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# INTEGRATED INFORMATION

International Conference on Integrated Information

Kos, Greece      September, 29 – October, 3 2011

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**All papers have been peer-reviewed**



**Piraeus, Greece, 2011**

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# CONTENTS

<b>PREFACE: Proceedings of the International Conference on Integrated Information (IC-INFO 2011)</b>	<b>1</b>
Georgios A. Giannakopoulos, Damianos P. Sakas	
<b>Conference Details</b>	<b>3</b>
<b>Keynote Speaker</b>	<b>5</b>
<b>SYMPOSIUM ON INFORMATION AND KNOWLEDGE MANAGEMENT</b>	<b>6</b>
Prof. Christos Skourlas	
<b>Towards the Preservation and Availability of Historical Books and Manuscripts: A Case Study</b>	<b>8</b>
Eleni Galiotou	
<b>An Extensive Experimental Study on the Cluster-based Reference set Reduction for Speeding-up the k-nn Classifier</b>	<b>12</b>
Stefanos Ougiaroglou, Georgios Evangelidis and Dimitris A. Dervos	
<b>Exploiting the Search Culture Modulated by the Documentation Retrieval Applications</b>	<b>16</b>
Nikitas N. Karanikolas and Christos Skourlas	
<b>Information and Knowledge Organization: The Case of the TEI of Athens</b>	<b>22</b>
Anastasios Tsolakidis, Manolis Chalaris and Ioannis Chalaris	
<b>Providing Access to Students with Disabilities and Learning Difficulties in Higher Education through a Secure Wireless framework</b>	<b>26</b>
Catherine Marinagi and Christos Skourlas	
<b>Improving Query Efficiency in High Dimensional Point Indexes</b>	<b>30</b>
Evangelos Outsios and Georgios Evangelidis	
<b>Text Segmentation Using Named Entity Recognition and co-Reference Resolution in Greek Texts</b>	<b>34</b>
Pavlina Fragkou	
<b>KINISIS, a Graphical XQuery Language</b>	<b>42</b>
Euclid Keramopoulos, Achilleas Pliakas, Konstantinos Tsekos and Ignatios Deligiannis	
<b>Dimensionality Curse, Concentration Phenomenon and the KDB-tree</b>	<b>46</b>
Nikolaos Kouiroukidis and Georgios Evangelidi	

<b>Applying Balanced Scorecard Strategic Management in Higher Education</b>	<b>50</b>
Manolis Chalaris, Anastasios Tsolakidis and Ioannis Chalaris	
<b>A Web Portal Model for NGOs' Knowledge Management</b>	<b>54</b>
Zuhal Tanrikulu	
<b>The Digital Archives System and Application Optimized for the Tradition Knowledge Archives</b>	<b>58</b>
Jeon Hong. Chan, In Deok. Hwang, Jae Hak. Park, Hyeok. Sim, U won. Gwon and Soon Cheol. Park	
<b>A Semi-automatic Emerging Technology Trend Classifier Using SCOPUS and PATSTAT</b>	<b>62</b>
Seonho Kim, Woondong Yeo, Byong-Youl Coh, Waqas Rasheed, Jaewoo Kang	
<b>Presenting a Framework for Knowledge Management within a Web Enabled Living Lab</b>	<b>66</b>
Lizette de Jager and Albertus AK Buitendag and Potjie (JS) van der Walt	
<b>4TH SYMPOSIUM ON BUSINESS AND MANAGEMENT AND DYNAMIC SIMULATION MODELS SUPPORTING MANAGEMENT STRATEGIES</b>	<b>71</b>
Dr. Damianos Sakas	
<b>New Political Communication Practices: No Budget Events Management. The New Challenge</b>	<b>73</b>
Evangelia N. Markaki, Damianios P. Sakas and Theodore Chadjipantelis	
<b>Free Software – Open Source Software. A Powerful Tool for Developing Creativity in the Hands of the Student</b>	<b>78</b>
Nasiopoulos K. Dimitrios, Damianos P. Sakas, Konstantinos Masselos	
<b>Open Source Web Applications. How it Spread Through the Internet and their Contribution to Education.</b>	<b>82</b>
Nasiopoulos K. Dimitrios, Damianos P. Sakas, Konstantinos Masselos	
<b>Culture in Modern Times in the Frame of Luhmann's System Theory</b>	<b>85</b>
Anastasia J. Chournazidis	
<b>Managing Scientific Journals: A Cultural Viewpoint</b>	<b>87</b>
Marina C. Terzi, Damianos P. Sakas, and Ioannis Seimenis	
<b>A Conceptual Framework for Analyzing Knowledge-based Entrepreneurship</b>	<b>92</b>
Nikos S. Kanellos	

