available only in that form. In so far as these electronic representations are adequate for a particular purpose, the physical distinctions between the different formats or media or records disappear. [...] Modern telecommunications systems now make it of little concern to the individual researcher where the record he or she wishes to access is held — library, archive, museum, or commercial database vendor, or any personal or institutional location on the Internet — provided only that what is wanted is available electronically” (Rayward, 1998, p.214).

The idea that people looking for information do not share the same assumptions and expectations as people providing access to information is an important, but difficult lesson to learn. It reflects the changing nature of how people look for information, and how information providers seek to meet the needs of information consumers in a world that is shifting from a system-centered to a person-centered perspective on information behavior (Case, 2012). One finds this shift embedded in the user-centered development of websites, online catalogs, interactive exhibits, and digital collections, where it is no longer sufficient nor acceptable to design interfaces that

reflect how we as information providers organize information; instead, our designs need to reflect our improved understanding of the ever-changing information needs of our users.

For such a simple idea, however, the person-centered approach to information provision turns out to be a very hard concept to internalize. Looking at things from the user's perspective can be challenging, and it is easy to forget what is really an incredibly simple rule: "People want stuff," and information access in 21st century cultural heritage organizations should be as transparent as possible (Martin, 2007). In particular, individuals who desire access to cultural heritage information resources should not be required to understand and acknowledge the differences that traditionally have divided and differentiated information organizations (Marty, 2008).

Naturally, this is not to say that the "behind the scenes" activities that make those information resources available are unimportant; quite the contrary, those activities remain as important as they have always been. But it is equally important for us as information professionals to realize that, for most of our users, the internal activities on which we spend so much time and effort tend to be completely invisible (Marty, 2012). In the digital world, it is incredibly easy for the information consumer to focus on "stuff," while completely ignoring where their "stuff" comes from, and the role of the information provider in making that "stuff" available.

This is not a comfortable idea for many information professionals, particularly those who work in museums and related organizations; as the joke goes, "if museum curators ran libraries, no one would be able to check out a book until it was first explained to them what it was about and why they should read it." But resisting this idea, whether for the purpose of preserving traditional identities, or in the name of authority, or in the interest of making a profit, means putting barriers in the way of information access and use, and risking the alienation of a large portion of one's audience. As Ken Hamma (1995) writes, "To most users of images, one Monet is pretty much like another for a DVD cover that is to be mainly blue and green."

Users of information resources do not want to have to understand the differences between libraries, archives, and museums—nor is there a reason that they should need to do so to find the resources they need. They want to be able to say, "I'm writing a paper about Hercules," or "I'm researching the evolution of glass-making technologies," and find all the relevant resources in one search, in person or online, regardless of the type of collections where the records they need may be stored. They do not want to learn that most information systems are not geared toward answering these kinds of questions, and they especially do not want to discover how difficult it still is today for cultural heritage organizations to share information about their collections and enable searching across multiple institutions.

It may be some consolation for users to know that information professionals in cultural heritage organizations have at the very least been working toward this goal for a very long time. At the first Museums and the Web conference in 1997, the very time Rayward was writing about the "functional integration of libraries, archives, and museums," Eleanor Fink, Director of the Getty Information Institute, predicted that "by 2005, successful models for integrating our cultural heritage [will] have emerged. [...] Professors and students, curators and schoolchildren, you and I [will be] able to search the online universe seamlessly, as if the images and text about culture were available in one vast library of information" (Fink, 1997, p.5). Today, fifteen years later,

we are still a long way away from achieving that goal, but as is typical in situations like this, the difficulty here is not technical, but social. Meeting the changing expectations and internal demands of the users of cultural heritage organizations—people who neither need to nor care to understand the differences between these institutions—will require information professionals to shift their own mindsets to a world where the library, archives, or museum in the everyday life of the user is more important than the user in the life of the institution.

