CHAPTER 1

The Paper Trade in Early Modern Europe: An Introduction

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1 Introduction

Early modern Europe was a paper age – an age of paper production, of paper usage, of paper consumption, and also of paper trading. When referring to the historiographical period of European “Early Modernity,” ranging from circa 1400 to 1800, it seems appropriate to name this timespan the first European paper age. By the time that paper was introduced and produced in Europe, first by Arab papermakers and via Arab trade contacts from the eleventh and twelfth centuries, the artefact ‘paper’ was already an established product known, used, and produced in China for more than 1300 years.1 Europe’s first paper age may have started with trade imports but a separate way of producing paper eventually developed, starting in the early thirteenth century on the Iberian Peninsula and in Italy.2 By the fourteenth century, paper mills became an investment option within the commercial world, and with the spread of the art of making paper through Europe, paper sheets started their journey as a commonly known economic good. In fact, paper products of European origin quickly became a transregionally moved, traded, and sold good.3 In keeping

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with the broader trade mobility of the period, these early paper flows reached places and regions both with and without their own paper mills and established the first regular markets for the purchase, usage, and consumption of paper. From its earliest days in Europe, the man-made artefact paper was a hand-formed and moved economic good that was produced as a commodity to be sold. The accompanying economic activities of producing, moving, and selling paper are echoed in historiographical interpretations as the founding moments of an early paper industry.\(^4\)

The products made, moved, and sold by this industry – mainly for writing, printing and wrapping purposes – were purchased and used in growing numbers from the fourteenth century onwards. By at least the fifteenth century, paper became a good and steadily selling product in Europe, as paper was increasingly used in more and more individual and public contexts including education, administration, correspondence, arts, transport, and of course within the burgeoning printing industries in Europe. New and quickly-expanding paper usages in archiving, administrating, communicating, and wrapping activities, are legion within the historiography of early modern Europe, and in sum they tell us a history of paper as one of the main material characteristics of the period.\(^5\) From fresh writing and printing papers, to wallpapers, wrapping papers and coloured and artist’s papers, from tobacco paper to playing cards, from greeting cards to newspapers, pamphlets, and broadsheets, from calendars


to journals: a diverse plurality of papers was experienced by both literate and non-literate people alike in early modern Europe. As a hand-made economic product, paper was one of the main artefacts of the period, a mass product that came in many formats and qualities for a variety of usages. Coming up with concrete numbers of newly manufactured papers of the period (e.g. the number of sheets produced from a mould) is inherently problematic due to missing data, including where and when paper mills were run in Europe and variables in their productivity, which was often affected by such diverse conditions as harsh winters, differing local and transregional labour conditions, the availability of resources like linen rags, tax requirements and regulations, short-term and long-term purchase trends, the producers’ finances, military conflicts, and many circumstances too numerous to name. Despite this, such calculations help in estimating the broader economic picture of production and paper sales within Europe. Given that, with ideal (but not realistic) conditions and starting as early as the fifteenth century, each mould could have produced about one million sheets annually – the average technically possible production is estimated by experts at about 800,000 to 900,000 sheets annually per mould. As working and producing practices did not change significantly between the early fourteenth and the late eighteenth centuries, this would theoretically mean: 5 sheets per minute, 300 per hour, and more than 3,600 sheets per working day, according to Frieder Schmidt. However, more careful and moderate estimates of the productivity and mass output of these paper industries have to be taken into serious consideration, because they shed light on the potential lucrativeness of trading in paper products. For example, it is estimated that for the decades around 1700 northern Dutch paper production for only writing and printing papers comprised annually about 60 million sheets. That is 120,000 reams, each consisting of about 500 sheets per year that needed to be traded, sold, and stored before someone would use it for printing or writing purposes somewhere in the Netherlands.

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estimates for eighteenth-century northern Dutch production are even higher, and range between 200 million sheets annually (Bellingradt) and 140 million sheets annually (Voorn). Comparisons to the Dutch paper industries – the market leaders of their time – are sparse. In sixteenth-century France, the average technically possible annual production of paper has, in accordance to the already mentioned approaches, been estimated between 450,000 and 900,000 reams annually; even the lower figure of 450,000 reams would still come out to be about 220 million sheets of fresh paper produced each year from French paper moulds. For eighteenth-century France, Warren J. Scoville estimates a daily production per mould of between 2–10 reams, i.e. 600–3000 reams per year, but as estimates of the exact numbers of active moulds are shaky, the total sum of French paper production may have been something more along the lines of 100 million sheets annually during the 1770s and 1780s. But again, however patchy these calculations may be at the moment, they still deliver a strong message to economic and trade historians alike: purely by numbers, the artefact paper was among the most typical economic goods of the period. In this sense, the many metaphorical terms used to refer to the scale and impact of paper usages from the early modern period onwards have an impressive, though as of yet, mainly unreflected upon, meaning. This holds as true for the term and concepts of “paper worlds,” coined within the History of Ideas and Intellectual History to describe the early modern culture of paper production, paper utilization, and of course, paper storage in libraries and in archives, as it does for the multitude of paper expressions and references used in many disciplines to address the typical pre-modern and modern cultural management of information and knowledge production from paper, on paper, and with paper like “paper knowledge” (Lisa Gitelman) resulting from “paperwork” (Ben Kafka) in a “paper world”, “papereality” (David Dery), or “paper