<b>SESSION ON INFORMATION HISTORY: PERSPECTIVES, METHODS AND CURRENT TOPICS</b>	<b>96</b>
Prof. Laszlo Karvalics	
<b>Emerging Research Fields in Information History</b>	<b>98</b>
Laszlo Z. Karvalics	
<b>Information Management through Elementary Data Clusters: New Observations on Pridianum-Type Roman Statistical Documents</b>	<b>102</b>
Gergő Gellérfi	
<b>Information and Secrecy on the Silk Road. Methods of Encryption of Legal Documents in Inner Asia (3th-4th century)</b>	<b>106</b>
Szabolcs Felföldi	
<b>The Role of Information and Disinformation in the Establishment of the Mongolian Empire: A Re-examination of the 13th century Mongolian History from the Viewpoint of Information History</b>	<b>110</b>
Márton Gergő Vér	
<b>Early Warning Systems and the Hospitallers in the Eastern Mediterranean</b>	<b>114</b>
Zsolt Hunyadi	
<b>Information Management as Establishment Dutch Navigational Knowledge on Japan, 1608-1641</b>	<b>118</b>
Gabor Szommer	
<b>Files Everywhere - Register and Training of Men for Military and Civil Purpose in Prussia in the early 18th century</b>	<b>123</b>
Marton Holczer	
<b>SYMPOSIUM ON INTEGRATED INFORMATION: THEORY, POLICIES, TOOLS</b>	<b>126</b>
Prof. Georgios Giannakopoulos	
<b>Approaching Information as an Integrated Field: Educating Information Professionals</b>	<b>128</b>
Georgios Giannakopoulos, Daphne Kyriaki Manesi and Stryidon Zervos	
<b>Special Libraries as Knowledge Management Centers</b>	<b>132</b>
Eva Semertzaki	
<b>Digital Libraries' Developers and their Suitability: A Case Study</b>	<b>136</b>
Maria Monopoli	

<b>A Preliminary Study for the Creation of a Greek Citation index in the Humanities and the Social Sciences (GCI – H&amp;SS)</b>	<b>140</b>
Daphne Kyriaki-Manessi and Evi Sachini	
<b>Archiving as an Information Science. Evidence from a Survey Carried out on a Sample of Greek Students</b>	<b>144</b>
Georgios Giannakopoulos and Ioannis Koumantakis	
<b>Transition Process of E-records Management and Archiving System in Universities: Ankara University</b>	<b>147</b>
S. Özlem Bayram and Fahrettin Ozdemirci	
<b>Government Information: Access and Greece's Efforts for Access</b>	<b>150</b>
Aikaterini Yiannoukakou	
<b>School Archives and their Potentials in Teaching: Aspects of Greek Reality</b>	<b>156</b>
Sonia Geladaki and Panagiota Papadimitriou	
<b>Research on School Libraries in Greece and Suggestions on its Further Development</b>	<b>160</b>
Georgios D. Bikos	
<b>Building Digital Collections for Archeological Sites: Metadata Requirements and CIDOC CRM Extension</b>	<b>164</b>
Georgios S. Gkrous and Mara Nikolaidou	
<b>Museological Claims to Autonomous Knowledge: Rethinking the Conceptual Mode of Display and its Claims to Knowledge</b>	<b>169</b>
Assimina Kaniari and Georgios Giannakopoulos	
<b>Use of Library Loan Records for Book Recommendation</b>	<b>172</b>
Keita Tsuji, Erika Kuroo, Sho Sato, Ui Ikeuchi, Atsushi Ikeuchi, Fuyuki Yoshikane and Hiroshi Itsumura	
<b>Developing a National Database on Librarianship and Information Science. The Case of E-VIVA, the Hellenic Fulltext Database</b>	<b>176</b>
Filippos Ch. Tsimpoglou, Vasiliki V. Koukounidou and Eleni K. Sakka	
<b>Integrated Access to Cultural Heritage Information Pieces in Iran Astan-Quds Razavi's Organization of Libraries, Museums and Documents Center: A Theory of Unionization Disparate Information Assets over Imam Reza's Zarih</b>	<b>181</b>
Ms. Mitra Zarei and Ms. Maliheh Farrokhnia	
<b>Attitudes of University Librarians and Information Scientists towards the Draft Code of</b>	<b>185</b>



