

INTRODUCTION

*Approaches to the Paper Revolution: The Registration and Communication of Knowledge, Value, and Information **

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First invented in China and brought to Europe by Muslim merchants along the Silk Road, the use of paper in the West took off in the Mediterranean towards the end of the Middle Ages. Overshadowed in cultural and media history in large part by the invention of print, but also by its own success and consequent ubiquity, since its introduction paper has played a fundamental role as the media infrastructure for innumerable processes that involve the registration and communication of data, knowledge and value in human communities and institutions of all sorts – from religious orders, through financial and mercantile societies, to global empires. Only recently has the digital age ushered in new media that have become serious competitors to the global rule of paper.

This special subsection of *Cromohs* proposes four essays, three of which (by William Zammit, Joëlle Weis, and Elizabeth Harding) examine particular cases of paper as a medium for the codification and exchange of knowledge, information and value, whereas the fourth (José María Pérez Fernández) provides an outline of the state of the art on the history of the so-called paper revolution while also proposing new interdisciplinary approaches illustrated with relevant case studies. All surveying the existing scholarship on the cultural history of paper, our contributions propose a series of original and innovative approaches that open paths for further interdisciplinary research. Our essays also exemplify the sort of research conducted by the Paper in Motion work group, within the People in Motion COST Action project, which looks into the role of paper as a medium for the connectivity of information in processes and practices involving objects, people, and ideas in motion across the Mediterranean, and beyond.

The aim of our essays is to examine several distinct but at the same time closely related varieties of paper formats and documentary genres, from a wide range of administrative documents, through newsletters, to auction and library catalogues. Some of them demonstrate the use of paper documents in legal and political administration across linguistic and cultural boundaries. Others illustrate the formats

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and the protocols employed in transnational financial and commercial correspondence in combination with the exchange of news across the Mediterranean, as demonstrated by the case of the Maltese archives and the documents that belonged to the sixteenth-century Spanish merchant Simón Ruiz.

While my article puts forth the case of the Hispanic monarchy to illustrate the use of paper documents for the administration of a global empire and all the fabulous challenges that this posed, William Zammit focuses on the micro-history of a political community like Malta. Its scale and scope may have been much more modest, but it still displayed the peculiar functional complexity in the administration of all its different affairs that was facilitated by paper-based documents. In other words, Malta is a micro-cosmos that yields a comprehensive catalogue of different documentary genres and their performative functions. These illustrate the ubiquitous and complex role of paper as a medium for the administration of all the different aspects involved in a political, cultural, linguistic, religious and economic community, on both the domestic front and also in terms of its manifold relations with the rest of the world. Zammit's essay also includes a particular sort of documentary genre which resonates with our current pandemic predicament: the so-called bill of health, whose main purpose was to certify the absence of any contagious disease in its carrier, and therefore facilitate his or her mobility.

As regards relations with the outside world, the Maltese letters in the Archivo Simón Ruiz (one of the most important repositories of sixteenth-century mercantile and financial documents)¹ afford scholars insights into a significant piece in the vast paper mosaic mapping the sociocultural and economic networks of the Mediterranean world and its connections with the rest of the globe. Zammit also discusses the self-interested use of newsletters in early modern Malta, which proves that early modern news and the documentary formats it employed emerged as tools at the service of economic, political and religious agendas. Their emergence is a phenomenon that went hand in hand with the creation of a growing constellation of postal systems, which were in turn part of the material and immaterial infrastructures for the transport of goods and people, and the communication and administration of news and data. To put it in short and blunt terms: the early modern global Mediterranean rested upon the logistics facilitated by this sort of sophisticated infrastructure in which the medium of paper played a central role.

While Zammit's essay illustrates how paper logistics informed the relations and hierarchies of power in all its manifold demonstrations, Joëlle Weis's article samples library catalogues as both records of knowledge and agents in the creation of a hierarchy of disciplines, in their special capacity as meta-registers comprising several layers of data that classify not just authors and their titles, but also genres and formats. In the same way, they also project power relations and embody socio-cultural values.

¹ Archivo Simón Ruiz (Medina del Campo, Valladolid, ES), <https://www.museoferias.net/archivo-simon-ruiz/>.

Her essay constitutes further proof, for example, of the close connection between libraries, their catalogues, the production of knowledge and the conduct of intellectual lives within social networks of scholars – that is, in the so-called Republic of Letters. Like paper, these ties have traditionally been taken for granted, and historians of ideas have, for the most part, failed to explore them in the depth and detail they deserve. Likewise, the involvement of intellectuals and scholars in the administration of libraries and in the elaboration of their catalogues also goes unnoticed, or simply commented on as an episode in their intellectual biographies that does not deserve as much attention as their major publications. However, this engagement in libraries, in particular in the task of organizing and classifying knowledge, frequently constituted the preconditions, or the seedbeds, as it were, for the onset and development of their intellectual careers. And so, not many of those who are familiar with Leibniz and his work as a philosopher and mathematician are aware of or lend much importance to the fact that he was also a librarian who penned and organized a sophisticated catalogue for a collection which, by the time he took charge, had grown to such a size that it had become difficult to manage and search.