age” (Kevin McLaughlin), fuelled by the increasing usage of “paper machines” (Markus Krajewski).13

For this introduction and edited volume the foremost idea is to look specifically at the trade of this common economic good, ‘paper.’ Scholars working in many historical (sub-) disciplines have described Europe’s first ‘paper age’, with its numerous paper mills and the later cultural uses and effects of paper-use, but without any examination of the trade of the good. At the moment, we do not have an appropriate understanding of the trading activities which underlay the many paper usages of the period. The consideration of this dilemma resulted in the 2019 conference, “The Paper Trade in Early Modern Europe: Practices, Materials, Networks,” a conference that was devoted solely to making the first steps towards constructing a history of the paper trade in early modern Europe.14 The present volume grew out of the Erlangen conference, and this introduction resonates with ideas presented at the conference and in the following chapters, as well as with the questions that each raises. In a nutshell, this volume aims to find answers to the basic question: where are the (yet invisible) trading activities behind all of these visible paper relics that were once produced, moved, read, stored, used, and recycled all over Europe? The exchanges of the paper trade were a relevant, though as-of-yet largely overlooked, economic activity (as the next section of this introduction will explore further), which also functioned as the essential link between the manufacture of paper and the usage and consumption of paper products in the social worlds. This volume sets out to shed light upon this desiderata of economic history, as well as on a broad but still burgeoning history of communications. In doing so, this volume’s arguments make a case for an accentuated analytical perspective on historical materiality, as well as a plea for alternative focuses in media studies, communication studies, and book studies.15 Section two of this introduction (“A paperless history of the first European paper age”)
highlights the missed chances of historiography to treat paper as a trade good of historical interest. As the artefact ‘paper’ and its exchanges are relevant in early modern Europe, historiography must increase paper’s visibility in historical approaches. Our approach in this volume is to bring paper trade history to the forefront by studying its practices, materials, and networks. The third section of the introduction, “Approaching the early modern paper trade,” explains, therefore, the analytical benefits of doing so and discusses the theoretical and methodological value of the three chosen leading themes – practices, materials, and networks. The final and concluding section, “A future paper history,” sets out to explore the perspectives and benefits of a future historical research into the matter.

2 A Paperless History of the First European Paper Age

The historiography of early modern Europe is a curiously paperless history. While Europe developed and cultivated a rich culture of paper production and consumption, historians tend to be more interested in designing the influential narrative of a “printing era,” an era of marks and impressions primarily upon paper, rather than an era of paper itself. Even though it is a well-known fact within historiography that a short-term lack of paper means that no administrative records, or letters, or publications can be produced, the history of the paper trade remains one of the least studied areas of early modern history. For decades, perspectives on the trading of all paper products were lost somewhere in-between economic history, book history, communication history, and many other fields of historic expertise that encompassed paper usage and the production of paper. While paper artefacts are omnipresent and visible in our histories of early modern Europe, the paper trade is oddly invisible, or at best, well-hidden – almost as if it were a clandestine activity. As will be highlighted in detail throughout the following pages, communication history and paper history has not paid much attention to the trade of the material; economic and trade historians have lacked interest in paper and while book historians sometimes mention the connection of paper production and its selling to the world of printing, they tend to eschew the details linking these trade activities.

Traditionally, paper caught the attention of interdisciplinary studies examining the changing behaviours and practices of communications in early modern Europe. In these studies of communication history, a paper-related focus starts
with the transition from the utilization of vellum to paper for written communication and documentation, and usually relies on the growing secretarial aspects of administrative work all over Europe. Here, the usages of paper as the most important and common material to be written upon (e.g. to produce a new administration record), are interpreted as a “paper revolution,” building on the growing availability of the material paper (from new paper mills), and an unfolding and ever-increasing written culture in diplomacy, archiving, and so on. These writings on paper are described as a “paper technology” or as “paper work,” while the overall paper-based archival and informational practices of the period are characterized as the record-keeping business of so called “paper states.” It is this epoch's formation of bureaucracies and the practice of scholarly record-keeping that historians generally address as a paper-based knowledge creation, connected to the birth of (paper) archives, and to information handling tendencies, and knowledge production in general. These

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schools of ideas and perspectives are echoed especially in media studies where a media history of documents is being developed – a theory based around the cultural usages of paper-related and paper-based data documentation.