<b>Library Ethics to Present a Model for Final Library Ethical Codes</b>	
Mahsoomeh Latifi, Fatemeh Zandian and Hasan Siamian	
<b>SESSION ON OPEN ACCESS REPOSITORIES: SELF-ARCHIVING, METADATA, CONTENT POLICIES, USAGE</b>	<b>188</b>
Dr. Alexandros Koulouris	
<b>Geographical Collections in Greek Academic Libraries: Current Situation and Perspectives</b>	<b>189</b>
Ifigenia Vardakosta and Sarantos Kapidakis	
<b>Information Seeking Behavior: Factors that Affect the Behavior of Greek Astronomers</b>	<b>194</b>
Hara Brindesi and Sarantos Kapidakis	
<b>Aggregating Metadata for Europeana: The Greek Paradigm</b>	<b>198</b>
Alexandros Koulouris, Vangelis Banos and Emmanouel Garoufallou	
<b>Integrating a Repository with Research Output and Publications: The Case of the National Technical University of Athens</b>	<b>202</b>
Dionysis Kokkinos	
<b>Implementation of Workflows as Finite State Machines in a National Doctoral Dissertations Archive</b>	<b>205</b>
Nikos Houssos, Dimitris Zavaliadis, Kostas Stamatis and Panagiotis Stathopoulos	
<b>Practices of “Local” Repositories of Legally Protected Immovable Monuments. A Global Scheme for ‘Designation – Significance’ Information</b>	<b>209</b>
Michail Agathos and Sarantos Kapidakis	
<b>Integration of Metadata in BWMETA-2.0.0 Format</b>	<b>213</b>
Katarzyna Zamlynska, Jakub Jurkiewicz and Lukasz Bolikowski	
<b>SESSION ON EVIDENCE-BASED INFORMATION IN CLINICAL PRACTICE</b>	<b>216</b>
Dr. Evangelia Lappa	
<b>Applicability of Data Mining Algorithms on Clinical Datasets</b>	<b>218</b>
Wilfred, Bonney	
<b>Changing Roles of Health Librarians with Open Access Repositories</b>	<b>221</b>
Christine Urquhar and Assimina Vlachaki	
<b>From Medical Records to Health Knowledge Management Systems: The Coding to Health Sector</b>	<b>225</b>
Evangelia C. Lappa and Georgios A. Giannakopoulos	

<b>The Survey of Skill, Attitude and Use of Computer and Internet among Faculty Members</b>	<b>229</b>
Hasan Siamian, Azita Bala Ghafari, Kobra Aligolbandi, Mohammad Vahedi and Gholam Ali Golafshani Jooybari	
<b>Trends in Scholarly Communication among Biomedical Scientists in Greece</b>	<b>232</b>
Assimina Vlachaki and Christine Urquhart	
<b>SESSION ON ELECTRONIC PUBLISHING: A DEVELOPING LANDSCAPE</b>	<b>236</b>
Dr. Dimitris Kouis	
<b>E-Journal and Open Access Journal Publishing in the Humanities: Preliminary Results from a Survey among Byzantine Studies Scholars</b>	<b>238</b>
Victoria Tsoukala and Evi Sachini	
<b>Preliminary Results on a Printed VS Electronic Text Books Assessment Through Questionnaire</b>	<b>242</b>
Dimitrios A. Kouis and Kanella Pouli	
<b>An Interpretation of Aristotelian Logic According to George Boole</b>	<b>246</b>
Markos N. Dendrinis	
<b>SESSION ON INFORMATION CONTENT PRESERVATION AS OUTCOME OF CONSERVATION OF CULTURAL HERITAGE: ETHICS, METHODOLOGY AND TOOLS</b>	<b>251</b>
Prof. George Panagiaris and Dr. Spiros Zervos	
<b>Intrinsic Data Obfuscation as the Result of Book and Paper Conservation Interventions</b>	<b>254</b>
Spiros Zervos, Alexandros Koulouris and Georgios Giannakopoulos	
<b>Mass Deacidification: Preserving More than Written Information</b>	<b>258</b>
Michael Ramin, Evelyn Eisenhauer and Markus Reist	
<b>Information Literacy of Library Users: A Case Study of Mazandaran Public Library Users, Iran</b>	<b>260</b>
Hussein Mahdizadeh and Hasan Siamian	
<b>The Narratives of Paper in The Archives of the New Independent Greek State (Mid 19th c.)</b>	<b>264</b>
Ourania Kanakari and Maria Giannikou	
<b>From Macro to Micro and from Micro to Nano: The Evolution of the Information Content Preservation of Biological Wet Specimen Collections</b>	<b>268</b>
Nikolaos Maniatis and Georgios Panagiaris	