### **Shifting Philosophies**

“At least for the foreseeable future each of the professional groups will still have to continue to deal — perhaps preponderantly — with their ‘traditional’ materials. Thus there is no reason to suggest that differences between them will cease to exist and that we must envisage their physical consolidation. Nevertheless, the argument of this paper is that ‘electronification’ can only be dealt with adequately by questioning and rising above traditional modes of territorial demarcation between these groups. To the extent that they are dealing with the same kinds of ‘thing’ — electronic records — we must begin to explore the idea of functional integration between the agencies — libraries, archives and museums — that are responsible for collecting and managing the public’s access to them” (Rayward, 1998, p.224).

Over the past few decades, the library and information studies community has witnessed a philosophical shift away from the “user in the life of the library” to the “library in the life of the user” (Augst & Wiegand, 2003; Zweizig & Dervin, 1977). More recently, this idea has swept through the world of museums and cultural heritage organizations writ large, prompting a critical change in mindset that has shaped (and re-shaped) the way these institutions interact with their visitors and vice versa (Marty, 2007). It is not about what we do in libraries, archives, or museums that matters; it is the role these institutions play in our everyday lives that is so important. This change in mindset is an astonishing conceptual leap for the cultural heritage community, and a critically important idea for understanding the meaning of digital convergence for information professionals today.

Accepting this shift in philosophy involves wrestling with difficult ideas about the changing nature of information access, provision, and authority in the digital age. The very institutions that used to insist that individuals who wanted their resources follow their rules, have now dramatically changed course, encouraging their users to take their resources out of context, and create new meaning from them in their everyday lives (Green, 2011). These changing mindsets have required cultural heritage organizations to wrestle with concepts such as disintermediation (Downie, 1999; Nicholas, 2012), where the information professional is removed from the role of the authoritative intermediary, and presented with the much more onerous task of embedding all of their knowledge and expertise in the very information systems that allow users to bypass the information professional in the first place. Similar changes in the areas of distributed collection building, collaborative annotation, and the co-construction of knowledge have left information providers and consumers alike dealing with a world where users become responsible for assessing the quality of information on their own, and making their own decisions about the authority of information sources (Jorgensen, 2004; Terras, 2011).

Changing trends in how individuals search for, access, and use information sources in the digital age has dramatically changed the role of cultural heritage organizations as information providers, information authorities, and information intermediaries. While libraries, archives, and museums are still viewed as trusted authorities (a recent study on the use of libraries, museums, and the internet (Griffiths & King, 2008) revealed that cultural heritage organizations are among the most authoritative information sources in the nation, and certainly more trusted than government or commercial websites), they still need to find new ways of meeting the information needs of a public that is not only constantly changing, but that rarely pays any attention to the aspects of information provision and access that we consider most important.

The Flickr Commons project serves as an excellent example. Since 2008, dozens of libraries, archives, and museums from around the world have contributed thousands of images from their collections to the Commons in an effort to increase awareness of and access to publically-held images with “no known copyright restrictions” (<http://www.flickr.com/commons/>). There is no question that these images have reached an extremely wide audience; according to the Smithsonian Institution, the images they contributed received as many views in three months on Flickr as they had during the previous five years on the Smithsonian’s website (Kalfatovic et al., 2009). On the other hand, despite some initial hopes that increased views on Flickr would result in increased traffic back to the museum’s website, most museums found that this was not the case; while Flickr users are delighted to have access to these images on Flickr, they seem to have little interest in learning more about the institutions that uploaded the images in the first place. Not only does the work these institutions put into making their images available remain largely invisible, but the average user of those resources remains essentially unaware of the institutions that contributed them (Marty, 2012).

Coming to terms with changing expectations and new ways of interacting with information resources can be challenging. How does our role as an information provider change when our users are uninterested in the differences between collecting agencies? How can any cultural heritage organization serve as an authority when people just want stuff, and do not care to understand where it comes from? And how do we reconcile these concerns with research showing that libraries, archives, and museums are still very trusted sources of information? How the information profession adapts to the changing ways in which people look for information in cultural heritage organizations will shape the future of the information profession.