In these worlds of paper consumption and paper storage within newly created archives, paper is a resource awaiting use, one that had to be purchased somehow and somewhere. In a single sentence: the ever-used and ever-needed material, paper, is simply waiting to be written upon. Paper is, in this sense, an anticipatory resource that is then, by the act of being written upon, enriched with important and sometimes genius intellectual creativity by the writer. Of course, every secretary, every archive, and every writer had to purchase paper on a regular basis before the writing process could commence. Despite this, only a few scholars address this purchase as a necessary and regular practice connected to the act of writing. In fact, Megan Williams, who also contributes to this volume, is one of the few voices addressing in detail the importance of routine paper-purchases. Williams argues that the purchase of paper has to be included and reflected upon when dealing with the “paper practices” of European early modernity. In summation, the communication histories that tackle an increase in paper usage ought to also be extended to include


viewpoints on the purchase of paper. Mark Bland summarises this blind spot, writing, “we need to know how much paper was used for private, educational, ecclesiastical, business, official and secretarial purposes.” Moreover, Bland pleads to overcome this paper-reduced path of interpretation by highlighting the many places and usages of writing upon paper: “[A]llowance must be made for the grammar schools, the universities, the Inns of Court, the Crown and Parliament, the court, personal political papers, local political administration, literary, scientific and antiquarian accounts, the law courts and the legal system, the parish churches and the central ecclesiastical administration, the guild organizations, commercial activity and bills of exchange, estate and household records, conveyancing and legal records, surreptitious material, street literature and other forms of ephemera as well as blank commonplace books, personal correspondence, drawings and private manuscript circulation.” If we keep in mind that all such paper usages of a written culture required a steady paper supply, the purchase of paper, and a person from whom to buy the material, then we see the (yet missing) importance of administrative paper supply from trading activities. What ought to be highlighted in more detail by approaches to communication history are basic questions like, ‘where did the paper come from before storage or usage?’ and ‘who sold paper to whom, and under what conditions?’

Book history of early modern Europe – in all its national tendencies and specializations like the French histoire du livre, the Spanish historia del libro, the Dutch boekgeschiedenis, or the German Buchgeschichte – may be an interdisciplinary field of much interest and it is certainly a field in which paper is evidently present. This is unsurprising, as from no later than the fifteenth centuries, almost all technically produced artefacts of the bookish world were paper products. As the printing industries were literally running on paper, and the supply of this “vital material” (Leon Voet) was crucial for every printer and publisher in Europe. The paper focus, and the resulting neglect of a focus upon parchment from medieval book history, is a main feature of this field. It is commonly agreed and discussed that there is a vital connection between the growing paper production of the period and the development of paper-run

print industries. Because “[P]aper can be viewed as a bulk commodity linking the paper trade with the book trade,” as John Bidwell put it, book historians concerned with the “first print age” of Europe seem to have internalized that paper has a relationship to books. “What we call the printing ‘industry,’” Lucien Febvre and Henri-Jean Martin stated, “was in origin an artisan’s trade dependent on one primary material without which it would have been impossible, namely paper.”

Robert Darnton, often referred to as the progenitor of the field, addressed this economic relationship succinctly. For Darnton, viewpoints on the purchase and trade of paper help to make up key “economic conditions” of the highlighted book trade activities. Leslie Howsam paraphrased the entire interdisciplinary field succinctly, saying, “The history of the book is a way of thinking about how people have given material form to knowledge and stories,” reflecting and addressing the lacking material focus of the field. In line with this material focus, book history of early modern Europe stresses the impact and production of print, and has distinguished it from parchment and handwriting during the middle ages. However, and despite all the paper-evidence in book history, from, for example, newspapers to almanacs, and broadsheets to encyclopaedias, there is as of yet no history of the early modern “business of books” (as James Raven termed it) that properly includes the commodity ‘paper.’ Manifestly, there is yet no lemma “paper trade”, and no equivalent content on the trade of paper in other lemmas, in all of the varieties of handbooks, lexicons, and guides to book history (and media

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history in general). The paper trade is rarely even mentioned as a desiderata of book history, as it is in the Guide to Early Printed Books and Manuscripts (“Much archival work on the early paper trade remains to be done”). Too often when the materiality of texts and images is addressed, as for example recently by Adam Smyth, the focus lies strikingly on the available paper and potential printings on it.