<b>Digital images: A valuable scholar's tool or misleading material?</b>	<b>272</b>
Patricia Engel	
<b>Attitudes of University Librarians and Information Scientists Towards the Draft Code of Library Ethics to Present a Model for Final Library Ethical Codes</b>	<b>277</b>
Mahsoomeh Latifi, Fatemeh Zandianand and Hasan Siamian	
<b>Investigation of the Degradation Mechanisms of Organic Materials: From Accelerated Ageing to Chemometric Studies</b>	<b>280</b>
Ekaterini Malea, Effie Papageorgiou and Georgios Panagiaris	
<b>SESSION ON DIVERGENCE AND CONVERGENCE: INFORMATION WORK IN DIGITAL CULTURAL MEMORY INSTITUTIONS</b>	<b>285</b>
Dr. Susan Myburgh	
<b>Extending Convergence and Divergence in Cultural Memory Institutions: The Old Slave Lodge in the New South Africa</b>	<b>287</b>
Archie L Dick	
<b>The Transfer of Knowledge from Large Organizations to Small: Experiences from a Research Project on Digitization in Wales</b>	<b>289</b>
Clare Wood-Fisher, Richard Gough, Sarah Higgins, Menna Morgan, Amy Staniforth and Lucy Tedd	
<b>The Usage of Reference Management Software (Rms) in an Academic Environment : A Survey at Tallinn University</b>	<b>293</b>
Enrico Francese	
<b>Varialog : How to Locate Words in a French Renaissance Virtual Library</b>	<b>297</b>
Marie-Hélène Lay	
<b>The Urge to Merge: A Theoretical Approach</b>	<b>301</b>
Susan Myburgh	
<b>SYMPOSIUM ON ADVANCES INFORMATION FOR STRATEGIC MANAGEMENT</b>	<b>304</b>
Professor Nikolaos Konstantopoulos	
<b>Empowerment in the Tax Office of Greece</b>	<b>306</b>
Antonios E. Giokas and Nikolaos P. Antonakas	
<b>Building Absorptive Capacity Through Internal Corporate Venturing</b>	<b>310</b>
Ioannis M. Sotiriou and Alexandros I. Alexandrakis	

<b>The Monitoring Information System (M.I.S.) - An information and Management System for Projects Co-financed Under the National Strategic Reference Framework (NSRF) and the Community support framework (CSF)</b>	<b>314</b>
Catherina G. Siampou, Eleni G. Fassou and Athanassios P. Panagiotopoulos	
<b>Corruption in Tax Administration: The Entrepreneurs View Point</b>	<b>318</b>
Nikolaos P. Antonakas, Antonios E. Giokas and Nikolaos Konstantopoulos	
<b>Conflicts between the IT Manager and the Software House after the Strategic Choice of Outsourcing of the Information Processes in Maritime Companies.</b>	<b>322</b>
Anthi Z. Vaxevanou, Nikolaos Konstantopoulos, Damianos P. Sakas	
<b>Contemporary Forms of Ordering Between the Supply Department and Ship Chandler Companies in the Shipping Industry</b>	<b>325</b>
Anthi Z. Vaxevanou, Nikolaos Konstantopoulos, Damianos P. Sakas	
<b>Strategies Implemented and Sources Used for the Acquisition of Information on Foreign Markets</b>	<b>329</b>
Myropi Garri, Nikolaos Konstantopoulos and Michail G. Bekiaris	
<b>The Effect of High Performance Working Systems on Informative Technology in Enterprises after Organisation Changes such as Mergers &amp; Acquisitions</b>	<b>333</b>
Nikolaos Konstantopoulos and Yiannis Triantafyllopoulos	
<b>Personnel's Absorptive Capacity as a Guiding Concept for Effective Performance in Informative Technology</b>	<b>337</b>
Nikolaos Konstantopoulos and Yiannis Triantafyllopoulos	
<b>SESSION ON CONTEMPORARY ISSUES IN MANAGEMENT: ORGANISATIONAL BEHAVIOUR, INFORMATION TECHNOLOG, EDUCATION &amp; HOSPITAL LEADERSHIP</b>	<b>341</b>
Dr. Panagiotis Trivellas	
<b>Investigating the Importance of Sustainable Development for Hotel SMES</b>	<b>343</b>
Panagiotis Reklitis and Anestis Fotiadis	
<b>Strategic Alignment of ERP, CRM and E-business: A Value Creation</b>	<b>347</b>
Catherine C. Marinagi and Christos K. Akrivos	
<b>The Impact of Occupational Stress on Performance in Health Care</b>	<b>351</b>
Panagiotis Trivellas Panagiotis Reklitis and Charalambos Platis	

