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INTEGRATED INFORMATION

International Conference on Integrated Information

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EDITORS

Georgios A. Giannakopoulos
Technological Educational Institute of Athens, Greece

Damianos P. Sakas
University of Peloponnese, Greece

All papers have been peer-reviewed



Piraeus, Greece, 2011

Editors

Georgios A. Giannakopoulos

Technological Educational Institute of Athens
Faculty of Management and Economics
Department of Library Science and Information Systems
Address: Aghiou Spyridonos Street, 12210, Egaleo
E-mail: gian@teiath.gr

Damianos P. Sakas

University of Peloponnese
Faculty of Science and Technology
Department of Computer Science and Technology
Address: End of Karaiskaki St., 22100, Tripolis, Greece
E-mail: D.Sakas@uop.gr

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

GEORGIOS A. GIANNAKOPOULOS

Department of Library Science and Information Systems, Technological Educational Institute of Athens, Aghiou Spyridonos, Egaleo, 12210, Greece

DAMIANOS P. SAKAS

Department of Computer and Technology Science, University of Peloponnese, Praxitelous 89-91, Piraeus, 18532, Greece

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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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 Narratives of Paper in the Archives of the New Independent Greek State (mid 19th c)

Ourania Kanakari † and Maria Giannikou †

† General State Archives of Greece, Central Service, 15452, Athens, Greece.
conservation (at) gak.gr

Abstract: Paper documents are carriers of a multitude of information, beyond the apparent written content. In the case of the historical Fonds of Ioannis Kapodistrias period (mid 19th c), in the General State Archives of Greece, information inherent in the paper material was retrieved, organized and interpreted along with the evidence provided by the written content and archival context of the documents examined. This synthesis aimed to promote understanding of the archival material in terms of its preservation and explore the premises of the history of paper in Greece of the time.

Keywords: Archives, Kapodistrias, Paper history, Paper preservation, watermarks.

I. INTRODUCTION

Apart from the obvious importance of historical documents on the grounds of their written content, there is a treasure of information hidden in their physical material, the value of which is often ignored.

In this sense, disintegration of information is the basic problem with digitized archives where information is reduced on the expense of the material evidence.

On the other hand, an interpretation of the material aspect, with reference to the particular historical and social context of paper, is necessary in order to plan preservation strategies and conservation programs.

The retrieval and interpretation of material information was the scope of a systematic research of the historical Fonds of the four-year period of governance of Ioannis Kapodistrias (the first governor of the new independent Greek State 1828-1832) in the General State Archives of Greece (GSA). This significant body of interrelated documents, extending over an appreciable (and important for the history of paper) period of time and involving many contributors from the Greek territory, presents a considerable variety of paper material. It can be said that the history of paper in Greece of the time and certainly a part of the history of the European paper is represented in these Fonds.

II. METHODS

The main body of the Fonds of the Kapodistrias period, in the Central Service of the GSA, consists of eleven entities that follow the structure of the Greek administrative system of that time. The archival material (1140 files in total) is arranged in chronological order.

Given the apparent variety of the Fond's material content, possibly related to the developments of paper manufacture and technology of that time in Europe,

paper characterization and identification was the core tool of this research.

The watermarks constituted a key parameter for that since a primary survey of the material indicated a certain association of the watermarks with the physical characteristics and quality of the paper supports. Out of a sample of 95 files representing the central administration and covering the entire chronological range, the most frequent watermarks were recorded. A subset of this sample was used to study the watermarks and to examine the paper characteristics. This sample belongs to the entities of the "Secretariat of the State" and "Finance Committee".

An identification data sheet was designed to document both the watermark and the paper substrate. Apart from the archival description data and as far as the watermark is concerned the following data fields are included:

- motif,
- lettering (initials, names and dates),
- size measurements,
- position in paper,
- method of production,
- drawings.