In fact, current book history is too often limited to perspectives and topics dealing with available paper. Traditionally, book history had a bibliographical interest in the material paper, but this interest was not really concerned with where paper came from, who moved it, or who sold it. Another point one finds often is the concern about the price of (available) paper when it comes to planning a print run. Generally, book historians follow the assumption that “paper was watched carefully,” as C.E. Harline put it, because, according to Andrew Pettegree, “paper had to be purchased;” paper was a required resource. In fact, paper was the single most expensive material needed for a print production, and the most costly item for nearly every publication. Paper “used up vast amounts of capital with remorseless regularity,” as Leon Voet summarised the typical paper demand of an early modern print shop. “It is well known,” Andrew Pettegree assists, “that in the sixteenth century the price of


paper represented the main part of cost of a book." For the fifteenth and sixteenth centuries, estimates between 50–70 percent of the total costs of a print production are used and repeated in historical book studies. For the seventeenth century, 40–50 percent are calculated for books of about 1500 pages each in quarto; and for the eighteenth century this 50 percent estimate is still the magic number. Only for newspapers and magazines of the eighteenth century, which used cheap papers, estimates of about 20 percent are used. This costly paper then, somehow, appears in the workflows of early modern printshops without further notice or reference. This line of interpretation, in which paper is waiting somewhere until the printing process starts, derives clearly from the early modern manuals on the art of printing. Here, invisible hands have taken care of the purchase of the resource paper, and the real hands start to work in the printshop when this paper was ready to be used. At best, book historians mention the necessity of purchasing “with care” when paper was needed. Exemplary: “It can be assumed therefore in principle ... that a printer planned his paper purchases with care and exhausted one

stock almost in its entirety before acquiring another.\textsuperscript{47} To be fair, this careful attention to purchasing paper for a printshop has been mentioned regularly in studies around the topic of running a print shop in the period.\textsuperscript{48} However, in general it seems that in these stories paper is waiting somewhere to be purchased, and has the tendency to appear miraculously when it is needed or ordered. Only recently, the book historian Angela Nuovo reminded the field of this long-time missing perspective, “the history of book production is also the history of paper production ... and we have little sense of the dynamics and organization of the paper industry, with all its operators and intermediaries who were the printers’ usual interlocutors.”\textsuperscript{49}

Within paper history however, the paper industry, as well as its dynamics and organizations, is usually described by solely focusing on the complexities of the material’s manufacture. In highlighting the complexities of this craft, and especially concerning the changing techniques of production and production management, knowledge of an impressive cosmos of paper mills, watermarks,

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    \item \textsuperscript{47} Harris, \textit{Paper and Watermarks as Bibliographical Evidence}, p. 136.
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and paper sizes was created, and continues to be created within a lively scholarly community. But these research activities have become academically and scholarly isolated over the last decades; the result is a technology-focused auxiliary sub-discipline that, at best, mentions that paper is of course sold after production. John Bidwell summarized this trend splendidly, “These histories of papermaking are no more concerned with the marketing and sale of paper than those that take the old-fashioned, arts-and-crafts approach. Paper was meant to be sold, they concede, yet once it becomes a commodity it seems as if it had suddenly left their realm of technology and entered a foreign territory best explored by others”. Pleas from inside the community that call for a more intensive focus on aspects of trade, like the ones Gerhard Piccard published, are ignored and largely unimitated within current research by paper historians. However isolated and single-focused, the economic process of making paper in an age of hand-made paper became clearer and its typical features and dynamics took shape: paper mills needed skilled specialists to work efficiently (or at all), and manufacturing paper was a business that required substantial capital. Between the fourteenth and nineteenth century,
the resources, technology, financial investment, and skills needed to produce paper did not change significantly in Europe. Moreover, for about 600 years, the product 'paper' was an artefact that was produced by using flax rags (alternatively, hemp rags), water and gelatine. Making paper was a process of transforming plant material into a sheet of paper. Because the textile industry also transformed plant materials into new products, it was thus always nearby and connected to paper manufacture, as has been stressed by paper historians very recently.

While an economic history of early modern Europe is slowly developing perspectives on typical economic commodities and activities, the commodity paper has not yet been positioned or addressed within the early modern 'world of commerce' by trade historians, commercial historians, nor by economic historians. This finding has been emphasized prominently by John Bidwell. All of Bidwell’s sobering findings have been summed up and echoed in the only two research reviews about the state of paper (trade) history in pre-modern Europe, written by Franz Irsigler and Sandra Zawrel. Navigating this lack of


See on this the perspective from the paper historian Bidwell, ‘The Study of Paper as Evidence’.


