# Special Issue "Emergent Digital Practices: Essays in Honour of Patricia Manson"

## Editorial—Working Together: An Ode to Joy

**Special guest editors:**

### Derek Law

United Kingdom
d.law@strath.ac.uk, orcid.org/0000-0003-2833-5825

### Seamus Ross

Universities of Toronto and Glasgow and Athens University of Economics and Business (2016 and 2017)
seamus.ross@utoronto.ca, orcid.org/0000-0001-6364-8304

The emerging technological world of the late twentieth century and its impact on academic life had begun to emerge by the mid-1980s as the novelist David Lodge perceptively noted in his 1984 novel *Small World*:

> *"…information is much more portable in the modern world than it used to be. So are people. Ergo, it's no longer necessary to hoard your information in one building, or keep your top scholars corralled in one campus. There are three things which have revolutionized academic life in the last twenty years, though very few people have woken up to the fact: jet travel, direct-dialling telephones and the Xerox machine. Scholars don't have to work in the same institution to interact, nowadays: they call each other up, or they meet at international conferences. And they don't have to grub about in library stacks for data: any book or article that sounds interesting they have Xeroxed and read it at home. Or on the plane going to the next conference. I work mostly at home or on planes these days. I seldom go into the university except to teach my courses.*

*… As long as you have access to a telephone, a Xerox machine and a conference grant fund, you're OK, you're plugged into the only university that really matters - the global campus. A young man in a hurry can see the world by conference-hopping."* (Lodge, 1984).

This developing technological world was to prove a fruitful area of research and development for the European Union. It is now over a quarter of a century since the European Commission first became involved in what was at first the simple area of library co-operation. It is difficult now to recall the world as it existed in 1990. A world without cheap air travel; a world without mobile telephones and a world without the World Wide Web. The very first EU project simply explored how libraries could work together and early reports are as much concerned with the practicalities of cultural difference as the technicalities of library practice (Law & Tzekakis, 1990). A huge programme of work has developed from those first initiatives and the Commission has overseen a transformation in information management which has had a transformational effect not just on the information industries but on the lives of citizens in every Member State. But much of this significant development has gone unnoticed and unrecorded. In a mail exchange during the development of this volume Birte Christensen-Dalsgaard notes: "*In writing this paper I have tried to check references and revisit sources of information quoted. What I discovered was that most sources of the data behind the graphs are no longer accessible and many of the references in older papers and websites have disappeared.*" And in an early version of the paper she had gone on to lament that *"[the sources for] all the figures and all the numbers behind them cannot be recovered and the references in the unpublished papers I have used instead are now dead ends."*

For most organisations the development and progress of major initiatives and programmes is recorded in their formal documentation which can be found in archives, both paper and digital. But for anyone involved in such activity it is clear that the formal record tells only a very small part of the story. The history of, say, the First World War looks very different when viewed through the prism of official histories than when viewed through the novels of Erich Maria Remarque or Jaroslav Hajek or the poems of Wilfred Owen. We know that personal relationships are what makes things happen. Matters as varied as good working partnerships, a common taste for opera, a shared love of Belgian beer—and even personal animosity—are what drives change and not official policy documents. Much of even the informal record

of digital information services lies in unpublished and increasingly inaccessible electronic documents. It is perhaps in the nature of information technology that personal testimonies have simply not been published which describe the nature and development of such technology in general and the EU programmes in particular. It was the drive of individuals such as Ariane Iljon, Bernard Smith and Pat Manson which made a difference, which created official documents and which translated them into action. It is also true that such writing rarely finds space in journals whose principal objective is to publish research papers. A Festschrift provides a welcome opportunity, not to set the record straight, but simply to provide a record. The first five papers in this volume are not canonical research papers, but they provide perspectives which enable readers to reflect on motivations, the then contemporary information landscape, and the emerging research and development environment. The first is a biography of Pat Manson, to whom this volume is dedicated, the following three are very personal recollections. They are a cross between history, testimony, reminiscence and form an acute record of the engagement of some of the key participants. They are not research papers in the strict sense but they do form a small part of the record which describes what really happened and what made a difference. As such they deserve to be given the permanence bestowed by publication.