### **Reconciling Differences**

“The fundamental question is: what is to be collected, by whom, and under what circumstances of preservation, availability, and access. [...] In so far as the media of the past continue to be centrally involved, there is little problem — books for libraries, objects for museums, and government and organizational records for archives. But the electronic versions of these media create problems as to who has responsibility for identifying and collecting them, preserving them physically, and maintaining systems of access to them. The new kinds of electronic information sources in their turn present even more pressing problems of this kind, because there is no real precedent for dealing with them” (Rayward, 1998, p.215).

For information professionals in cultural heritage organizations, reconciling the differences between internal and external demands means living a double life. To succeed at their jobs, they need to be intimately familiar with and able to work within the constantly evolving information environments of their unique institutions—collecting, preserving, organizing, and researching as dictated by their institution’s rich traditions—while meeting needs externally for a public that increasingly has no desire to understand what is happening behind the scenes as long as their needs are met. As the expectations of information consumers evolve, driven by the easy access and availability of information prompted by trends in digital convergence, the gap between external perceptions and internal reality becomes ever larger. The future of cultural heritage organizations in the information age depends on the information professional’s ability to bridge that gap and meet needs internal and externally, especially when those needs are contradictory.

Accomplishing this task requires a new kind of information professional (Myburgh, 2005; Olander, 2010), one who can meet the ever-changing information needs of our users, helping them learn how to discover and assess the quality of information sources on their own, while simultaneously staying out of the way of people who just want stuff. It requires individuals with the capability of providing authoritative sources of information without bashing people over the head with their own notions of authority. It requires a new generation of information professionals who are comfortable with the idea that as long as people are finding the resources they need, and that those resources are of high quality, then it does not matter whether anyone knows where those resources came from (unless of course, they want to know).

These are not easy requirements, especially since this rapid influx of new technologies, new ideas, and new methods for interacting with users comes at a time of great change for cultural heritage organizations (Marty & Kazmer, 2011). Libraries, archives, and museums still struggle to share data across their own institutions, let alone between institutions of different types, but are pressured to provide their users with online environments that include the ability to tag collections, annotate objects, and otherwise contribute their thoughts to the knowledge base of the institution. Information professionals had barely begun to make progress completing their inventories and developing data interoperability standards when, as social computing became the norm, providing the ability for users to manipulate data changed from a cool feature to a basic expectation. Moving forward—and keeping pace with these constantly evolving expectations—places difficult demands on information professionals to coordinate the actions of many different users as they contribute, participate, shape, and create all types of data in all types of contexts.

The good news is that people have been discussing these issues for years, and much work has already been done to meet these needs and improve information organization and access behind the scenes. The resources that libraries, archives, and museums have made available online, and the systems that allow users to interact with them, are simply spectacular. The bad news, however, is that much of the work information professionals put into making those resources available goes unnoticed by people who just want stuff. An increasing number of information consumers seem to believe that if it is “free” for them to access, it must be “free” for information providers to create. As Marty (2012) writes, “Museums, libraries, and archives in the 21st century face a stark paradox: the easier they make it for their users to access their cultural heritage information resources, the harder they make it for those same users to understand how much work is actually involved in making those resources available. The challenge facing



cultural heritage information professionals today is to make their contributions clear, to be their own advocates for their own contributions to the betterment of humanity, while simultaneously making more resources available to an audience that wants increasingly unlimited access to everything, with as few barriers as possible, and all of it for free” (p.31).

Helping people understand the nature of “information work” is an old problem in library and information studies; as Bates (1999) writes, the first fallacy of information work is “thinking that organizing information requires deep subject expertise and no information expertise” (p.1046). Making the “invisible substrate of information science” visible is not easy. When one asks the general public what is more important for cultural heritage organizations to preserve, the objects in their collections or the information about those objects, many people will pick the objects; but it is the information that gives meaning to the object, that makes the difference between the wild antelope on the plains, the antelope on display in a zoo, and the stuffed antelope in a natural history museum (cf. Buckland 1991). To mend the rift between internal realities and external assumptions, we need to find new ways of engaging our audiences, actively involving them in contributing their own knowledge to the institution, in the hope that somewhere along the way, they will understand that our collections are only the tip of the information iceberg we offer.