58 See on this the perspective from the paper historian Bidwell, ‘The Study of Paper as Evidence’.
information while tracing the ephemera of traded paper, Zawrel stresses that a paper trade perspective ought to take shape in the future, and Franz Irsigler concludes by labelling his intended research review of the medieval and early modern paper trade as a documentation of research gaps.59 Assuming that the trading activities this edited volume is devoted to were amongst the essential business enterprises of early modern European culture, this blank space overlooked by economic historians is remarkable. Even the recent plea that the good ‘paper’ is a useful part of a to be written transnational commercial history of pre-modern Europe derives from a group of paper historians tracking the trade flows of European paper to Africa.60

3 Approaching the Early Modern Paper Trade

As we know little to nothing about how the paper trade transpired, we are deeply in need of insights into actual trade practices. Such a focus will be helpful in making the many historical paper flows more visible. Highlighting these practices opens the door to addressing the social and business activities of the trade’s participants. Describing these practices (which include, for example, the transporting, collecting, storing, and of course the selling of papers and its material resources) is an actor- and praxis-orientated approach to human involvement in trade activities that make up in sum the ‘paper trade’. On a very basic level, approaching the practices of the paper trade requires consideration of all human involvement in the processes of the paper industry. Such an encompassing of the sociality of an economic field of activity has a rich and fruitful tradition in many fields, as can be seen for example in the history of the book trade of early modern Europe.61 Within the history of the book, this social orientation towards all involved ‘book people,’ or gens du livre, helped establish a broader understanding and investigation of the many shadowy but interconnected economic practices from the production levels


to the worlds of book consumption. For paper history, a focus on practices may lead to an identifying step that makes visible specialist actors of the paper trade: ‘paper people,’ so to say. By describing the business practices of a paper trader or paper merchant in detail, a spotlight on predominantly unknown usages of the paper trade is established, and an overall dynamic interpretation of unknown economic activities is to be expected. For example, the common practice of many paper-sellers and paper-traders of purchasing and reselling waste paper as fresh “new” paper products, is a business tactic that has recently been brought back to light because the practices of these actors were investigated. Unknown organizational patterns of the paper trade also became visible: namely dealings with raw materials for future paper manufacture, and complex buyer and seller relationships with paper manufacturer and print workshop owners alike. It was the close examination of the practices of the involved actors that guided the interrelationship patterns from the paper mills to the various places of storing and reselling. Moreover, and more generally, a focus on practices allows us to ask, how did the paper trade function in detail? In this sense, a newly accentuated paper trade history that aims for a better understanding of the range of activities of the involved actors, establishes – via its focus on practices – theoretical interconnections to recent trends in economic history and commercial history alike. Here, actor-led perspectives on the practices of a commercial activity are seen as a key feature to access and make sense of economic networking activities of the pre-modern period.

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Another benefit for paper trade history is a nuanced material focus. Just as recent research on early modern objects and their material contexts has shown, a focus on the man-made artefact ‘paper’ as a trading good with its own stories to tell might be enriching. While integrating material culture into various historiographical working methods, debates about the potential of this renewed interest started recently and are still thriving amongst historians. In this sense, paper history can contribute and engage with other historiographical trends. On the other side, continuing to ignore paper as one of the “taken-for-granted materialities” of history, as John Nerone has put it, is not and would not be helpful. To begin with, materiality as a theme opens a renewed discussion of the plurality of paper products and raw materials traded on the early modern markets for paper. It seems worth remembering that dozens to potentially hundreds of different kinds of paper products and relevant raw materials required in paper manufacture made up the material flows of the paper trade. Firstly, there were newly produced writing and printing papers in a plethora of different qualities and formats in Europe, usually as white paper but there were also smaller amounts of blue and coloured papers. These ‘fresh’ and ‘unused’

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paper sheets came with the most confusing range of names referring to watermarks, usages, format, quality, and place of manufacture. “This multiplicity of names”, as E. J. Labarre put it, reminds paper historians of the varieties of sheets (for writing and printing papers alone) present in the trade. As it was very important for contemporary purchasers of writing and printing papers to have an overview of the many paper varieties on offer in the trade, the historian’s eye should pay attention when analysing a paper purchase of the past.

