Signa Vides

RESEARCHING AND RECORDING PRINTERS' DEVICES

CERL PAPERS \cdot XIII

Signa vides Researching and recording printers' devices

Papers presented on 17-18 March 2015, at the CERL Workshop hosted by the National Library of Austria, Vienna

EDITED BY

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Even since they first appeared, printers' devices have attracted considerable interest among readers and booksellers. In the early printing world they functioned not only as a proof of origin, but also as a form of publicity, a riddle game, a self-statement, and the printer's locale. This tradition still lives on but particularly flourished in the early modern period, which saw thousands of printers' devices used across Europe. Humanists such as Erasmus of Rotterdam played an important part in the development of printers' devices, while eminent artists and printmakers like Hans Holbein the Younger carried out the designs. Some book buyers not only observed the marks in their books, but cut them out and created extensive collections of printers' devices.

For a long time printers' devices attracted little scholarly attention. Towards the end of the 20th century, research into everyday life ("Alltagsgeschichte") and media studies meant that printers' devices, along with emblems and leaflets, became the subject of scholarly attention. However, this rise in interest did not result in comprehensive cataloguing and indexing projects. Their variety in regards to media, geography and time period creates a huge challenge for comprehensively cataloguing and indexing them. However, in the last few years a number of projects have attempted to index and describe these devices. These projects were initiated at a national level in various European countries, and mostly in the context of national bibliographies. Unfortunately, up to now, all these projects have worked independently of each other, according to very heterogeneous criteria and within current political borders. There is a high risk that we may miss an opportunity of a Europe-wide survey of printers' devices, which could provide information on the extent of knowledge, advertising strategies, and economic relations in the early modern period. As this danger becomes more apparent, we have started, in numerous discussions, to find networking and collaborative opportunities. From our point of view it is absolutely essential to include the perspective of librarians and information scientists as well as the perspective of humanities researchers.

We would like to thank Antje Theise (Hamburg), Petra Feuerstein-Herz (Wolfenbüttel) and Maria Federbusch (Berlin) for their valuable support since the initial stages of our discussions. During our preliminary talks we developed the idea of the Vienna workshop, where speakers would be invited from different European countries, and whose contributions are published here. The aims of this publication are to document the current state of research, foster exchange between various national projects, and to start discussion on future perspectives and criteria for recording printers' devices. We are especially grateful to the head of the manuscript department at Österreichische Nationalbibliothek, Andreas Fingernagel (Wien), and his collaborators, in particular the deputy head, Monika Kiegler-Griensteidl, and Ute Schmidthaler, for their generosity in hosting the workshop there and for their support with regard to organization and management. Thanks are due to Christina Schmitz (Berlin) for her valuable support during the preparation for the workshop.

We are very glad that CERL took the project under their wings and agreed to make the presentations accessible under the CERL Papers title. We are especially grateful to Marian Lefferts and Kimberley Hart, who supported us with enthusiasm, and to Kathleen Walker-Meikle for her advice with language issues. We wish to thank the participants of the workshop for their many contributions, and the contributors themselves, who very kindly gave us permission to publish their presentations. We are grateful to Isa Gundlach (Tübingen), assisted by Luise Menz, Sarah Blessing, Aurelia Gumz, David Pitz, Pia-Beate Schmidt, Viktoria Schuster and Sonja Völker for enduring the hardships of editing.

This publication is designed to continue the discussion initiated during the workshop, and to open it to a wider audience. This exchange on the respective national levels is the first step towards coordinated cataloguing and indexing, and future European research projects, which can draw on this rich resource. If you are interested in researching and recording printers' devices and perhaps wish to participate in the process, please do not hesitate to contact us!

Michaela Scheibe Anja Wolkenhauer

Anja Wolkenhauer

Printers' marks in scholarly research – overview and questions

The following talk will, I hope, do two things: it will give a first overview of the conference topic and will introduce some questions. In roughly the first half of these remarks, I will therefore briefly sketch the research history of printers' marks. This will provide a platform which, once in place, will prove useful for discerning both the directions and the *lacunae* of the research record to date. In the second part of my talk, I will address the current situation and identify some promising avenues for future research.

Research history

Friedrich Roth-Scholtz: The beginnings

The research history of printers' marks begins with the *Thesaurus*, dating from 1730 and printed by the bookseller Friedrich Roth-Scholtz. To be sure, some indications do point to significantly earlier collections of printers' marks;¹ but the *Thesaurus* is the first monograph we have. The first part of this work illustrates some 500 printers' marks; the second part was never completed, probably due to the early death of Roth-Scholtz, but it was to contain indexes and interpretations.² Thus the fragment that we have concentrates on the icon and on the signet owner, with the affixment locations, variants and genealogies playing no role at all. Also, the specific *motti* and frames of the marks will not be dealt with in this book. The book's typographic lay-out, ranging together several printers' marks in full-page copperplates, is an allusion to the emblem encyclopedias very much in vogue in the years around 1700, like de la Feuille or Bosch.³ The catalogue is supplemented by historical studies by the Nuremberg theologian Johann Konrad Spörl (Spoerlius) and the Alciato commentator Claude Mignault.

Spoerlius emphasizes that there are no extant laws of signet production;

wherever one looks, rank growth prevails. However, a perusal of the material, such as it is, does permit an iconographic systematics to be derived: thus there were initials, coats of arms and, yes, emblems which may, in turn, be divided into those that are 'speaking', as it were, i.e. the name of the printer is depicted, and those that are 'enigmatic', i.e. convey a message couched in riddles. Nor did enigmatic printers' marks spring from the printer's imagination alone; rather, they would always have required input from a humanist adviser, who would have been likewise responsible for the explanatory *motti*. The high artistic value of such a signet, coupled with scant knowledge of its epoch, in which not even the printers were privy to the meaning of their signets, would render a historical excursion necessary, such as was offered by Spoerlius' work.⁴ For both authors, the art of emblems forms the most important reference point. The systematic probing by these thinkers, their willingness to seek a theoretical perspective, offers a glimpse of a new research field in the making.