The future of the information profession in cultural heritage organizations lies in helping the users of their resources learn to see what lies beneath the surface, while simultaneously providing access to the information they already know they want. Helping users understand that the role of the information professional goes far beyond access to information, that they themselves can contribute to the process of creating new knowledge, will be a challenge. How we as information professionals respond to this challenge will shape the role of the cultural heritage organization as an information provider, as an authoritative source, and as a leader in the information age. Doing this well will require a new generation of information professionals with the skills and ability to lead a double life where they balance internal and external expectations, while simultaneously working across the boundaries of libraries, archives, and museums.

### **Crossing Boundaries**

“It is clear that the availability of increasing volumes of information in electronic form and the emergence of new kinds of electronic information sources are presenting critical professional challenges for librarians and other ‘information professionals.’ How they meet these challenges will determine how the institutions under their care respond to the needs of historians and other scholars for the sources they need to fulfill their scholarly roles and responsibilities. Being able to respond to these challenges effectively will largely depend on how well these ‘information professionals’ are able to transcend the limitations that their highly developed professional ‘cultures’ impose upon them” (Rayward, 1998, p.223).

Change is always difficult. How the information profession in the cultural heritage community adapts to the changing ways in which people look for information in the 21st century will shape the future of cultural heritage organizations in the digital age. There is a need for more research on how the increased use of and reliance on digital resources has blurred traditional distinctions between information organizations, examining the phenomenon of digital convergence from

internal and external perspectives. There is a need for more research exploring how libraries, archives, and museums can collaborate and combine forces to better serve their users, many of whom do not clearly distinguish between these institutions or the resources they manage.

Meeting these needs will require cultural heritage information professionals who can transcend the traditional boundaries between libraries, archives, and museums in the information age. They will need the ability to maintain key distinctions between libraries, archives, and museums on the back end, while making information access more universal and more transparent on the front end. They will need to be able to balance external perceptions about the advantages and disadvantages of digital convergence with the internal perspectives of librarians, archivists, and museum professionals. In all areas, they will need to walk a delicate line between the conflicting motivations and expectations of the information provider on the inside and the information consumer on the outside.

Educating individuals with the ability to cross these boundaries and achieve these goals poses serious challenges to the nation's library and information studies, museum studies, and archival studies programs. There are many questions to be answered: How does the process of meeting information needs in libraries, archives, and museums differ internally and externally? What new educational programs are needed to prepare the next generation of information professionals for the roles and responsibilities they will face in today's libraries, archives, and museums? How are existing programs currently preparing their students for these roles, and what potential is there for sharing expertise across programs?

Educational institutions have increasingly stepped up to this challenge—library science programs offer courses on museum informatics, museum studies programs offer courses on information technology, and it is now possible to seek advanced degrees in library and information studies, archival studies, and museum studies at the same time from the same university. In an attempt to break down pre-existing academic silos, educational institutions such as the University of South Carolina or Simmons College have developed new programs with the specific aim of preparing students to transcend the boundaries between cultural heritage organizations (Bastian, Cloonan, & Harvey, 2011). While these are all positive developments, even more work is needed, and time is of the essence. When it comes to reconciling internal and external demands in cultural heritage organizations, the problem we face is that the easier we make it for more people to obtain access to our resources, anywhere, anytime, the more we make the percentage of people using our resources who actually care about our collecting agencies smaller and smaller (Martin, 2007).

In the nearly twenty years since W. Boyd Rayward started us down this path in the mid-1990s, the gap between internal perceptions and external demands on information institutions has become so wide that almost nobody outside the information profession would understand the topics we argue about today; yet it is imperative that we reach out to our external audiences for the simple reason that, for the most part, they have all the money. We need to admit that all of our institutions are dealing with changing internal and external pressures, and that fighting about differences in identity is not a valuable use of our time. When need to recognize that when we argue about maintaining the traditional distinctions between libraries, archives, and museums, all legislators and governmental bodies hear is, “we don't want to share.” We need to break out of these silos and our traditional ways of doing things, and recognize that really, everyone is right.

We are, all of us, working for the betterment of humanity, and in the long run, the differences in how we preserve, organize, and make available our information resources simply do not matter.