<b>The Impact of Emotional Intelligence on Job Outcomes and Turnover Intention in Health Care</b>	<b>356</b>
Panagiotis Trivellas Vassilis Gerogiannis and Sofia Svarna	
<b>SYMPOSIUM ON BUSINESS MANAGEMENT AND COMMUNICATION STRATEGIES SUPPORTING DECISION MAKING PROCESS IN TOURISM SECTOR</b>	<b>360</b>
Dr. Panagiota Dionysopoulou	
<b>The Human Factor as a Mediator to the Total Quality in the Tourism Companies. The impact of Employees' Motivation to Quality Improvements</b>	<b>362</b>
Christos K. Akrivos and Panagiotis Reklitis	
<b>Tourist Destination Marketing and Management Using Advanced ICTS Technologies</b>	<b>365</b>
Anastasia Argyropoulou, Panagiota Dionyssopoulou, Georgios Miaoulis	
<b>G.N.T.O. (Greek National Tourism Organization) Communication Strategy in Advertising Campaigns 1991-2006</b>	<b>370</b>
George Stafylakis and Panagiota Dionyssopoulou	
<b>GENERAL PAPERS</b>	<b>375</b>
<b>The role of Environmental Education within the Framework of the Environmental Policy of a Regional Municipality</b>	<b>376</b>
Vassiliki Delitheou and Dimitra Thanasia	
<b>Issues of Social Cohesion: A case study from the Greek Urban Scenery</b>	<b>380</b>
Evgenia Tousi	
<b>Merging Activity and Employee Performance: The Greek Banking System</b>	<b>384</b>
Panagiotis Liargovas and Spyridon Repousis	
<b>Sustainable Development and Corporate Social Responsibility in Higher Education: Some Evidence from Greece</b>	<b>387</b>
Anastasios Sepetis and Fotios Rizos	
<b>Exploring the Effects of Organizational Culture on Collaborative vs. Competitive Knowledge Sharing Behaviors</b>	<b>395</b>
Hanan Abdulla Mohammed Al Mehairi and Norhayati Zakaria	

# **Preface: Proceedings of the International Conference on Integrated Information (IC-ININFO 2011)**

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## **Aims and Scope of the Conference**

The International Conference on Integrated Information 2011 took place in Kos Island, Greece, between September, 29 and October, 3, 2011. IC-ININFO is an international interdisciplinary conference covering research and development in the field of information management and integration.

The conference aims at creating a forum for further discussion for an Integrated Information Field incorporating a series of issues and/or related organizations that manage information in their everyday operations. Therefore, the call for papers is addressed to scholars and/ or professionals of the fields of Library and Archives Science (including digital libraries and electronic archives), Museum and Gallery Studies, Information Science, Documentation, Information Management, Records Management, Knowledge Management, Data management and Copyright experts the latter with an emphasis on Electronic Publications. Furthermore, papers focusing on issues of Cultural Heritage Management and Conservation Management are also be welcomed along with papers regarding the Management of Nonprofit Organizations such as libraries, archives and museums.

One of the primary objectives of the IC-ININFO will be the investigation of information-based managerial change in organizations. Driven by the fast-paced advances in the Information field, this change is characterized in terms of its impact on organizations that manage information in their everyday operations.

Grouping emerging technologies in the Information field together in a close examination of practices, problems and trends, IC-ININFO and its emphases on integration and management will present the state of the art in the field. Addressed jointly to the academic and practitioner, it will provide a forum for a number of perspectives based on either theoretical analyses or empirical case studies that will foster dialogue and exchange of ideas.