The digital library world of 2016 is fundamentally different from the "dead tree" format[1] world of 1990. That change did not simply happen but was the work of hundreds of individuals in dozens of roles. The purpose of the opening section is then both to describe how the European Commission has shaped that change, but also to demonstrate how much the role of individuals was a key element of delineating that change.

The opening paper from Mel Collier, former Librarian at KU Leuven, and Neil McLean, most recently former Librarian at Macquarie University, provides both a synopsis of Patricia (more commonly known as Pat) Manson's roughly forty-year career in library and information science as she transitioned from a cataloguer to catalyst for innovation. Concurrently it charts the context of some of her many contributions to enabling library, digital library, digital preservation, and data curation research and development. The story that they tell of Pat's early professional development also reflects similar trajectories of many other information professionals in that early period as increasingly in the 1980s libraries responded to the possibilities of information technologies to transform services and librarians themselves required

new kinds of professional capabilities as libraries responded to these oppor-
tunities. This information revolution both created new possibilities, such as
those of integrated online catalogues, and it created new challenges, such
as the curation and preservation of digital materials. Collier and McLean
show how in her work at the European Commission, initially as an external
expert through to her final role as a Head of Unit, Pat built collaborations and
shared intellectual milieux which enabled researchers, industrial partners,
and cultural heritage institutions in the European Community to do new
things which ensured that EU citizens would benefit from a rich and varied
information landscape.

The next three papers each offer very different perspectives on research and
development in the digital library arena. The first is by John Mackenzie Owen,
Professor Emeritus of Information Science at the University of Amsterdam.
He was one of a team of three along with Lorcan Dempsey and Derek Law
who were contracted by Ariane Iljon to work with Pat Manson in drafting
the Libraries section of the 4th Framework Programme. This paper is a very
personal, impressionistic but accurate account of how that seminal document
was developed. In its reflections it provides a context for the direction taken
by European Union supported research and development initiatives in the
libraries arena under FP3 and FP4 between 1991 and 1998.

The second is from Max Dekkers, an independent consultant in information
systems and an acknowledged innovator in such areas as metadata, and the
semantic web. He delivers a perspective on the foundation for the vision of
the European Digital Library, Europeana, and such key information architec-
ture and service challenges as Linked Data and Semantic Web capabilities.
Max argues that Pat, her colleagues and the experts they brought together
were "instrumental" in reshaping the library domain in Europe.

The third is from Steve Griffin, who was a Program Director, Division of
Information, and Intelligent Systems at the National Science Foundation
(NSF) in the United States. The NSF worked closely with the EU over a num-
ber of years. At the NSF Steve led the Digital Libraries Initiatives (DLI), which
funded much innovative research in the domain. Indeed some DLI research
resulted in commercial platforms which have reshaped internationally the
information landscape and economic structures. He records that at the time
Pat's vision was at the leading edge in supporting "projects that explored and
exploited new possibilities." One of the key results of the discussions between

NSF and the EU in Steve's view was two series of working groups the first tranche of which completed its work in 1998 and the second in 2002. The crucial outcome of both was a trans-Atlantic understanding of the research and development issues facing digital libraries; the reports and agendas of these working groups became the foundation for subsequent research initiatives on both sides of the Atlantic.

The fourth paper is by David Worlock. The author is a distinguished member of the publishing profession and a powerful supporter of EU activities as the paper demonstrates. It is again a very personal reflection on the huge impact of EU programmes in general on the European Information landscape and the information marketplace. Worlock, for instance, reminds us of the contribution EU initiatives made to the growth of the "information market consultancy workforce in Europe," a significant by-product of research and development efforts. His scope is broad and offers a personal view of the nature, role, and impact of European Research Programmes on the publishing industry.

In preparing his paper, Worlock remarked to the editors that he was involved in FP 1 as CEO of a European law publishing enterprise which had sought research support in legal information. In each subsequent programme he has acted as a co-ordinator of applicants and writer of applications, or as an assessor of applications, and in each programme as a reviewer of project work in progress. This experience is common to many of the authors of papers in this volume. In Commission terminology, they are "experts."