Let me sum up the ground covered so far: The early 18th century coincides with the first comprehensive attempts to catalogue printers' marks in a systematic way. Such cataloguing is based on the single mark and its iconography. Any relevance that printers' marks may have had as trademarks is passed over. The goal the work has set itself is the chronological determination of printers' marks in terms of their respective owners, particularly well captured here are the needs of private collectors of graphics. In addition, the authors formulate a general historical aspiration, namely that of preserving forgotten corpora of knowledge. The enigmatic character of many signets is adduced as proof that they represent a complex art form akin to that of emblems and hence, *qua genre*, in need of explanation. Moreover, the frequently stressed freedom printers enjoyed in signet selection seems chiefly to serve the purpose of elevating printer and printers' marks alike to the rank of independent artworks. Historization leading to the goal of upgrading printers' marks to become an autonomous art form can be seen here as a key criterion of early modern theory formation.

Paul Heitz: book illustration

Let us now run through all of 150 years to the next important research contribution. Paul Heitz, scion of an old Strasburg printer dynasty, published a series of volumes on European printers' marks in the years after 1890.⁵ The timeframe of representation tended to differ, as did too the accuracy of the descriptions - both were clearly dependent on who Heitz's cooperation partner happened to be. All the catalogues treat printers' marks like book illustrations and take great interest in the draughtsmen and in print variants, while more or less ignoring the various functions played by the printer's mark in the book and, indeed, completely ignoring the motti. For a comparable direction where printers' marks are mostly seen as a graphic artform along with ex libris and emblems, we need only turn to, say, the repertories of Silvestre (for France), Kristeller (for Italy) and MacKerrow (for Great Britain), all published around 1900.⁶ Fixation on graphic representation, while, at the same time, neglecting biographic, chronological and textual data, is characteristic of the catalogues of the time. The chief reason why this is so can hardly be stressed enough: as we have seen already with Roth-Scholtz, behind these catalogues there are no books or libraries, but only single-sheet collections. Futhermore, most single sheets were not yet title pages, but final pages or even page fragments - no wonder, then, that so many items of data are missing from the catalogues.

Heitz's catalogue, originally intended to run to rather more than its seven published volumes, is based largely on the single leaf signet collection of Frankfurt banker Heinrich Eduard Stiebel. It contained some 10,000 printers' marks by the time it was auctioned off in Leipzig in 1910.⁷ Similarly grand in scope are the Berlepsch collection, which is kept in Wolfenbüttel today and run to some 6000 signets; the Grisebach collection in Berlin with nearly 3000 printers' marks, and the now lost Weissenbach collection (formerly kept in Leipzig) with upward of 50,000 prints, including an unknown number of printers' marks.⁸

Considering the fact that just about every old library, when asked, admits to

having somewhere in its collection a paste album or a pile of folders full of single sheets, then we start to glimpse the contours of a grand migration which, in the years between 1600 and 1900, saw many printers' marks being removed from books and deposited in private collections.⁹ What had happened is this: in their new context, printers' marks had come to be seen as graphics in their own right, that is, they were no longer as book-specific trademarks belonging to a particular printer. So, isolated and reduced in form, they shaped contemporaneous perception, and it is thus that we encounter them in the catalogues of the day. An analysis of current inventory catalogues and historical auction catalogues in respect of scope, structure and location of signet collections - let it be here noted – is therefore a key research *desiderandum*.

From Meiner to Grimm

The next big step in research history occurred in the mid-20th century, closely connected to the then growing study of emblems. However, while 'emblematics' grew into a major scholarly preoccupation in a number of disciplines, the study of signets was itself neglected. This may reflect the fact that most scholars classified them (wrongly) as a kind of later or applied emblematics.

The principal works from those years, as far as signet history is concerned, are those by Meiner, Volkmann, and Grimm in Germany;¹⁰ Vindel in Spain¹¹ and Vaccaro in Italy.¹² All of them have been significantly influenced by emblem research. These authors foreground the paradoxical nature and interpretive ambiguity of printers' marks, with the iconography continuing to receive the lion's share of attention. *Motti* and, for that matter, early theory formation, sign migration and variation, are largely ignored in all of these works, even if exceptions may be found here and there. Volkmann, to be sure, made the conceptual proximity to Renaissance hieroglyphics central to his own thinking; Meiner focused more on genre history, while Grimm, for his part, was at pains to construe signets as ego-documents. All the above works take their point of

departure from an individual case, from isolated evidence; they are silent about the longue durée or the larger European cultural scene. In the entirety of research, bearing on the early modern era, they fell off the radar; with the exception of book scholarship, they were accorded scant reception.

Today & tomorrow: what questions should be asked?

In the last twenty years, the pace of technical development has speeded up enormously, starting, as it seems, from many of the most important research libraries of Europe. The 500 or 1000 signets that might have been catalogued in former times are dwarfed by what is possible today. Now, at last, we could easily capture factors like duration and circumstances of utilization, the variability of signets and their migrations, using bibliographic data from numerous books. But what, we may ask, is the purpose of collecting such data at all?

The first answer that comes to mind is that it is to reverse, at least on paper, the destructions wrought by the collection frenzy that gripped the early modern era. And it is also to give a name, to assign a place, to the many homeless single sheets we have. Another aim would be to capture, and render accessible to scholarship, those largely uncatalogued single-sheet collections that continue to languish in all the great libraries. I would like to make a request: if you have in your library any collections of the kind I have just described, do let me know!

But there are plenty more scholarly questions that could do with a wider airing. This has also been remarked by Paolo Veneziani in Italy and by Hans Brandhorst in the Netherlands, already some twenty years ago.¹³ I would myself like to briefly sketch three questions that have preoccupied me ever since working on printers' marks.