To record information concerning the paper substrate the data fields are:

- type of paper (handmade/machine made),
- type of mould (laid/wove),
- laid and chain lines characteristics and measurements,
- sheet size measurements,
- original size,
- edges,
- other physical characteristics,
- quality grade,
- manufacture (provenance, date etc),
- condition assessment,
- physicochemical investigation.

Preselected values had been provided to choose from, for the data fields, except for the text data ones.

The physical characteristics - surface texture, fibres formation and direction, pulp distribution, irregularities and threads, impurities (woodchips, specks and spots etc), flaws, paper opacity and density, weight, colour and tone and finishing - were evaluated visually and determined classification of paper into 5 quality grades: 1.fine/excellent, 2.very good, 3.good, 4.quite/fairly good, 5.poor quality.

Condition of paper was assessed primarily by visual observation. This was complemented by physicochemical investigation: pH measurements, spot-tests and SEM EDX analysis for paper sizing and fibre content and examination of paper degradation caused by ink corrosion under UV radiation.

For non watermarked papers, mainly wove ones, no characterization was carried out, as the absence of distinctive identification characteristics complicates the task. However, a small sample of papers was selected for quality assessment and physicochemical investigation as long as they carry significant evidence (e.g. wove mold pattern, intense discoloration etc).

To substantiate the indications provided by the watermarks it would be essential to illuminate the decisions behind paper supplies and the broader framework into which these supplies took place.

Searching through the written content of documents was occasionally quite revealing since evidence of paper purchases by official governmental services was found in a number of lists of supplies, orders and receipts of payments in the "Finance Committee" files. These documents include basic descriptions of paper supplies, providing indications on purpose of use, quality, format and size, thickness, provenance, quantities and cost.

In the course of the study of the watermarks in the Fonds of Kapodistrias period, a possible relationship of paper supports with the end-use of paper was identified in the material of correspondence. It was then attempted to find correlations between paper qualities and document creators (governor, central or local administration, individuals) or document types (drafts, copies, finals, incoming, outgoing, internal distribution etc).

Given the difficulty in locating types of same documents by cross-checking between creators and recipients, the method used was to generally compare documents of same type produced by the same creator. For example for the "Secretariat of the State" creator, the drafts or copies kept in its files were compared with the finals found as incoming in the files of the "Finance Committee".

Despite some interesting findings, further research is needed in depth in order for the attitudes observed towards paper selection to substantiate general trends.

Field work was combined with literature research: papermaking and watermarks bibliography, books and encyclopedias of the 19th century on paper types and trade, books on the political and socio-economic situation in Greece of that time (Banou *et al.*, 2011).

The research has been carried out by the permanent staff of the Conservation Dept. of the Central Service, GSA. This paper discusses the implications of the results presented at the Conference "New Approaches in Book and Paper Conservation-Restoration in Europe" in Horn, Austria, 9th to 11th May 2011.

III. RESULTS

Since there was no paper manufacture in Greece during the Kapodistrias period, the paper of the Fonds under discussion was imported. Greek commercial encyclopaedias of the early 19th century report that various types of paper were imported to Greece from France, Russia, Italy (Genoa and Venice and Livorno), England and Holland.

Watermarked papers in the Fonds indicate mainly an Italian origin of paper. This is easily understood for papers with watermarked names that correspond to known names of mills or paper production areas. The most frequent name is that of MASSO plus lettering i.e. "IL MASSO", "AL MASSO", "IL GRAN MASSO", "GIORMAGNANI AL MASSO" and countermarked with a *Coat of Arms* (a crowned shield with a castle, eagle, one star, three stars or lion). The manufacture of these paper has been attributed to a certain geographical area, that of Pescia in Tuscany. Other watermarked names which indicate an Italian origin of paper are the "Gio & Cos Cini La Stella", "VINCENZO GIUCCI, PONTREMOLI AL CARMINE", "V. CALVANI", "A. GAVARRONE", "GIOVANNI GHECCHI", "PM FABRIANO" and "L. ANDREOLI E FIGLI". Where the names are missing, the main watermark motifs could be attributed, according to relevant bibliography, with more or less certainty to Italian paper mills.