Where Collier and McLean leave off their discussion of Pat's contribution to shaping the information environment of cultural heritage institutions, Paul Ayris, Pro-Vice-Provost for Library Services at University College London (UCL) and himself a recognised pioneer in the development of information services, takes up the discussion. Throughout Paul's analysis a key theme, which is echoed in many other contributions in this volume, is that of the core value of "collaboration across national borders for European libraries" as they grapple with emerging challenges and create innovative services. In probing the three key issues currently facing European Libraries, which are Open Science, copyright reform, and Open Access to publications, he stresses that the fundamental challenge is "pan-European agreements," and collaborative action. In his opinion one of the main contributions of Pat and her colleagues at the Commission was the way they interwove vision

and agenda setting with acting as catalysts for collaborative action; indeed, he sees the legacy value in this alongside other research and development outcomes.

A significant achievement of European Commission support for digital libraries is reflected in the coalescing of resources and pan-European effort around the creation of a European Digital Library. In her contribution Jill Cousins, Founding Executive Director of Europeana, draws attention to Pat's vision of the library landscape as encompassing a broad spectrum of cultural heritage content and their holders including "libraries, archives, museums, and audio-visual collections." Adopting this joined up thinking early on enabled the research and development initiatives supported under EU programmes under Pat's watchful eye to create information architectures and methods for analysis, representation, and use which anticipated new kinds of research approaches and more imaginative ways of enabling users to engage with the information landscape. Jill charts the programme of development which ultimately culminated in the establishment of Europeana, "the European digital library, museum, and archive." Europeana's existence and shape reflects, as Jill notes, "the results and initiatives of projects that ranged from research and development to the creation of a powerful thematic network" under programmes which Pat envisioned in collaboration with the internationally recognised expert advisors and researchers she attracted to assist her.

Funding under various Framework Programmes supported a diversity of research and development projects in FP6 and FP7, which ranged in size from several partners to very large integrated projects which each brought together well over a dozen collaborating institutions. In her contribution, Birte Christensen-Dalsgaard, currently Project Manager of the Digital Humanities Lab Denmark, examines an early stage of the programmes of activity in which Pat was active. She draws attention to some of the conflicts over competing technical protocols and the challenges of conducting research in an arena of rapid technological change, emerging standards, and embryonic network services. The primitive nature of the networks was a special challenge to early research and development of ways to promote interoperability between libraries and user engagement with multimedia objects. In 1991 many of these information initiatives were a new frontier for libraries and what Birte makes evident is that the European Commission recognised the necessity to be responsive to change and to take risks.

Alongside these R&D initiatives were a number of collaborative actions [such as ERPANET[2]—The Electronic Resource and Access Preservation NETwork—, which ran from 2001 to 2004 and was an early proponent and coalition builder in the digital preservation space (Ross, 2004)] to Networks of Excellence (NoE) which were intended to create environments for collaboration between researchers. For instance, in the domain of the Cultural Heritage her Unit oversaw EPOCH (2004–2008),[3] which defined and catalysed research into the application of ICTs to cultural heritage. Within the context of digital libraries, the single most significant NoE, and the one which has probably left the most lasting impact, is DELOS (2004–2007).[4] In their contribution, Constatino Thanos, who was the Principal Investigator on DELOS, and his colleague Vittore Casarosa, who played a key role in inspiring and co-ordinating the activities of this NoE, describe its contributions in terms of intellectual outputs, research collaborations created, agendas set, and the expansions in the numbers of highly qualified personnel with capacity and engagement in the digital library research area. Initiatives, such as DELOS, EPOCH, and ERPANET, contributed to creating skilled researchers, collaborative communities, and in turn to defining the next generation of research and development programmes. While DELOS produced numerous scholarly publications, software tools, and agenda setting reports, it's primary legacy rests, as Thanos and Casarosa make clear, in the community of researchers it fostered and in the subsequent research they went on to do. In the research projects, NoEs, and the co-ordination of pan-European action there was a cohesiveness to the activities led by Pat and her colleagues that ensured its legacy.