Paper was part of a general revolution in communication which also provided the material conditions for a revolution in the production and distribution of science and knowledge. Libraries and library catalogues played an important role among the institutions and tools that contributed to unleashing the potential of paper as a medium in combination with the technology of print. For instance, the use of paper facilitated the massive production of maps, not just at the service of sailors, or soldiers, but also for the armchair traveller, a new sort of reader who proliferated with the publication of atlases and the growing favour that travel literature enjoyed among the general public. While maps were the result of the triangulation of data and of complex calculations involving cross-referencing different sources and sorts of information and data, catalogues created different methods for the classification of manuscript and printed paper documents, which when successfully combined – facilitated by the modular nature of paper – generated virtual maps of the knowledge materialized in a particular library. The tabular cartography of a catalogue offered different paths to a vast array of contents for a large variety of readers, each with his or her own particular interests and ends.

The sheer material overabundance of paper – light, cheap, and easy to produce and transport – did not just condition its modular nature and facilitate the production of documents of all sorts, manuscript and print, bound and unbound, all of which could then be combined and recombined in myriad ways. The amount of information that these documents could now record also posed immense challenges for the classification of knowledge, on totally unprecedented scales. Whereas medieval libraries or archives were always modest in size, new libraries and archives could grow exponentially – usually also in close step with the power of their political patrons, financiers and administrators. In some cases, this mass of bound paper flooded the shelves, and even the catalogues themselves started to proliferate in a way which posed

new challenges, to wit: how to catalogue the catalogues themselves. As my essay proves, the administration of early modern states faced similar challenges: hence the growth of their bureaucratic machines with the host of officers employed for the generation, manipulation and storage of paper-based information. Paper documents legitimized social exchanges, enfranchised individuals as members of the community, and in general defined and established their position within the complex structures of daily life and the hierarchies of power that regulated it. In a similar way, catalogues guaranteed the actual social existence and intellectual function of individual books, for a volume that was not properly registered or identified in the catalogue was virtually non-existent and could lie hidden for many, many years, buried under a mass of other books. A book is, on its own, a specific repository of knowledge which can in some cases have a simple and straightforward structure while in others it may display an extremely complex and multilayered classification of its contents, with tools to facilitate its navigation (such as indexes, abstracts, and all sorts of paratexts and paralinguistic components). A library catalogue, therefore, can flaunt the complexity and sophistication of a meta-map, as an index to knowledge that reflects the world view and the interest of its compiler and his or her times, or the agendas of her or his patrons and political masters.

Elizabeth Harding demonstrates that auction catalogues are a documentary genre which combines the features and functions of administrative documents having an economic and/or political scope, on the one hand, with those of library catalogues as registers of knowledge and its hierarchies, on the other. Auction catalogues record market value alongside the symbolic intellectual, aesthetic or political capital of the artefacts that they list. Like library catalogues, auction catalogues were also alternative methods for the classification of knowledge, genres, formats, disciplines, and categories of objects, showing how the dynamic of market forces unleashed by the emergence of a culture of consumption could contribute to shaping representations of knowledge and the world, as well as social order. They also constitute a very interesting series of case studies on the interaction of manuscript and print, and on how readers and collectors who doubled up as consumers left traces of their approach to the objects for sale and the social occasion of the auction through their annotations.

The cases addressed in my article bring to the foreground the pervasive triumph of paper as a medium that materialised knowledge and power, and thus took them into the most recondite and private corners of citizens' lives. The use of paper as an icon in literature and the visual arts as a signifier for the ubiquitous contractual-administrative culture of the early modern state provides a striking reminder of the extent to which its bureaucratic structures and the forces set in motion by the new social, political and economic conditions invaded the public and private realms. One of the earliest and most significant cases is that of the Hispanic monarchy. Established first upon the union of the crowns of Castile and Aragon, and then the imperial rule of Charles V, it came to fruition under Philip II, who supervised the emergence of an extremely complex and sophisticated administrative machine with a global reach,

founded upon a profusion of paper-based documents that circulated throughout the vast communication networks of the first global empire. Simultaneously, Philip II also envisaged an imperial library in El Escorial, whose purpose was, among others, to appropriate Muslim knowledge and science – El Escorial houses the largest collection of manuscripts in Arabic outside the Arab world. Philip II controlled all these paper-based levers of power – which included the administration of the private lives of his subjects – with only one remarkable exception: the parallel empire of paper-based currency and credit, an increasingly immaterial financial economy which was not in the hands of the monarch, but in those of his international bankers. As my essay demonstrates, the use of paper money and the development of sophisticated financial instruments registered on the new medium contributed to the dematerialization of the global economy, a process that generated a significant amount of anxiety and confusion among those who were not familiar with the semiotic arcana involved in these new methods for the registration and communication of value. Paper in motion was, in other words, part of the media infrastructure that facilitated the emergence of modern capitalism. Even now, its progress continues to stir debate and generate controversies about the semiotic and performative nature of money and credit, and the media used for their registration, be it in the now traditional paper format, or its enormously successful digital and electronic competitors, the latter of which have come to exacerbate the process of dematerialization set in motion by paper.

The essays in our special section bring to the foreground the paradox that it is only with the arrival of the digital age and new electronic formats that paper has started to attract the attention of the academic community. The digitisation of texts, and above all the imaging of digital copies of books and documents, have brought to the attention of global audiences the massive ubiquity of paper in a way that was unconceivable before the invention of these new formats. Not so long ago, many of us (in particular those of a certain age) conducted our daily affairs using paper in the workplace, in our dealings with the public administration on all its different levels, and as part of a host of other activities that relied on this omnipresent medium: medical prescriptions; financial dealings with our banks; letters to lovers, family and friends; birth, marriage and death certificates. In short, paper was everywhere and it accompanied us throughout our whole lifespans.