Among these newly produced sheets were also many special drawing papers popular among artists, as well as all sorts and variations of ‘brown’, ‘blue’ and ‘grey’ wrapping and packaging papers, including cardboard and cartons, that were constantly present and traded by paper merchants, and bought from apothecaries by almost all other businesses that needed wrapping for their goods. Also available on these paper markets were used and old papers from unsold, rejected, or slow-selling books, as well as from ephemeral publications like small pamphlets and cheap newspapers that were systematically sold to customers like fishmongers and grocers, and of course to paper makers in need of this material resource for the manufacture of new paper.

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all sorts of waste papers from printshops (i.e. leftovers, unused and damaged papers from the printing processes) and often even linen rags (as the main textile raw material for the manufacture of new papers). Because all these paper materials were typical goods of the paper trade business, the historical view ought to highlight these relevant material flows carefully and in detail.

Secondly, the theme ‘materials’ also highlights the physical story of the commodity paper as a good to be sold in specific trade units. As most paper amounts in early modern Europe were calculated in trade units around quantity, i.e. describing the number of sheets, until the early nineteenth century (when a general change to units of weight began), the current paper trade history needs to shed light more carefully on these (changing) units. Evidence suggests that writing and printing paper was sold as single-sheets, in units of 5 sheets (called in Spanish, for example, cuadernillo, in French, cahier d’un livre, and in German, Fünferbogen), in units of 24/25 sheets (called for example in Dutch a boek, in German ein Buch, in English “a quire,” and in French une main), but the most common trade unit in early modern Europe was the ream – of about 500 sheets of printing paper or 480 sheets of writing paper each. Originally, this ream (in German and Dutch Riemen, in French reyme, in Spanish resma, in Italian risma) trade unit derived from the Arab word rizmah, meaning nothing more specifically than a bundle or bale, in which the first papers that reached Europe were packed when Arab businessmen traded in the twelfth and


76  See “Ream” in: Émile J. Labarre, Dictionary and encyclopaedia of paper and paper-making with equivalents of the technical terms in French, German, Dutch, Italian, Spanish and Swedish, 2nd ed. (Amsterdam: Swets & Zeitlinger, 1952), p. 222. Depending on the quality of the paper, the sheets in a ream differed between 472, 480, 504 or 516, sometimes referred to as vaguely a “short ream” or “long ream.” In Europe, only the German equivalent of a “Ream” is not a unit for about 500 sheets. The German „Riemen“ comprises around 5000 sheets of paper; a German „Ries“ of 500 sheets is the international “ream.”
thirteenth century along the Mediterranean coast. Remembering this original inexact category for trading paper is important, because calculating the early modern paper trade is and was a tricky business that requires special material attention. Generally, some of the trade units used remain mysterious, as we do not yet have sufficient and comparable details on them. For example, among the variety of units used within the German paper trade in Hamburg – Partie, Pack(en), Ballen, Kiste, Riem(en), Bund, Stuck, Ries, Kiste, Faß, Koffer, Parcel, Bündel, Buch and Sack – we only have detailed information on Riem (about 5000 sheets), Ries (about 500 sheets) and Buch (24 or 25 sheets). Among the difficulties in calculating the trade units are the changing relations of same trade units even used at the same places but at different times. Locally used terms and scales could differ radically within a few years or decades, therefore paper trade history needs to engage in more detail with what exactly was traded within a focused moment of time. For example, and to further explore the exemplary case of Germany, in Hamburg the proportion between a Ballen (bale) and a Riem (ream) changed in Hamburg from 1:1 to 1:5 between 1782 and 1808 – a difference of 20,000 sheets. During the sixteenth and seventeenth centuries, the definition of a German Ballen within the Holy Roman Empire could easily differ by 1,000 sheets depending on the place of trade. The German Ballen was sometimes an equivalent of the German Riemen (about 5000 sheets), while a Spanish Balón was a unit comprising around 10,000–12,000 sheets of paper, and a Dutch Ballen had 10,000 sheets, packed into 21 Dutch Riemen (the same as a Dutch Fass, barrel, or Korb, basket, also of about 10,000 sheets, by the way). In short, trade unit calculations need special material attention to the following factors: the quality and format of the paper traded; the amount of paper sheets that were traded; the time of trade transaction; the involved actors (buyer and seller) and their local usances of defining a trade unit. As early modern paper merchants were quite accurate when it came to understanding and defining the trade units used within Europe, and we have evidence of this detailed “trade unit knowledge” and its inherent material sensitivity this accuracy should be mirrored within paper trade history.