The comprehensive view of the information landscape which Pat and her colleagues at the Commission took ensured that the cultural heritage contents at different types of institutions and different kinds of materials held by those organisations was the subject of research initiatives. While in many instances there was a focus on projects which supported interoperability, metadata, tool development, pioneering information architectures, digitization and so forth, there was also a recognition that as society's use and actual creation of materials in digital form increased so did the requirement that these materials were preserved for future generations. In their thoughtful examination of the origins of and progress in research into digital preservation, David Anderson and Janet Delve, both Professors at the University of Brighton, record that in reviewing the documentation related to projects supported by her Unit and in interactions with colleagues who worked on them they found that:

*"the digital preservation community in Europe has grown from a few individuals articulating a set of well-founded concerns, into a vibrant international community of practice, providing industrial-strength solutions."*

In her response to a query Delve and Anderson report that Mariella Guercio, one of the early leading pioneers in the preservation of electronic records, noted that she *"appreciated"* Pat's *"capacity in supporting a strategic view"* in the domain of digital preservation. These essays which capture only a narrow view of the R&D which Pat championed are a cogent demonstration of her commitment to a comprehensive, strategic, and yet responsive view of the information landscape in cultural heritage and the ways in which technology required change.

In his contribution David Arnold,[5] who died in 2016 shortly after he retired, and while this volume was in preparation, after an illustrious career as a researcher in computer science and in particular computer graphics, investigates why the research Pat championed and he pioneered for the last fifteen years of his career at the confluence of computer science, cultural heritage, and the humanities is so significant for contemporary society. He argues among other points that *"[f]or computing research cultural heritage becomes the test-bed for computing solutions that seek to represent uncertainty, conflicting truths, and linguistically-based and culturally-based interpretation of texts, imagery and objects."* While on the one hand pioneering projects enhance access to distributed and integrated cultural heritage materials in new and meaningful ways, their inherent complexity, multivariance, and ambiguity requires, on the other hand, exceptionally sophisticated and highly nuanced computational approaches. This view was well-reflected in the agenda setting and research and development directions which Pat encouraged researchers to pursue.

In the final analysis the research and development initiatives supported by the European Commission designed to promote outcomes which contribute to social and economic development. They are intended to enhance the lives of the European Citizen. At the same time the ability of the researchers to conduct research which achieves these objectives is heavily influenced by their own access to information resources and the way they interact with these. Lorcan Dempsey, Vice-President and Chief Strategist of the Online Computer Library Center (OCLC), whose thinking and research on information infrastructures, content representation, and modes of access has been at

the forefront of strategic approaches reshaping the digital landscape for more than twenty five years explores in his contribution the ways in which the academic library is evolving as the very nature of collections, users, and mediation change. He draws attention to two emerging trends in academic library provision: "The inside-out Library" and "The facilitated collection."

The authors here focus on aspects of Pat Manson' contributions, but they do not engage with all the work in which she had a leading, influencing, or directing role. For instance, we do not cover her work in technology enhanced learning which means we overlook many of her contributions as Head of Unit for Cultural Heritage and Technology Enhanced Learning in the Information Society and Media Directorate General, and we only allude to her contributions as Head of the Inclusion, Skills & Youth Unit of the European Commission's Directorate General for Communication Networks, Content and Technology (DG CONNECT). Among the other areas to which we do not give significant attention is that of digitization. In the 1990s Pat and other EU colleagues recognised the need to unlock the content of cultural heritage institutions through digitization. Initially this resulted in the development of the Lund Principles and associated Lund Action Plan 2001–2005.[6] The Lund Principles laid out four main areas in which action was required if the content of EU institutions was to be unlocked. These included: (a) "Improving policies and programmes through cooperation and benchmarking"; (b) discovery of digitised resources; (c) Promotion of good practice; and, (d) the establishing of a content framework. The work of promoting the principles and monitoring efforts in digitization was in the initial phase overseen by The National Representatives Group (NRG), which Pat and others in her Unit had fostered. Their approach enabled the success of the NRG and the development of new ways to engage Member States in pushing forward regional pan-European efforts in digitization. One of the key challenges with these sorts of initiatives is benchmarking and measuring progress. About the time efforts under the Lund Action Plan finished the NUMERIC project (2007–2009) launched to construct *a framework for the gathering of statistical data on digital cultural heritage.*[7] This activity was subsequently carried forward by the ENUMERATE (2011–2014) Project[8] as it collected and monitored "statistical data about digitization, digital preservation and online access to cultural heritage in Europe."[9] More recently this role has been taken on by the ENUMERATE Observatory hosted by Europeana.[10] The recognition of the tremendous cultural, economic, and social benefits arising from making content in European Cultural Heritage Institutions accessible lies behind these