Libraries, archives, and museums contain within them everything humanity has considered dear for millennia—art, history, culture, and science. By bringing together our shared resources, we can help cultural heritage organizations collect, preserve, and disseminate the very information resources that make these institutions more than a collection of records and objects, but the sum total of what it means to be human. By bridging curricula and educational programs, we help break down existing academic silos, and give our students the tools they need to ignore our differences and focuses on our similarities. But if we cannot set aside our minor differences and work together to prepare the next generation of information professionals who understand the process of reconciling internal identities and external expectations, then all hope is lost.

We have today a unique opportunity to broaden cultural heritage beyond the purview of individual libraries, archives, and museums, and reinforce the value of our shared heritage in the broader society. That this can and should be done in a way that respects the underlying value of individual institutions, and recognizes that expertise in cultural heritage comes in many forms, and from many different areas, goes without saying. Working together, we can accomplish these goals, transcend these barriers, and reconcile internal and external demands. Side by side, firmly grounded in the world they have in common, and fully aware of the value of their differences, researchers, educators, and practitioners in libraries, archives, and museums can look forward to the future of cultural heritage and the information profession together.

## References

- Augst, T., & Wiegand, W. (2003). *Libraries as Agencies of Culture*. Madison, WI: University of Wisconsin Press.
- Bastian, J.A., Cloonan, M.V., & Harvey, R. (2011). From teacher to learner to user: Developing a digital stewardship pedagogy. *Library Trends*, 59(4), 607-622.
- Bates, M.J. (1999). The invisible substrate of information science. *Journal of the American Society for Information Science*, 50(12), 1043-1050.
- Buckland, M. (1991). Information as thing. *Journal of the American Society for Information Science*, 42(5), 351-360.
- Case, D.O. (2012). *Looking for information: a survey of research on information seeking, needs and behavior*. Bingley, UK: Emerald Publishing Group.
- Dempsey, L. (2000). Scientific, industrial, and cultural heritage: a shared approach: a research framework for digital libraries, museums and archives. *Ariadne 22*, <http://www.ariadne.ac.uk/issue22/dempsey>
- Doucet, M. (2007). Library and Archives Canada: a case study of a national library, archives and museum merger. *RBM: A Journal of Rare Books, Manuscripts and Cultural Heritage*, 8(1), 61-66.
- Downie, J.S. (1999). Jumping off the disintermediation bandwagon: Reharmonizing LIS education for the realities of the 21st century. <http://people.lis.illinois.edu/~jdownie/alise99/>
- Dupont, C. (2007). Libraries, archives, and museums in the twenty-first century: intersecting missions, converging futures? *RBM: A Journal of Rare Books, Manuscripts, and Cultural Heritage*, 8(1), 13-19.
- Fink, E.E. (1997). Sharing cultural entitlements in the digital age: Are we building a Garden of Eden or a patch of weeds? In D. Bearman & J. Trant (Eds.), *Museums and the Web* (pp. 5-8). Pittsburgh, PA: Archives and Museum Informatics.
- Given, L.M. & McTavish, L. (2010). What's old is new again: The reconvergence of libraries, archives and museums in the digital age. *Library Quarterly*, 80(1), 7-32.
- Green, T. (2011). The copyright revolution at US art museums. *Modern Art Notes*, <http://blogs.artinfo.com/modernartnotes/2011/09/the-copyright-revolution-at-us-art-museums/>
- Griffiths, J.-M., & King, D.W. (2008). Interconnections: The IMLS National Study on the Use of Libraries, Museums and the Internet. <http://interconnectionsreport.org/>