Printers' marks are a form of branding, hence as old as commerce itself. But why are they so complicated? What are they actually trying to communicate? Looking at the signets and their progressive alteration - can one learn anything useful about the self-perception of, say, a printer or a publisher elite *in statu nascendi*, i.e. about the values and interests being represented there? (Self-fashioning)

Where did the knowledge come from that was needed to design highly complex printers' marks? Assuming, as one can, that a printer's mark only seeks to show what a potential customer could see for himself – what insights, then, can be gained about the spread of specific knowledge inventories in the early modern era? (Cartography of Knowledge)

Michael Giesecke has reminded us of the switch, associated with the advent of the printed word, from a culture of hearing to one based on seeing, but he has not chosen to include printers' marks in his analysis. And yet, no other bimedial object in the early modern era achieved similar penetration or, for that matter, proved so mutable. Do the constant alterations in printers' marks perhaps tell us something about other alterations going on in habitual ways of seeing, not to say the expectations reposed in the new media? Could it be that, with their advent, we have a new, ultra-sensitive yardstick for the analysis of modes of social perception? (Historical Media Research)

Historical media research, cartography of knowledge, self-fashioning: these are the keywords which may help us to connect our research to other projects concerning the cultural history of Europe. This horizon of inquiry does not bear solely on, nor is it only shaped by, the history of the printed book. What is at stake is, among others, the history of knowledge and the media in early modern times, a time of transition involving altered modes of perception and evolving mindsets. The data required to answer such questions falls into four categories. (Let me hasten to add that I am not quite happy with the categories – so please take it as a tentative):

- Chronological and geographical data (When and where is the signet used? Where do we find signet sales and imitations, etc.?)
- 2. Book-specific data (In which prints and where within a particular print is

the signet traceable? Is an explanation of the signet given in the paratext?)

- 3. Media-specific data (Iconography of the pictorial segment of the mark, location and use of *motti* and other text segments, utilization beyond the book context as, say, a shop sign)
- 4. Biographical data (What does the printer's educational background and his book publications look like? Who does the printer cooperate with?)

So far there has been something of a deficit in differentiated, worked-through material, such as would enable studies of this kind and attract careful scrutiny on a broader scale. This is true for all European countries, though the degree to which it is true varies. For iconography, Iconclass is a quite interesting reference tool, and Arkyves shows us the manifold ways in which it can be used.¹⁴ The prints of the early modern era are stored in printed catalogues within the borders of the nation states; printers' marks are, however, for the most part, only sketchily represented there. For other areas, there exists, to the best of my knowledge, nothing that merits the name of a systematic approach to cataloguing - this holds true for say the utilized motti; also for the twin aspects of materiality and mediality; and it holds true especially to the migrations within Europe, between countries and between art genres. Nor has the lack of a shared terminology been remedied, though this would prove useful for demarcating our present objects of inquiry from other image-text genres in the early modern era – not to mention a cross-border bibliography or a research history that would help us grasp, better than we have done to date, the specific development pace operating in this research area. But the biggest methodological challenge is concealed by the long shadows of emblem research, the dominance of which led to the shared properties of emblem and signet being lumped together as emblems, while what was specific to signets was swept under the rug. Here there is plenty of catchingup to do.

The case of Cratander

I would like to illustrate some possible directions for future inquiry, using the case of the printers' marks of the Basel printer Andreas Cratander.¹⁵ I have analyzed, according to the above criteria for signet use, not a single sign, but a sample of around a quarter of his total output, about 50 titles, which reflect all phases of his career. I'll show four examples.



fig. 1¹⁶

fig. 2¹⁷

The following long-term tendencies can be identified:

- Constancy of visual motif
- Growing technical ability (compare no. 2, say, with. no. 4!)
- But especially: reduction and concentration of the signet components. Noteworthy is that text and image develop in different ways.



fig. 3¹⁸

fig. 4¹⁹

The signet features an allegory of the *occasio*, the moment of earthly happiness. On the last verso of the book we see the female figure of Opportunity standing alone on a globe, representing the earth. In one hand she holds a shearing knife – her neck is shorn of all its hair – while her forelock, which is eminently seizable, falls over her face. Outside the frame, albeit typographically referenced to the icon four short texts are inserted, all of them being differently typeset (Antiqua, Greek minuscule, Hebrew letters). This textual inventory is nothing if not variable; at least ten different *motti* were used in the course of Cratander's career. It is not clear, nowhere is it explicitly commented on, why the printer switched between *motti* with such alacrity; many printers of the time proceeded no differently. My own explanation for this habit is that it is a strategy dictated by commercial-considerations, namely to resort to *variatio* at points where alterations pose no great technical difficulty, with the aim of embellishing the signet in a spirit of *variatio delectat* – without, however, altering the basic structure.

As far as the motti are concerned, the result is clear: Cratander begins in 1519

with a comprehensive and differentiated textual segment. First, he changes the motti frequently and the languages also.²⁰ First the Hebrew disappears, then the Greek, and last to go is the Latin. After 1523, his use of motti becomes sporadic only, whereas the pictura is further refined and adapted. In 1539, Cratander's printing career came to an end; the last printing block was sold and, in the years following 1540, found use with the Antwerp printer Johannes Crinitus,²¹ – again without text. The era of books with bimedial printers' marks is over - at least from the standpoint of these two protagonists – already by the mid-16th century. If, at this point in time, I had at my disposal a Europe-wide database, I would study motif migrations, in which case the finely discriminating data-capture techniques of Iconclass would, no doubt, prove indispensable. Perhaps then I would see how Cratander's happy moment (occasio) was emulated throughout Europe, to the point where it becomes one of the defining symbols in the age of the printed book. Or maybe I would juxtapose the language of book advertising with that of books, in the hope that this would show parameters elucidating just how wide the gap was, in the early modern era, between aspiration and reality in terms of the language faculty. This would require the *motti* to be captured in terms of their respective languages.

Now, please, don't take these observations on Cratander as describing a *Sonderweg*. Perhaps it can't be pinned down to the exact year, but a general tendency is discernible that many internationally oriented, humanistically educated (and in no sense text-hostile) printers in the early 16^{th} century are vehemently engaged in combining image and text in a manner that assigns to both media a similarly high degree of importance – or, putting it another way: they presume a balanced media relationship, possibly oriented to the hieroglyphics of the time. But what we do find is that, after a number of years, all printers successively distance themselves from the text, with the image left to hold centre-stage – albeit often in a simplified form. I understand this as processing an experiential value against an horizon of expectation that would

otherwise defy understanding: for it is a fact that printers' marks, ever since the days of the first printers, have ranked as important personal signs. To be sure, they function as recognizable corporate identification marks ("logos", as we might call them now). But that's not all: they are also used to make statements about the printer's technical and other related skills, but even more about the printer's own intellectual horizons. The more specific the statements, the greater the imperative to ensure that texts are integrated into the signet. Clearly, it was the case, after several years of use, that the printers' needs had moved on, or it might be that they now saw the public in a different light. For the *motti* grew fewer in number, the classical languages disappeared, even the complexity of images underwent a process of simplification. For purposes of identification as well as conveying key ascriptions, the signets clearly sufficed in a reduced and text-free form.