activities. Here it was Pat's ability to engage communities of actors which was crucial in fostering the establishment of the initial working groups, and also created the atmosphere enabled may of these initiatives to become self-sustaining.

In final appreciation, some of the following articles chart new territory, others report on achievements made through initiatives championed by Pat or supported by her Units at the Commission, and still others are reminiscences about the history of digital libraries and emergent information landscapes. They all demonstrate what Mel Collier and Neil McLean so aptly note: Pat was able to deploy her *"sharp intellect"* with her engaging personality to connect experts and researchers in ways that enabled her to collaborate with them to construct a pathway through collaboration, and research and development which contributed to the formation of a new European Information landscape. Her legacy rests not just in the outputs of the projects, but in a rich array of outcomes which have enabled the development of new generations of researchers and the provisions of new kinds of services which enhance the lives of European citizens.

Access to information is crucial to ensure citizens are informed and can contribute to promote an open and democratic society. It also enhances the life of citizens. Historically libraries play a core role in providing access to and in assisting users to understand information. The central role of the library is under threat as the information landscape evolves and new kinds of information players enter the marketplace. At the same time a range of developments have changed the way the public uses libraries and the role libraries play in society. This is not new news. In the late 1980s as the authors of the essays in this issue make evident the European Commission acted to develop programmes which would support integration and interoperability between European Libraries. Over the past twenty-five years the programmes supported by the Commission in the area of libraries and digital libraries have become more sophisticated and the goals more focused. Throughout, the Units in which Pat worked in Luxembourg ensured that information professionals and citizens were advancing the shape and ways libraries managed, presented, and preserved information. The technology landscape continues to evolve at a rapid pace as do the expectations of users. The defining and understanding of the future place and role of library continues to require new kinds of investment. While Pat, her colleagues, and the researchers and experts who supported them have left a formidable legacy, the European

Commission must continue to invest in research and development of the information landscape if citizens are to have secure, relevant, and understandable access to digital information in the future. Libraries play a key role in an equitable and prosperous information society and they are crucial in enabling us to protect our freedoms and the very nature of our open society.

## References

Law, D., & Tzekakis, M. (1990). *European cooperative ventures: Project management issues* (Library & Information Briefings, Vol. 28). London: British Library.

Lodge, D. (1984). *Small world: An academic romance*. London: Secker & Warburg.

Ross, S. (2004). ERPANET, A European platform for enabling digital preservation. *Vine Journal of Information and Knowledge Management Systems*, *34*(2), 77–83. https://doi.org/10.1108/03055720410531022.

## Notes

[1] The earliest cited usage of this phrase appears to come from Thomas Johnsson: *Mail on dead trees (*in a 23 July 1985 post to net.lang.c:). Dept. of CS, Chalmers University of Technology, Goteborg, Sweden.

[2] www.erpanet.org. FP5-IST-2001-34898.

[3] http://epoch-net.org/site/ FP6-IST-507382.

[4] http://cordis.europa.eu/project/rcn/71130_en.html FP6-IST-507618.

[5] https://www.brighton.ac.uk/about-us/news-and-events/news/2016/11-10-professor-david-arnold-1951-2016.aspx.

[6] https://cordis.europa.eu/ist/digicult/lund-principles.htm. This was subsequently replaced by the "Dynamic Action Plan for the EU co-ordination of digitisation of cultural and scientific content" www.minervaeurope.org/publications/dap/dap.pdf.

[7] http://www.enumerate.eu/.

[8] http://www.enumerate.eu/ FP7-CIP-270939.

[9] http://www.enumerate.eu/.

[10] http://pro.europeana.eu/enumerate/.