77 Bellingradt, ‘Trading paper’.  
79 The calculation ratio for ‘Fass’ and ‘Korb’ into Dutch Ream (of about 500 sheets) are taken from the STRO database (URL: http://www.soundtoll.nl/index.php/en/over-het-project/str-online). On this database see the chapter by Jan-Willem Veluwenkamp in this volume.  
80 An insider view of the perceived plurality of paper products on the early modern markets for papers is, for example, the Memorie der Papier-Negotie naer Experientie, a. 1781 (“Account of the paper trade according to experience, a.178t”) (Gemeentearchief Zaanstad,
Thirdly, the costs and prices of the materials of the paper trade require more attention. Building on the increased attentiveness to the plurality of paper products and raw materials traded on the early modern markets for paper, a closer focus on valuations becomes important. As soon as we know the exact paper material traded and its prices, investigations into the yet unknown market dynamics of preparation costs, availability, and selection by purchasers are opened up. Making sense of the costs of manufacture, the purchasing conditions, and the needs and criteria of paper buyers depends upon more research into the prices of paper products and the costs of these transactions between the mills and the traders, as well as the end-sellers and the final purchasers. The problem of unearthing a set of comparable prices for the various paper products make it nearly impossible to calculate paper costs seriously (or at all) at present.\(^{81}\) As a reminder: the prices that we sometimes find in paper trade related sources are the payments that one party (the buyer) gives to another (the seller) in return for a specific unit of a paper good. Mentioning these prices, however, is only the first step to making sense of the costs and prices of the paper trade. A price only acquires meaning when you compare it to other goods traded at the same moment (other paper products and other products in general), therefore collecting prices leads to a relational access to the paper trade economy and its markets. In this light, the existing data on costs and prices of paper, and the interpretation of these factors, are still too sketchy. Even the tentative calculations already made for expenditures on paper by an early-modern printing workshop range between 20 and 70 percent of the total production costs.\(^{82}\) But, while it is true that paper was one of the most expensive elements of book production during the hand-press era, we should also consider the paper not used in a printing office. The prices of paper sheets purchased in small amounts – for example in single sheets of writing paper – indicate a very different story of paper purchases. As Heather Wolfe and others have pointed out, purchasing single sheets and small amounts of paper was not that expensive and quite normal, as a deeper look into the accounts[?] of

\(^{PA\ 451,\ inv.\ 2496,\ unfol.}\) written by a paper trader. This account is also mentioned in the chapter by Andreas Weber.


\(^{82}\) See the details presented in section II of this introduction and for a range of references and estimates on costs and prices from the sixteenth to the eighteenth centuries see: Bellingradt, Vernetzte Papiermärkte, pp. 82–84.
book shops demonstrates. As we know that booksellers systematically dealt with all sorts of paper products, fresh and used, damaged and functioning, printed and non-printed upon, this material story of selling – and of prices for certain objects – should be featured more frequently and prominently in book history. Also, knowing the prices and costs of manufacture, as well as of storage and transport, are helpful when it comes to deciphering the decisions about materials made by publishers for particular paper publications. With more data on prices and costs, the purchasing strategies and determinations of early modern European publishing industries could be better understood. In fact, book historical interpretations of how and when a ‘physical book’ takes material and intellectual shape, as has been put forward, for example, in the so-called ‘archaeology of the book’, ought to be connected to the contemporary availability and the prices of paper offered on the market.

A material focus also explores the physical conditions of the trade and transport of paper goods in early modern Europe. Paper did not just ‘travel’ on its own to different destinations, but was moved by people from the mills to warehouses, apothecaries, print shops, and many more places of buying and (re-)selling. A nuanced paper history should investigate the materiality of these movements, as well as where they break down, in more detail. In fact, the material details of the shipments of paper commodities by boat and wagon are largely unknown, as are the locations and material conditions of the places of storage of paper products. We are in need of studying the physical ins-and-outs of paper in order to write a material story of the commodity and its trade within Europe. Who transported, sold, and bought paper? Who stored it under which material conditions? Where? And, who re-sold it again?


This claim has been made by Carlo Federici (‘Sul Fallimento dell’Archeologia del Libro’, *Gazette du Livre Médieval*, 45 (2004), pp. 50–55) but is not reflected in the main approaches on this topic, as can be seen in Martin Boghardt, *Archäologie des gedruckten Buches*, ed. Paul Needham (Wiesbaden: Harrassowitz, 2008); Ulrike Gleixner etc. (eds.), *Biographien des Buches* (Göttingen: Wallstein, 2018).
While a focus on ‘practices’ already lays visible the human interconnections of the trade, the theme of networks expands further on this topic. A focus on networks sets out to highlight systems and patterns of activities making visible a larger paper economy. This larger paper economy is accessed via a broad social perspective on those actors dealing with the plurality of paper products on the paper markets. As every actor had its own network of buying and selling paper, a network perspective opens a systematic interpretation of paper flows within a paper economy. In doing so, the markets of paper manufacture can be linked through economic networks of paper traders to the purchases of the print industries and civic administrations, and to the collecting, storing and selling of linen rags and waste paper back to paper manufactures. It is time to explore the close relationships between paper mills, paper warehouses, printing offices, and administration offices in more detail and interpret these connections as networked economies. Also, financing networks should be systematically highlighted and integrated into our understanding of the functioning of a paper economy as they played important roles at the manufacturing stage and often in the supply of ‘reams on contract’ to certain paper traders.85