- Hamma, K. (2005). Public domain art in an age of easier mechanical reproducibility. *D-Lib Magazine*, 11(11), <http://www.dlib.org/dlib/november05/hamma/11hamma.html>
- Hedstrom, M. & King, J.L. (2003). On the LAM: Library, archive, and museum collections in the creation and maintenance of knowledge communities. Paris, France: Organisation for Economic Co-operation and Development.  
<http://www.oecd.org/dataoecd/59/63/32126054.pdf>
- Jørgensen, C. (2004). Unlocking the museum: A manifesto. *Journal of the American Society for Information Science and Technology*, 55, 462-464.
- Kalfatovic, M.R., Kapsalis, E., Spiess, K., Van Camp, A. & Edson, M. (2008). Smithsonian Team Flickr: A library, archives, and museums collaboration in web 2.0 space. *Archival Science*, 8(4), 267-277.
- Martin, R.S. (1994). The development of professional education for librarians and archivists in the United States: A comparative essay. *American Archivist*, 57, 544-558.
- Martin, R.S. (2007). Intersecting missions, converging practice. *RBM: A Journal of Rare Books, Manuscripts and Cultural Heritage*, 8(1), 80-88.
- Marty, P.F. (2007). The changing nature of information work in museums. *Journal of the American Society for Information Science and Technology*, 58(1), 97-107.
- Marty, P.F. (2008). Cultural heritage information professionals (CHIPs) workshop report.  
[http://chips.ci.fsu.edu/chips\\_workshop\\_report.pdf](http://chips.ci.fsu.edu/chips_workshop_report.pdf)
- Marty, P.F. (2010). An introduction to digital convergence: Libraries, archives, and museums in the information age. *Library Quarterly*, 80(1), 1-5.
- Marty, P.F. (2012). Unintended consequences: Unlimited access, invisible work, and the future of the information profession in cultural heritage organizations. *Bulletin of the American Society for Information Science and Technology*, 38(3), 27-31.
- Marty, P.F. & Kazmer, M.M. (2011). An introduction to involving users. *Library Trends*, 59(4), 563-567.
- Myburgh, S. (2005). *The new information professional: How to thrive in the information age doing what you love*. Oxford: Chandos Publishing.
- Nicholas, D. (2012). Disintermediated, decoupled and down. *CILIP Update*, April 2012, 29-31.
- Olander, B. (2010). Shaping the information professional of the future. *Evidence Based Library and Information Practice*, 5(1), 1-5.

- Ray, J. (2009). Sharks, digital curation, and the education of information professionals. *Museum Management and Curatorship*, 24(4), 357-368.
- Rayward, B. (1995). Libraries, museums, and archives in the digital future: The blurring of institutional boundaries. In H. Berthon & R. Jamieson (Eds.), *Proceedings of the Second National Conference of the National Preservation Office* (pp.71-86). Brisbane: National Library of Australia.
- Rayward, B. (1998). Electronic information and the functional integration of libraries, museums, and archives. In E. Higgs (Ed.), *History and Electronic Artefacts* (pp. 207-226). Oxford: Clarendon Press.
- Robinson, H. (2012). Remembering things differently: museums, libraries and archives as memory institutions and the implications for convergence. *Museum Management and Curatorship*, 27(4), 413-429.
- Terras, M. (2011). The Digital Wunderkammer: Flickr as a platform for amateur cultural and heritage content. *Library Trends*, 59(4), 686-706.
- Trant, J. (2009). Emerging convergence? Thoughts on museums, archives, libraries and professional training. *Museum Management and Curatorship*, 24(4), 369-387.
- Waibel, G., & Erway, R. (2009). Think globally, act locally: library, archive, and museum collaboration. *Museum Management and Curatorship*, 24(4), 323-335.
- Zorich, D.M., Waibel, G., & Erway, R. (2008). *Beyond the silos of the LAMs: Collaboration among libraries, archives and museums*. Dublin, OH: OCLC Research.  
<http://www.oclc.org/research/publications/library/2008/2008-05.pdf>
- Zweizig, D., & Dervin, B. (1977). Public library use, users, uses: Advances in knowledge of the characteristics and needs of the adult clientele of American public libraries. *Advances in Librarianship*, 7, 231-255.

## **Biography**

Paul Marty is an associate professor in the School of Library and Information Studies at Florida State University. His research and teaching interests include museum informatics, information behavior, and user-centered design. His current research focuses on the evolution of sociotechnical systems and collaborative work practices, digital convergence and the evolving roles of information professionals, and involving users in the co-construction of distributed, digital knowledge.