If this observation holds water (as I think it does), then it would seem to follow that everything the texts stood for in terms of bimedial unity – technical precision, evidence of education, multilingualism – became successively less important in the self-depiction of the printer. True, the images remained eye-catching; even, their technical quality improved at times; but the fact of the matter is that the degree of iconographic differentiation sank. As the 16th century advanced, printers' marks became in general tendency simpler, they contain less information, and they became progressively more oriented to the visual image, even as they demanded from the beholder ever less time and education. Actually, I don't look further. I can't tell you about the development trends of the 17th century (but, maybe, Melinda Simon can).

Cataloguing historical mass-produced goods: thematic and structural aspects The sheer fact of the databases accumulated in recent years is an invitation to search for models for the analysis of mass-produced goods and long-term developments in an historical timeframe. I would like to direct your attention, if only in passing, to some other fields of study that operate with a similarly multifaceted body of historical material, incorporating texts and images alike, and I would be grateful to learn of any further fields you may know of.

The study of emblems: Emblems are a closely neighbouring field as we saw before and, as such, merit our attention. Systematically seen, though, something is missing: they are not assigned to a specific user; meaning, in this context, that we can expect no help from them with respect to personal data. Emblem catalogues are, ever since Henkel/Schöne, primarily focused on iconography, but the texts are printed along with it (and often even translated).²² Hans Brandhorst and Arkyves follow their traces in a broader context: he will tell us more about it. Emblem catalogues treat textual components in a more differentiated light than is often the case with printer's mark catalogues. But a new and till now unsolved problem becomes visible here, too: it is that of correctly transcribing the older printed texts and translating the ancient languages. We should take this as a strong marker for the necessity of scientific cooperation.

Similarly, in the case of friendship albums (*alba amicorum*) what we find is a heterogeneous body of information – heterogeneous in the sense that persons, texts, visual images and materials all rub shoulders. As far as this has been evaluated, it seems to be the personal data that has been prioritized. In a research project undertaken by the Anna Amalia Bibliothek at Weimar, geographic and person-related data culled from some 1500 albums (involving a total of 30,000 personal data) have already been captured.²³ This database, now grown to impressive dimensions, is opening up new vistas on biographical and social-historical issues. But concentrating on personal data comes with a downside; it gives only little information about the images and text entries (especially the later), as a result of which the usefulness of the database is significantly reduced. Educational history and media history are not specifically addressed. Even if the project logic does point in this direction, concentrating on only a single data ensemble is very shortsighted with regard to future research questions.

My last example is taken from numismatics - it is perhaps especially due to its material and historical distance that it will prove helpful, as I believe it will. Coins are even older and are much more widely disseminated than printers' marks. Historical numismatics is focused on the regional and chronological origins of coins, on the material aspects of their production, and on the identification of their textual and pictorial components. But the focus of recent research has, as seemed to me, shifted away from the isolated type and towards giving more and more consideration to variants, use and 'find constellations', i.e. the context of recovery. This permits issues of contemporaneous adaption to the political context to be addressed, along with the regional spread of individual coins, along with the migration of visual motifs. Databases like "Online Coins of the Roman Empire",²⁴ whose search engines currently access something in the order of 25,000 entries, weigh in additionally with material charts and maps covering vast geographic areas. But if I had to single out a particular merit, it would be the attention which the discipline brings to the various guises, in which the object turns up: in a catalogue, in a historical collection, or as an *in situ* find. The database has brought the UK, Germany and the USA into a joint project. The website leaves one in no doubt about the great – and continuing – need for coordination, despite the fact that the participating institutions can look back on more than two centuries of intensive cataloguing activity on numismatics.

Conclusion

Printers' marks are an important source material for the study of the early modern era. They constitute a singular body of evidence for a whole raft of studies into long-term changes, whether manifested on the level of media history, book history, social and mental history. Given their enormous scope, their wide-spread dissemination and their high variability, they lend themselves outstandingly well to all manner of far-ranging inquiry. But if printers' marks are to deliver on their potential usefulness, what will be needed is this: coordinated cataloguing on a truly European scale. While, to be sure, in some segments of this cataloguing enterprise we already have parameters open to discuss (e.g. Iconclass), in other segments (such as signet migration, *motti*, languages) our work has barely begun and the history gives us not much help at all for many of our features. The key point to grasp here is that, apart from systematically targeting the regions – and here we should begin with printers' marks *in situ* – new categories will need to be developed if we are to capture the countless single-sheet collections. But if we begin now with their development, we will have a chance to tap into what emblem and numismatic catalogues can now deliver– and perhaps we will even be able to go one step further (than these).

Notes

- ¹ The reflex of a 16th century collection probably is to be found in the emblem book of Gabriel Rollenhagen, *Nucleus emblematum* (Arnheim: Jan Jansz 1611-13). See Anja Wolkenhauer, Zu schwer für Apoll. Die Antike in humanistischen Druckerzeichen des 16. Jahrhunderts (Wiesbaden: Harrassowitz, 2002, Wolfenbütteler Schriften zur Geschichte des Buchwesens 35), pp. 65-73. Spoerlius knows about a collection at Nuremberg, owned by Michael Rötenbeck, which probably was lost around 1740; until now, I haven't been able to find later traces of this collection.
- ² Friedrich Roth-Scholtz (1687-1736), Thesaurus symbolorum ac emblematum (Altdorf/Nürnberg: Tauber, printed between 1729 and 1733), marked as pars prima on the last page. The Herzog-August-Bibliothek Wolfenbüttel offers a digital edition, taken from the copy of the Berlepsch collection: http://diglib. hab.de/drucke/bd-2f-84-1s/start.htm. The only thing published later is an Index insignium bibliopolarum et typographorum quondam collectorum

Printers' marks in scholarly research

3

editorumque (Altdorf: Lorenz Schüpfel, 1765), see http://diglib.hab.de/drucke/ bd-2f-84-2s/start.htm.