The most frequent motif of *Three Hats* is known as "tre cappelli" and described as Venetian. The motif depicts three English top hats with various forms and brims, with or without border and with one, two, three or no feathers. The motif is countermarked with different initials. The frequent motif of a *Lion* in several variations and countermarked with various initials has been associated with the city-emblem of Venice. The *Three Crescents* motif, very common during the first year of the Kapodistrias governance, indicates an Italian and, in particular, Venetian provenance of paper intended for the eastern markets. Often it is combined with the initials G and M, separately in the lower corners of the sheet, for which it has been suggested (Reiman *et al.*, 2002) that they represent the initials of Italian name "Gior Magnagni".

Less commonly found is the English paper, laid or wove, with or without a watermark motif but with watermarked name referring to the manufacturer or the paper mill, confirming the origin. "J WHATMAN TURKEY MILL", "SMITH & ALLNUT" and "PHIPPS & SONS" with various watermarked dates, are the most recurrent English papers in the Fonds.

These findings for paper provenance are consistent with the common references in the lists of supplies, to the "three hat", "crown", or "shell" (watermarked) paper or the descriptions like "English", "Turkish" or more often "Livorno" paper. Those latter may denote a geographical location of paper production or trade, but also they may refer to particular paper types or specific watermarks intended for certain markets (e. g. "Turkish" for *Three Crescents* watermarked paper).

The *Hats*, *Lion*, and *MASSO* watermarked papers are handmade, “antique” laid. The research showed that the paper belonging to each of these watermark categories basically shares similar physical characteristics.

Hats and *Lion* watermarked papers are graded as very good in quality. They are whitish, medium weighted, less dense in comparison to those of superior quality, with variations in the bulk of irregularities and impurities present in the paper sheet, with limited defaults in the pulp distribution. No significant differences in physical characteristics were observed in these papers of many variations in motif details and countermark initials. Actually, quality fluctuates in accordance to the countermark initials rather than the motif details. In respect to that, it is interesting that *Hats* and *Lion* papers often share the same initials, perhaps indicating a relationship between the paper manufacturers.

The majority of *MASSO* paper is laid. However same *MASSO* watermarks are often found in both laid and wove papers. The quality of this paper, though generally inferior, shows greater variation, in accordance with the lettering and motif differentiation. The *Three Crescents* watermarked paper is graded good or fairly good quality. Again variations in quality are watermark dependant.

The “modern laid” English paper is distinguished by its fine quality and served as the reference paper for the determination of the superior quality grade.

The above observations actually confirm the association between the watermark and the quality of paper. Different stocks of same watermarked paper, distinguished by slight variations in the watermark details or additional elements (e.g. twins numbering) retain, in general, their quality during the investigated Kapodistrias period. A few exceptions include differences mainly in weight and colour.

The handmade wove papers are mainly of very good or good quality. Wove quality reduces in the few cases of machine made wove paper found in late files.

Finally the research comes to define how paper quality is linked to the condition of paper.

Visual observation of the material showed that the majority of the documents are preserved in very good mechanical condition with limited problems of discoloration and iron gall ink corrosion.

A number of characteristic paper types (as determined by watermarks and quality) were pH measured. Measurements of the inferior quality papers showed that their increased acidity corresponds to their low quality. However, low pH values were recorded exceptionally in a small number of papers of superior quality too.

This discrepancy between quality and acidity is expected since this period is a time of change and experimentation in the paper manufacture. Modifications of paper composition in sizing, loading etc. materials, were possible in an effort to improve paper characteristics (strength, opacity, ink absorption,

surface texture etc.) or lower the cost. Given that lignin is not contained in the paper and spot-testing for other compounds gave no clear results, further investigation was required to identify the possible components that could explain the low pH of higher quality paper. PH measurements and spot-testing are currently implemented in a broader sample of paper and complemented with Scanning Electron Microscope-Energy Dispersive X-Ray (SEM-EDX) analysis to identify elements attributed to the paper manufacture process, impurities or additives, with a possible effect on paper acidity and condition.