For example, it was a common commercial pattern for Amsterdam merchants to be financially involved (as a partner or co-owner in a “Compagnieschap voor de handel in papier”) in Dutch and other European paper mills.86 In order to define and investigate common characteristics of those networks involved in the paper trade, the concept of sociality (of the paper trade) may be helpful.87

In recent historiography, the term sociality is used to refer to the collective

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87 On the tradition and usefulness of positioning early modern actors and their networking practices within larger economic activities: Blondé et al., *Buyers & Sellers*.
actions of a specific group located within time and space. As research on the sociality of early modern economic networks has demonstrated, the fundamental question regarding paper trade networks should be, ‘who did what exactly (and why) for how long and with whom?’ Building on ideas presented in market sociology and economic sociology, the markets for the trade of paper may be understood and interpreted as social figurations allowing an interactionist analysis of economic cooperation and activities. These models have been introduced influentially within early modern economic history in recent years, and connecting with this trend may be another benefit for a history of the paper trade.

4 A Future Paper History

A future paper history benefits from a deeper engagement with the three themes of this edited volume, the practices, materials, and networks of the paper trade. As research on the sociality of early modern economic networks has demonstrated, the fundamental question regarding paper trade networks should be, ‘who did what exactly (and why) for how long and with whom?’ Building on ideas presented in market sociology and economic sociology, the markets for the trade of paper may be understood and interpreted as social figurations allowing an interactionist analysis of economic cooperation and activities. These models have been introduced influentially within early modern economic history in recent years, and connecting with this trend may be another benefit for a history of the paper trade.

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paper trade. Integrating the trade of the good ‘paper’ into the many paper usages of the period is necessary and looming within European research activities on the matter. The highlighting of practices and network activities offers the historical interpretation a bird’s-eye view on the patterns of paper flows within a larger paper economy. When the analysis follows the material flows that are necessary for manufacturing paper, it sheds light on the moments and rhythms of movement of the new paper products from place to place, pays attention to the storing and (re-)selling of these paper materials, notes the usages of paper for communication and wrapping purposes, and then also highlights the material flows back to the paper manufacturers. Thus, the bigger picture of a circular paper economy emerges. A meta-level observation builds fundamentally on the ways that material may escort the views of historical storytelling, as was mainly developed and used in histories of mobilities, circulation and transport logistics. Such a focus on the material flows of the paper trade can be found in so-called “it narratives” of the eighteenth century and in recent object biographies thriving in many interdisciplinary fields.

By describing the historical contexts of the paper trade as a connected economic sector in which necessary materials of the paper markets were manufactured, traded, stored, sold, bought, used, re-used and finally recycled by a numerous range of cooperating actors and networks, a larger textile, rags, and


paper economy becomes visible. This circular ‘paper economy’ is much more than just a supplemental aspect of an alleged “age of print” of early modern Europe, as it has been influentially characterized in the last decades by media and book historians alike. In fact, a broad to-be-designed paper history of early modern Europe is an alternative master narrative for the epoch in question. Future investigations into this first paper age of Europe, lasting from the early fourteenth to the early nineteenth centuries, calls for even more academic alliances than economic history, book history, market sociology, and communication history are offering at the moment. As every early modern paper manufacturer only thrived when textile industries were nearby, a future paper history should interact more closely with environmental history and the history of textile industries.94 The trade of rags – the rag flows among the material flows of the paper markets – remains one of the biggest desiderata of the field. When it comes to the material resources of the paper industry, linen rags are as understudied as a traded good, as indeed waste papers of all sorts are. In developing recycling perspectives on the reusages of papers and textiles alike, a future paper history will help establish a more concise view on yet unseen economic practices and alliances.95 The impact of a future paper history that pays attention to the materiality of the traded goods and the trade itself, that focuses more closely on the involved actors and their practices and network activities, might be seen in a couple of years in many interdisciplinary fields concerned with early modern Europe. With this volume, paper history takes a first step into this future.


95 See for example the chapter by Anna Reynolds in this volume. Also: Fennetaux, Junqua, Vasset (eds), *The Afterlife of Used Things*. 