Daniel de la Feuille, Emblematische Gemüths-Vergnügung bey Betrachtung der curieusten und ergözlichsten Sinnbildern mit ihren zuständigen Deutsch-Lateinisch- Französ- und Italianischen Beyschrifften, (Augsburg: Lorentz Kroninger und Gottlieb Goebels Sel. Erben., 1693) [= John Landwehr, German emblem books 1531-1888. A bibliography (Utrecht: Dekker & Gumbert [et al.], 1972), p. 113: 456-59: at least five reprints until 1705]. Digital edition (copy of 1697): http://diglib.hab.de/drucke/xb-2867/start.htm; Jacob Bosch, *Symbolographia sive de arte symbolica sermones septem* (Augsburg: Johann Kaspar Bencard, 1701).

Johann Spoerlius (1701-1773) notes that many people of his time didn't ⁴ understand the hidden meaning of the marks anymore and that printers' marks were increasingly replaced by the trademarks of the booksellers. Spoerlius (in Roth-Scholtz, p. 26): *Si ad sequiorem et nostram aetatem iam accedere propius animus esset, id praecipue observandum foret, insignia typographorum magis magisque a libris abesse iussa esse, in quorum locum soli iam bibliopolae notis suis signare eosdem solent* [...] *Ausim spondere, nam experientiam testem habeo, plurimos iam bibliopolas nescire ipsos, quid sibi velint notae bibliopolii sui nimium cumulatae.*

Paul Heitz (1857-1943) published between 1892 and 1908 seven volumes about printers' marks from different towns. After the dead of Eduard Stiebel and Karl Theodor Völcker, a famous antiquarian bookseller from Frankfurt, and after the sale of their collections in 1910/1911 he lost his main source. The catalogue of Stiebel is available (see note 7), but I wasn't able to find traces of Völcker's. Heitz' volume about Frankfurt would have been impossible without the collections; Basel and Alsace however show efforts to give single references, maybe because they had less access to the collections (or more librarian zeal).

5

6

7

8

Louis-Catherine Silvestre (1792-1862), Marques typographiques: Ou recueil des monogrammes, chiffres, enseignes, emblèmes, devises, rèbus et fleurons des libraires et imprimeurs en France, depuis 1470, jusqu'à la fin du 16. siècle (Paris: Renou et Maulde, 1853, ²1867), gives 1,300 marks and some information about the printer, but nothing about the motti. Silvestre died before finishing the manuscript. Paul Kristeller (1863-1931), Die italienischen Buchdruckerund Verlegerzeichen bis 1525 (Straßburg: Heitz, 1893, reprinted 1969). Ronald Brunless McKerrow (1872-1940), Printers' and Publishers' Devices in England and Scotland 1485-1640 (London: Bibliographical Society, Illustrated monographs 16, 1913, reprinted 1949), gives nearly 500 marks.

The collection of Heinrich Eduard Stiebel (1842-1909) was sold by the Leipzig Bookseller Börner in November 1910. Between other graphic art, it contained more than 10.000 printers' marks in topographic order. The catalogue is accessible at http://digi.ub.uni-heidelberg.de/diglit/boerner1910_11_21/0239. Heitz used several other collections, too, which are lost today.

Weissenbach (1847-1912) started work the Hanns von to at "Buchgewerbemuseum Leipzig" in 1909. As he died in 1912, he left nearly 50,000 items of graphic art. The collection was destroyed during the Second World War. I wasn't able to understand if the 7500 signets, mentioned as part of the Leipzig collection before the war, derived from the Weissenbach-collection, too. There are many smaller collections, which usually are not cataloged and often were spread to the four winds. To be named as a positive sign is the catalog of the collection of Walther von Zur Westen, now in the university library of Würzburg, which offers around 400 items (http://vb.uni-wuerzburg.de/ub/pictothek/ sammlungen.html). The collection of Josef Wünsch (1843-1916), sold 1927 in Leipzig and today unknown, had some printers' marks together with exlibris (see http://digi.ub.uni-heidelberg.de/diglit/boerner1927_05_04/0009).

9

Delving into my own experience, let me point to the bright metal engraving used by Johann Schott in 1503, showing a citation of Seneca: *necessitas forte*

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Printers' marks in scholarly research

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ferre ...: only very few of his books still contain the signet in question, lone survivors of systematic pillaging. See Wolkenhauer, p. 186-190.

Annemarie Meiner (1895–1985), book historian, publisher and daughter of the Leipzig publisher Arthur Meiner published: Das deutsche Signet. Ein Beitrag zur Kulturgeschichte, (Leipzig: Hiersemann, 1922). Ludwig Volkmann (1870-1947), publisher and co-owner of "Breitkopf und Härtel" in Leipzig, was president of the "Deutsche Buchgewerbeverein" and organized the international exhibition of books and graphics in Leipzig 1914. He published: Bilderschriften der Renaissance. Hieroglyphik and Emblematik in ihren Beziehungen und Fortwirkungen (Leipzig: Hiersemann, 1923). Heinrich Grimm, Deutsche Buchdruckersignete des XVI. Jahrhunderts. Geschichte, Sinngehalt und Gestaltung kleiner Kulturdokumente (Wiesbaden: Pressler, 1965). Some corrections can be found in Philobiblon, 11, 2 (1967), pp. 135-52.

Francisco Vindel (1894-1960), book historian and collector, published: ¹¹ Escudos y marcas de impresores y libreros en España durante los siglos XV a XIX (1485-1850). Prólogo de D. Vicente Castañeda Alcover (Barcelona: Editorial Orbis, 1942; Supplement Madrid: Editorial Orbis, 1950).

Emerenziana Vaccaro, Le marche dei tipografi ed editori italiani del secolo 16. ¹² nella Biblioteca Angelica di Roma (Florence: Leo S. Olschki, 1983, Biblioteca di bibliográfia italiana 98).

Paolo Veneziani, 'Le marche tipografiche. Problemi di metodológia', Bollettino
 ¹³ d'informazioni dell' Associazione Italiana Biblioteche, 1 (1987), 49-55. Hans
 Brandhorst/Peter van Huisstede, Dutch Printers' Devices 15th-17th Century. A
 Catatalogue (print edition and database, Nieuwkoop: De Graaf Publishers, 1999).

See www.arkyves.org.