It is difficult to draw firm conclusions on the rate of the adoption of the European paper manufacture developments by the producers of the Fonds of the Kapodistrias period. With the important exception of the *Three Crescents* paper that disappears suddenly, during the first year of governance of Kapodistrias, the trends observed in the files of the Fonds of the earlier historical period of the “Greek Revolution” (1822–1827) generally remained unchanged. At the same time it opens the way for the gradual prevalence of the new developments, more clear in the Fonds of the next historical period, that of King Otto.

Evidently there were many restrictions on a free choice of paper supports. The lists of orders found in the Fonds indicate a degree of awareness of differences in paper quality along with availability of various papers in the markets. The paper is described as “harti proton” (first class paper) or “harti defteron” (second class paper), as “Italian stratcho” (that implies an inferior-quality paper), “soprafitto” (very dense, thick) or “como sopra fitta”, “sopra finon” (very thin, fine), etc. Besides, Greek commercial encyclopaedias of the early 19th century report various types of paper described as “Good English writing paper” or “bluish writing papers or excellent thin paper” etc.

The limitations were at least economic, considering the bad economics of the new state and to some extent they may be related to the actual process of the import of paper from the remote trading hubs to the domestic markets. The comparison of reported costs between “fine” English and cheaper Italian paper, in lists of orders, may justify the domination of Italian paper in the Fonds. It is therefore reasonable that English papers were reserved for final or significant documents, as it is exemplified by those cases of different types of the same document found together. For the draft one, full of corrections, it was made use of an Italian paper while for the other, the final document to be dispatched, signed by the Governor, an English paper.

Another example in this direction is the constant preference for Italian paper of inferior quality (usually *MASSO* papers), by the “Secretariat of the State” for drafts or copies for the archives while for outgoing documents the paper used was most of the times Italian of good or even very good quality. The Secretariat appears to be a major consumer of paper that renews regularly its paper stocks (as it is shown by the

watermarks succession), indicating however a stability in paper choice.

Developments in paper manufacture from the first half of the 19th century are evident in the quality improvement and the change of paper types in the course of time. It was recorded the introduction of “modern” laid paper, without imperfections in the pulp distribution and sheet formation, in comparison to the “antique” one. Also the use of wove paper gradually increased mainly within the central administration. It seems, at a first stage, that wove paper was not selected because it offered a better surface for printing, since it was used steadily by the central administration for handwriting. Again it is the same central administration that used first and systematically wove paper with printed headers. Behind this attitude possibly lies the attempt to standardize and simplify the drafting of documents, to meet the increasing demands of a progressively organised state. The local administration kept using laid paper supports for the production of documents with printed headers, indicating the different grounds on which paper supplies took place.

IV. CONCLUSION

The information inherent in the material substance has admittedly its own value. For the first time the watermarks in the paper of the Kapodistrias period have been documented.

The research within the Fonds has shown the great potential of such information that if processed and associated with other available data is rendered meaningful and builds a comprehensive body of knowledge.

Paper characterization and identification enabled the categorization of paper material into broad groups that helps investigate and describe large volume of archival material in terms of provenance, quality and condition. It enabled also the reading of the written information in the lists of supplies and the correlation between paper quality and end-use of paper.

To advance this research further work is required on physicochemical investigation. In addition it is necessary that a method for characterization of unwatermarked wove paper is elaborated. The database is being developed with new entries of less common watermarks and its content distribution in digital environment is under construction. Finally, it would be of great interest to perform an interdisciplinary investigation of this material in order to incorporate paper use in a historic and archival context.

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