## **Topics of general Interest**

Library Science, Archives Science, Museum and Gallery Studies, Information Science, Documentation, Digital Libraries, Electronic Archives, Information Management, Records / Document Management, Knowledge Management, Data Management, Copyright, Electronic Publications, Cultural Heritage Management, Conservation Management, Management of Nonprofit Organizations, History of Information, History of Collections, Health Information

## **Symposia**

The Conference offered a number of sessions under its patronage, providing a concise overview of the most current issues and hands-on experience in information-related fields.

- Symposium on Integrated information: Theory, Policies, Tools
- 4th Symposium on Business and Management and Dynamic Simulation Models supporting management strategies

- Session on Open Access Repositories: Self-archiving, Metadata, Content policies, Usage
- Session on Evidence-Based Information in Clinical Practice
- Session on Business Management and Communication Strategies supporting Decision Making Process in Tourism Sector
- Session on Electronic Publishing: A Developing Landscape
- Session on Information and Knowledge Management
- Session on Information Content Preservation as Outcome of Conservation of Cultural Heritage: Ethics, Methodology and Tools
- Session on Advances Information for Strategic Management
- Session on Information History: Perspectives, Methods and Current Topics
- Session on Divergence and Convergence: Information Work in Digital Cultural Memory Institutions
- Session on Contemporary issues in Management: Organisational Behaviour, Information Technology, Education & Hospital leadership.

The wide range of aspects that the sessions covered, highlighted future trends in the Information Science.

### **Paper Peer Review**

More than 300 papers had been submitted for consideration in IC-ININFO 2011. From them, 91 were selected for presentation, after peer review in a double blind review process. The accepted papers were presented at IC-ININFO 2011.

### **Thanks**

We would like to thank all members that participated in any way in the IC-ININFO 2011 Conference and especially:

- The famous publishing house Emerald for its communication sponsorship.
- The co-organizing Universities and Institutes for their support and development of a high-quality Conference scientific level and profile.
- The members of the Scientific Committee that honored the Conference with their presence and provided a significant contribution to the review of papers as well as for their indications for the improvement of the Conference.
- All members of the Organizing Committee for their help, support and spirit participation before, during and after the Conference.
- The Session Organizers for their willing to organize sessions of high importance and for their editorial work, contributing in the development of valued services to the Conference.
- PhDC Marina Terzi for her excellent editorial work, contributing in the production of the Conference proceedings.

## CONFERENCE DETAILS

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Dimitris Kouis, Greek Ministry of Education, Lifelong Learning and Religious Affairs  
Dionysis Kokkinos, National Technical University of Athens

## KEYNOTE SPEAKER



Professor Amanda Spink

Professor Amanda Spink has published over 340 scholarly journal articles, refereed conference papers and book chapters, and 6 books. Many of her journal articles are published in the Journal of the American Society for Information Science and Technology, Information Processing and Management, and the Journal of Documentation. She is Editor of the Emerald journal Aslib Proceedings. Amanda's research has been published at many conferences including ASIST, IEEE ITCC, CAIS, Internet Computing, ACM SIGIR, and ISIC Conferences. Her recent books include Information Behavior: An Evolutionary Instinct and Web Search: Multidisciplinary Perspectives, both published by Springer. Amanda's research focuses on theoretical and empirical studies of information behavior, including the evolutionary and developmental foundations. The National Science Foundation, the American Library Association, Andrew R. Mellon Foundation, Amazon.com, Vivisimo. Com, Infospace.com, NEC, IBM, Excite.com, AlltheWeb.com, AltaVista.com, FAST, and Lockheed Martin have sponsored her research. In 2008 Professor Spink had the second highest H-index citation score in her field from 1998 to 2008 [Norris, M. (2008)]. Ranking Fellow Scholars and their H-Index: Preliminary Survey Results. Loughborough University, Dept of Information Science Report].

# The Urge to Merge: A Theoretical Approach

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**Abstract:** *While similarities between information professions have been examined for some time, the lack of an information theory appropriate for the construction of a theoretical framework that supports this collaboration – a metacommunity of information professionals – has been lacking. This paper provides a guide for the construction of such a framework.*

**Keywords:** *Information theory, Theoretical framework, Information professions, Metacommunity, Metatheory.*

## I. INTRODUCTION

Perhaps it is because of the ongoing changes in the information environment that the information professions feel that they are facing a watershed moment. The constant development of information and communication technologies (ICTs) has encouraged to believe that they hold the greatest promise for positive social and economic change. The term ‘information’ has become associated with contemporary, progressive, exciting and profitable endeavours. Yet there is a persistent misunderstanding of what an information worker does, and even more confusion concerning the differences between various information professions.