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For detailed information about Cratander and his mark see Wolkenhauer, p. 216-225. The best access to digitized editions can be found at www.e-rara.ch (more than 100 hits for "Cratander").

First mark of Cratander, used since April 1519, made by Hans Franck 16

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(Lützelburger). Image taken from Aulus Gellius, *Noctes Atticae*, Basel: Cratander Sept. 1519, last page; VD16 G 1036. UB Basel, CF III 5:1. Further details about the mark in Wolkenhauer, pp. 216ff. Marks nr. 3 and 4 can be found in Müller: Holbein, Druckgraphik, No. 126, 128 (taken from single leaf collections). All following images have been taken from: http://www.e-rara.ch, here: http:// dx.doi.org/10.3931/e-rara-2067. Terms of use: http://www.e-rara.ch/wiki/ termsOfUse?

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Mark used in 1522, attributed to Franz Gerster. Image taken from *Politianus et alii, Epistolarum libri*, Basel: Cratander Febr. 1522, last page; VD16 P 3989. UB Basel, DE IX 12; http://dx.doi.org/10.3931/e-rara-1422.

¹⁸ Mark used since 1523, made by Jacob Faber, probably using a draft by Holbein. Image taken from Johannes Chrysostomus, *Homiliae*, Basel: Cratander Sept. 1523, last page; VD16 J 434. UB Basel FJ V 17; http://dx.doi.org/10.3931/erara-401.

¹⁹ Mark used since 1525, made by Jacob Faber, probably using a draft by Holbein. Image taken from Oecolampadius, *In Iesaiam*, Basel: Cratander, March 1525, VD16 B 3757, first page (but also on the last page, without initials). UB Basel FNP VIII 45:1; http://dx.doi.org/10.3931/e-rara-1772.

²⁰ See Wolkenhauer, pp. 219-220.

²¹ Vandeweghe/ Beeck, p. 110 (for 1540) without further information.
Vandeweghe, Frank / Op De Beeck, Bart, Marques typographiques employées aux XVe et XVIe siècles dans les limites géographiques de la Belgique actuelle.
= Drukkersmerken uit de 15e en de 16e eeuw binnen de grenzen van het huidige België (Nieuwkoop: De Graaf Publisher, 1993, Publikaties Nationaal Centrum voor de Archéologie en de Geschiedenis van het Boek 5).

22

Henkel, Arthur/Schöne, Albrecht, Emblemata. Handbuch zur Sinnbildkunst des XVI. und XVII. Jahrhunderts (Stuttgart: Metzler, 1978). There are some very helpful databases now; let me just mention the famous "emblematica online" project of Mara Wade, which combines the rich libraries of the University of Illinois at Urbana-Champaign and the HAB Wolfenbüttel: http://emblematica. grainger.illinois.edu/. Recently, it offers a list of mottoes, too: http://dbs.hab. de/emblem/unioncat/.

http://opac.ub.uni-weimar.de/DB=2.4/LNG=DU/	23
http://numismatics.org/.	24

Melinda Simon

Cataloguing printers' marks in Hungary. Achievements and objectives

József Dankó (1829–1895), a titular bishop and university professor in Vienna, along with being a passionate collector of books and engravings, was the first scholar to study printers' marks in Hungary. In 1881 he was elected as a member of the Hungarian Academy of Sciences and his inaugural speech was published five years later in Budapest.¹ In one chapter of nearly 30 pages he summed up all available information on printers' marks. His bibliography lists nearly all published European scholarship on printers' devices, although he was not particularly interested in these works nor in Hungarian marks. He was the first author to write on printers' devices in Hungary but his book remained an isolated initiative which was not followed up by later scholars.

Intensive study of the subject began at the end of the 19th century. As the Hungarian printing industry grew bigger, a need emerged for scholarly professional journals.² These articles were mostly written by amateur printers who at times fought real battles on the symbolic meaning of certain early Hungarian printers' devices.³

In the first decades of the 20th century, scholarship in old marks diminished, and was replaced with an interest in contemporary printers' marks, in line with France and Germany. Attention was first given to Art Nouveau devices⁴, followed by the typo signet.⁵ This was accompanied by publications on the theory of designing modern printers' marks.⁶

The need to gather all Hungarian printers' marks and publish them in a professional journal was first expressed in 1910 by Gusztáv Wenczel (1856–1919), a proof-reader at the *Athenaeum* printing company.⁷ This endeavour was started a decade later by Gyula Végh (1870–1951), who was the president of the Hungarian Bibliophile Society and director of the Museum for Applied Arts, along with being a noted book collector.

His research resulted in a slim book, printed in 800 Hungarian and 200 German copies⁸. It focused on the marks of German booksellers who established their businesses in the Hungarian capital and supplied the Hungarian dioceses with liturgical works and schoolbooks. The book ends in 1527, the year of the defeat of Mohács and the professional bookselling business ceased for over two hundred years. Nevertheless, there were several printing-shops in Hungary at the end of the 16th century using marks. Gyula Végh originally planned to publish additional volumes on those marks but unfortunately was unable to achieve this.

Végh's bibliography includes the major European works on the subject, although his foreword firmly places his work as a reaction to Paul Heitz's series. The quality of this first Hungarian catalogue of devices reached the same level as similar European publications at the time. Végh gave all the necessary information for subsequent research and woodcuts were reproduced in their original sizes and colours.

Despite the late start of Hungarian research on this subject, it was followed by thirty to forty years of slow but steady development. Two short articles were published in 1946⁹ but the Communist takeover halted research and little was published on the subject over the next four decades.¹⁰ The Hungarian Bibliophile Society was dissolved, the printing industry was nationalized and the new political leadership was not in favour of "bourgeois pseudoscience".

At the end of the 1980's, a new generation of researchers began to study printers' marks, as the regime was weakening and therefore their work was tolerated. They were all employees of the National Széchényi Library and the first to publish their articles in foreign journals.¹¹ In the 1990's and at the beginning of the new millennium, interest on printers' marks increased, which resulted in several new articles and monographs.

However, a modern and targeted research needed firm foundations. At the turn of the millennium there was no comprehensive bibliography on Hungarian scholarship on the subject. Furthermore, all the articles written at the beginning of the 20th century were in very inaccessible journals. The first aim was to gather all articles on the subject, regardless of length, and republish them together. This was important for both library professionals and academics. This endeavour involved searching through all Hungarian professional journals and around 200 books. The first collection appeared in 2009, the second a year later¹² and the third and last one is ready, but yet unpublished for financial reasons.

In the course of this work, I discovered that several of the modern studies were published in a foreign language, despite being originally written in Hungarian. Unfortunately all the original manuscripts were lost and so I had to translate these French, English, German and Italian papers into Hungarian. They were published for the first time in Hungarian in the first two collections.

Secondly, apart from republishing this literature, it was important also accompany it with a modern historical interpretation. This was done in the latest book on the subject, which contains a historical analysis of both the European and Hungarian literature.¹³ A systematic review of the word usage of Hungarian authors revealed a high degree of uncertainty and inconsistency in the definitions, and I have collected not less than 38 different terms used by different authors. Thus there was an urgent need to establish which of these should be used as "official" terms, which are acceptable as an alternative and which are completely wrong. A whole chapter of the book deals with the problem of Hungarian terminology.

Last but not least, it was important to place the Hungarian literature in an international context. In order to do that, I attempted to compile a complete European and American bibliography of printers' and publishers' marks, published in this book. An overview of scholarship in the field was fundamental from another point of view, too. Even a superficial survey of the literature reveals shortcoming in the scholarship: works in German, Italian, English and French are almost exclusively cited. There are hardly ever allusions to works written in other languages, such as Danish, Swedish, Dutch or Polish, apart from those written by speakers of those languages.¹⁴ Thus several works have simply fallen out of or never entered the "canon" of specialised literature. At the end of this paper I propose a list of terms, which could be corrected and completed by fellow researchers.

After assembling the work of our predecessors, cataloguing followed. I published two volumes of a catalogue of Hungarian printers' devices with Judit V. Ecsedy in 2009¹⁵ and 2012.¹⁶ Both volumes are written in Hungarian and in English.

Hungary is a small nation with a small publishing and printing industry, and these two volumes were possible only because of a relatively small number of printers' and publishers' marks. German, Italian or Austrian researchers would not be able to publish 18th century devices due to the huge quantity of material.

The easiest way to gather printers' marks from the 19th century would have been to use an official journal which published them when a company was registering its mark to legally protect it. Such a Hungarian journal existed¹⁷ but unfortunately there are no printers' or publishers' marks in it. It appears that in the 19th century there was no need to protect these marks, as there was no real threat of counterfeiting.

The second easiest method would have been to examine a single-leaf collection but none is extant in Hungary. Although József Dankó had a great collection of woodcuts and engravings, it disappeared after being sold at an auction after his death.

Thus the only way to gather 19th century printers' and publishers' devices is from the publications themselves. It means examining one by one a huge amount of books, booklets and commercial prints for a small number of new devices. I began this work in October 2008 in the closed stacks of the National Széchényi Library and it is still in progress. So far I have examined ca. 8.200 shelf metres of books, with roughly 2000 shelf metres left.

Compared to the earlier period, where printers' and publishers' marks were

esteemed valuable and often cut out, 19th century marks were not valued. Often librarians cause the worst damage by stamping, inscribing and sticking labels on the devices. Therefore I have to check often 4–5 different copies of the same book to get one impression suitable for reproduction.

However, I think it is possible to publish four more catalogues although there is the issue of the exponentially growing amount of printers' and publishers' marks in the 20th century. The following diagram shows the number of Hungarian devices from the beginning until 1989, with a comparison to Polish marks.



These numbers are naturally small compared to the Low Countries, Germany or Italy. Thus it is better to compare the situation with other Central European countries with similarly developed printing sectors. The Polish printers' marks published by Katarzyna Krzak-Weiss¹⁸ show approximately the same quantities¹⁹, although her book ends at the middle of the 17th century. She listed 31 marks until 1650, so I estimate twice as many (62 marks) for the entire century. The only Czech publication includes only 9 Czech printers' marks from the 16th and 17th centuries, and so it is unhelpful.²⁰ Unfortunately no Croatian catalogue has been published so we only have these numbers to estimate the average in Central Eastern Europe.

Regarding the 20th century, after the Treaty of Trianon in 1920, Hungary's territory was reduced to one third of its previous extent. The number of Hungarian marks without this territorial change would have been around 3000, and it would be impossible to currently publish such an amount in print. However, it is clear that these 1200 marks can be subdivided, as follows:

1488 - 1800	1801 - 1900	1901 - 1920	1921 - 1945	1946 - 1989
(300 years)	(100 years)	(20 years)	(20 years)	(40 years)
131	345	~500	~500	

The first line should be drawn at 1920, as the Treaty of Trianon caused several changes in the publishing and printing industry. The second division should be the year 1945 due the political changes caused by the presence of the Red Army. This division ends in 1989 due to the political and economic changes.

I estimate that the first two periods will include around 500 printers' and publishers' marks each, while the last period will contain around 200 devices. I have to stress that these 40 years in the end could be treated as 3 different periods: 1945–1949 (publishers went bankrupt, many new ones were established, these were dissolved after publishing just a couple of books); 1950–1985 (four decades of political uniformity with a very reduced number of publishers and presses, therefore few marks) and 1986–1989 (the regime weakened, new publishers were appearing and tolerated, but these were not long-lived).

In the end I would like to publish a catalogue of marks of serials and those associations and institutions which weren't professional publishers but occasionally published books.²¹ This would mean that we will have a complete inventory of the marks used in Hungary, which could be augmented later by
fellow Hungarian researchers.

In order to do this the methodology of the publication must be changed, because the 300 marks included in the last catalogue were practically the maximum possible in one volume. That is why the 500 marks planned to be published next cannot be done in the same way.

The typical page layout of the first two yellow catalogues included a serial number, the image itself (in its original dimensions), data on the mark, a textual description of the image and of the motto (if there was one) and basic data on the printer or publisher who used the device.

For the 20th century, as there are often 4–5, and sometimes even 20 different marks linked to one single company, it seems best to place them on a single page. But if this is done, something must be left out. Data on the mark or the textual description cannot be deleted, because these are essential for a future keyword search database. Thus data on the companies themselves will be left out.