Part of the problem is that the knowledge domain of a discipline/profession depends on identified objects of study, and established methods and procedures for examination of these objects within the discipline. In the case of the information professions, the word ‘information’ has been so exhaustively used within and outside of the professions that it is difficult to understand what the term means, thus it is hard to know where information ends and technology begins (or indeed, vice versa). Are the traditional information professions – librarians, archivists, record managers, museologists, gallery curators – part of the information zeitgeist, or can they be replaced by smartphones, iPads and the internet? Are computer scientists, database administrators, information systems managers, and game designers the new information professionals?

The idea of developing an ‘information metacommunity’ has been arisen before: Gilliland-Swetland (2000) suggests that none of the information professions is independently sufficiently well-developed to deal with the changed environment introduced by ICTs, as the paradigm of each information profession comes up short when faced with the scope of the issues emerging in the digital environment. An overarching dynamic paradigm – that adopts, adapts, develops and sheds principles and practices of the constituent

information communities as necessary – must be created.

But how can this be done with seemingly diverse disciplines/professions? Abbott (1988, p. 8) defines professions as “exclusive occupational groups applying somewhat abstract knowledge to particular cases”. He believes that a profession’s strongest claim of jurisdiction over a problem is that its knowledge system is effective in the task domain. So, while a profession can be defined by the role it plays in society; a discipline is defined by its theoretical structure. A profession, however, needs a disciplinary or theoretical base to inform its praxis: it requires a supporting discipline which exhibits epistemological commitments and develops theory which supports practice. There is, Abbott believes, constant dispute over professional territory, or jurisdiction – a phenomenon he calls ‘jurisdictional jousting’.

Perhaps it is because of increasingly complex information problems that team effort and interactions, juxtaposition and integration of previously separate individuals and groups are all becoming increasingly common. There does not appear to be one single information profession that can deal with the information problems that society now faces.

## II. METACOMMUNITY

Forming a metacommunity of information professionals is no easy or straightforward undertaking. Information work, like many other areas of human activity such as medicine, architecture and law, have both a body of knowledge structured around their subject domain, and a practice which draws on this knowledge to solve the problems that fall within the ambit of the subject. In other words, they are both ‘disciplines’ and ‘professions’.

Disciplines comprise an object of study, theories, and epistemological commitments, as disciplines are a means for, in Foucauldian terms, constructing and controlling knowledge production. A discipline therefore includes a disciplinary culture, which provides an identity, credentials and values for its practitioners. It imparts, in addition, a particular view of the object of its study. Disciplines become classified, as described, by phenomena, theory, and method. The practitioners in a discipline, or of a profession, belong to different ‘academic tribes’ which, according to Bourdieu, cohere through similarities in habitus, which comprises a set of dispositions, reflexes and forms of behaviour people acquire through acting within a social and culturally determined system of thinking, perception and evaluation, internalised by the individual, or “the mental

or cognitive structures through which people deal with the social world” (Bourdieu, 1989, p. 22).

### III. CONVERGENCE

Convergence towards a single information discipline/profession is characterised by events that run parallel on two levels. One level is leading theoreticians and experts in particular disciplines to attempt to work out the best solution for similar, general problems, despite the fact that in their work they start with different goals, concepts and terminologies. On another level there are the effects of ICTs: digitisation produces new forms of cross-domain information flows. It firstly erodes, then creates new demands for boundaries between professional categories: part of the paradox in what Castells (1996) identifies as one of the major outcomes of digital communication systems – the convergence of all information streams.

The areas of commonality between the information professions exceed those that separate. All information professionals are engaged with users, organisations, information technologies, products and services. They are all concerned with the origination, collection, organisation, storage, retrieval, interpretation, transmission, transformation and utilisation of information, as contained in documents of some kind. All information professionals share an interest in uniform metadata, information retrieval, intellectual property, and intellectual capital, ethics, digital document management and preservation, the nature of information, organisational management, database structure and use, systems analysis, user needs and behaviour, legal influences, information resources, evaluating information and professional education.

### IV. A METATHEORY FOR THE METACOMMUNITY

A brief examination of the knowledge domain (and its accompanying professions) known as Library and Information Science (LIS) displays, to some extent the difficulties experienced in attempting to recognise similarity or compatibility. Librarianship comprises a large group of academics and educators, and is split by issues concerning type of library, international perspective, practitioners versus researchers and/or educators, technical and public services, amongst others. Existing ‘information theories’ that are used in librarianship and information science, and many other subdisciplines of information work, are not entirely satisfactory for a range of reasons, not least because they are not broad enough in interpretation to satisfy all kinds of information workers.

If all parties were to share a similar theoretical framework, what is required is the design of a new, idiosyncratic, interdisciplinary speciality, which has a delimited subject matter and a formulated, defined, conceptual and theoretical basis, which in turn will suggest research questions to be pursued, techniques and methods to be employed, and the type and style of result to be aimed at. One way, therefore, of dealing

with the differences within LIS and between LIS and other information professionals is to adopt a metaview, in this instance by considering philosophy.

The branches of philosophy (or knowledge seeking) include epistemology (the nature and grounds for knowing); ontology (the nature of being and the existence of entities); methodology (systematic understandings of method); ideology (the role of power and forces in human life, institutions, and cultures); teleology (designs and purposes as explanation); and axiology (the nature and operation of values and ethics). Epistemology is the branch of philosophy that deals with the definition, nature, structure, origin and theory of knowledge: how knowledge is created. There is usually a relationship between discourse (a model of thought and interpretation) and epistemology (the consequent knowledge structure).

### V. THEORETICAL FRAMEWORK

Developing a theoretical framework which provides a kind of ‘lingua franca’ for the disciplines/professions involved in information work should be a high priority if further collaboration and integration is desired. A theoretical framework provides a basic, hypothetical, logical, conceptual structure or description of a complex entity or process, which can be used to develop theory, by classifying and organising complex information and providing a unified and coherent view. It enables the organisation and classification of concepts, entities, and phenomena, and the relationships between them, providing a unified and coherent view. It may be used as the basis for later theory development: it provides an approach to understanding the research problem.

A theoretical framework comprises a set of concepts (ontology), the relationships between the concepts or phenomena which are called propositions or principles, and these relations are captured in a taxonomy. The ontology and taxonomy are accompanied by a statement of teleology, or purpose, which is qualified by axiological beliefs or obligations. ‘Nomos’, or the present situation and customs, can be contrasted with ‘telos’, which refers to a purpose or goal.

### VI. CONCLUSIONS

There is a great deal of interest in developing more collaboration and even integration of the various information work communities in order to solve some of the more complex information problems with which contemporary society is faced. Using their specific ontological formations, the information professions may be distinguished one from another, at the same time as connections between them may be identified. If it can be established that such a metacommunity<sup>96</sup> is possible

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<sup>96</sup> A metacommunity is a group of diverse subdisciplines who share a common knowledge base (which could form the foundation of such a metadiscipline), although each may have a different emphasis, culture and possibly even a different

and feasible, then, in order to facilitate the work of all practitioners, it is necessary that identification within the same discourse community becomes necessary. This necessitates the development of a metatheory<sup>97</sup> to support the metadiscipline<sup>98</sup>/ metaprofession.

Around these activities, a metatheory is required, as the existing theories (or lack thereof) and the conceptual models used to frame information work in the various subdisciplines are not sufficient to accommodate the holistic view that is required. Collaboration requires a theoretical basis which enables the development of theory: a higher level of abstraction or, as Gioia and Pitre (1990) describe it, a “meta-paradigm theory” which could provide a general unifying perspective across the information professions.

The metatheory should be specific enough to characterise information work, without replacing the intellectual focus on information, but with a renewed focus on the context, purpose, intent, interrelationship, functionality and accountability of the ideas contained in a document, their creator and his/her creation processes. Such a metatheory would need to be cognisant of the influence of the changing social, cultural and technological context, acknowledging the common basis for the professions, as well as providing space for areas of specialisation and divisions of labour.

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terminology. A theoretical model for this transition is located in Turchin’s metasystem transition theory.

<sup>97</sup>A metatheory is defined here not as a theory which can be used to analyse other theories, but rather a theoretical framework, comprising an ontology, taxonomy, and axiology that can be used as a basis for theoretical development by the metacommunity, as well as for praxis. It is vital that there is agreement by all subdisciplines that the metatheory accommodates their particular requirements; a metatheory of this type, therefore, must be conceptually generalised, in the sense of searching for the fewest, simplest, essential principles that can unify knowledge in this domain.

<sup>98</sup> A metadiscipline is an academic discipline that works with the matter of, or joins in some way, all disciplines – whether sciences, humanities and arts. Information professionals deal with all information and communication structures and the processes of knowledge creation across these areas.