When first publishing the Hungarian marks I considered this important as there is no Hungarian equivalent of the *Lexikon des gesamten Buchwesens*, and little information is available on the publishers and printers using these marks. Taking into account non-Hungarian users of the catalogues it seemed relevant, but in the end less important than the marks themselves.

Therefore there will be have several marks on one page (in their original dimensions), each with its own data (in a simplified structure, without doubling it) and one single textual description.

Finally I plan to create an online database of all the Hungarian devices published (with the necessary corrections made in the meantime). This will be searchable by name, by city, by technique and so on – and there will be a full text search option of the descriptions. That is why I deliberately use stereotyped phrases in the descriptions, so that future searches can be clear and effective.

Regarding my personal research interests, I do not believe that it would be appropriate to write comprehensive studies on early printers' devices. The number of marks are small and early Hungarian marks are often poor copies of famous Western European printing houses' devices. We have already published all Hungarian devices from the 18th and 19th centuries and I have collected a considerable number of devices from the 20th century. A future angle would be to attempt to analyse this material, which is rarely done.

Even highly regarded and recent European scholarship on the subject is focused on the first three centuries of printers' marks.²² 18th and 19th century marks are referred to with great disdain. For example, for Annemarie Meiner they are "meaningless and inartistic", "negligent", "just copies of antique marks", "they have lost the character of a mark and they became simple decorations", they are "either too big and violent or too small and irrelevant", in short: they are "devoid of style and tasteless".²³

There has been only one serious attempt to study printers' and publishers' devices from the 19th and the 20th centuries in Reinhard Würffel's two consecutive books.²⁴ He gathered a huge collection (2800 devices in 2000, 11.000 devices in 2010) but never gave the exact source of the images, nor reproduced them in their original sizes. He was working on a third collection of marks when he died in March 2014.

With little academic interest in the modern era, I believe it is possible to break new ground when I examine marks from the 18^{th} , 19^{th} and 20^{th} centuries.

One of the most interesting questions is the migration of designs, as in some cases I can trace several stages of a successful design in three to four different countries. Naturally this type of research could be improved with more data on modern devices. There are intriguing cases of a new type of heraldic devices and it is possible to observe and describe political ideologies in the printers' and publishers' marks. There is a different attitude to traditionalism and new types of devices (e.g. clichés bought from type foundries and altered in some way). New symbolic elements appeared (e.g. famous sculptures and buildings) and allusions to classical printers' marks gained additional meaning, often becoming visual commonplaces.

The identity of the designers of modern printers' marks also raises new challenges. In the 19th century, to save money, the managers of the printing-houses often ordered some of their employees to design a device for them. As these people were not famous artists, due to a lack of biographical data they are extremely hard to identify.²⁵

Last but not least, there is an exciting phenomenon seen exclusively in libraries built in the United States between 1890–1940.²⁶ The builders and the decorators of these premises frequently used printers' marks as decorative elements. The number of devices, popular marks, techniques employed, placement of the images and sources used when choosing them – these are all important aspects of this research.

I am convinced that printers' and publishers' marks of the 18th, the 19th and the 20th centuries will produce many interesting discoveries, which we will endeavour to find in the course of our cataloguing.

A proposed list of definitions in European languages for the term printer's and publisher's mark. Any corrections or additions are welcome.

Albanian	tipogragfik simbol	botues simbol
English	printer's device printer's mark	publisher's device publisher's mark
Bulgarian	pecatarski znaka	izdatelskie znaka
Czech	tiskařský signet signet tiskaře knižní signet	vydavatelský signet signet vydavatele emblém nakladatelství znak nakladatelství
Danish	typografisk mærke	forlaeggermærke
Estonian	tüpograafiline märk	kirjastaja märk
Finnish	kirjanpainajamerkki	kustantajamerkki
Dutch	drukkersmerk	uitgeversmerk
French	marque d'imprimeur marque typographique	marque d'éditeur
Hebrew	simle madpisim	simle molim
Croatian	tipografski značka	izdavački značka nakladni emblem
Polish	znak drukarski sygnet drukarski	znak księgarski sygnet księgarski znak wydawnictwa
Latvian	tipografinis ženklelis	leidėjas ženklelis
Lithuanian	spaustuvininko ženklas spaustuvės ženklas	leidėjo ženklas

German	Druckermarke Buchdruckerzeichen Signet	Verlegerzeichen
Norwegian	signet boktrykkermonogramm	forlagsmerk
Italian	marca tipografica	marca editoriale sigla editoriale
Russian	tipograficeskaa emblema	izdateľskie marka emblema izdatelsztva
Portuguese	marque d'estamper	marca de llibreter marca de editor
Romanian	marcă tipografică	marcă editorială emblemă de editură
Spanish	marca tipografica marca de impresor	marca del librero marca del editor escudete del editor
Swedish	boktryckarmärke tryckarmärke	förlägsmärke
Serbian	štamparski znak štamparska oznaka	izdavački znak izdavačka oznaka izdavački emblem
Slovakian	tlačiarenský signet	vydavateľský signet emblém vydateľstva znak vydateľstva
Ukrainian	drukars'ka marka drukars'kyj znak	vydavnyčyj znak
Turkish	dizgi amblemi	yayınevi amblemi

Notes

- József Dankó, A francia könyvdísz a renaissance korban [= The French book illustration in the Renaissance] (Budapest: Magyar Tud. Akadémia, 1886), 125– 152.
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E.g. Grafikai Szemle [= Graphic Review], Magyar Nyomdászat [= Hungarian Printing], Magyar nyomdászok évkönyve [= Almanac of Hungarian Printers].

- ³ E.g. Károly Firtinger (1847–1903) was employed as a typesetter and later as a proof-reader at the Pesti Könyvnyomda Rt., one of the biggest printing companies in Hungary. He was one of the founders of the Professional Association of Printers and also the editor of the journal Typographia between 1872–1881. He published several articles on printers' marks in Hungarian professional journals and was the correspondent of the "Deutsche Buch- und Steindrucker" under the pseudonym Pannonius. His career resembled that of another self-educated scholar of Hungarian printers' devices: József Tanay (1857–1929).
- ⁴ Ignác Gondos, 'Az impresszum [= The imprint]', Magyar Nyomdászat, 12 (1908), 386–387.
- ⁵ Tiposzignetek [= Typosignets]', Magyar Grafika, 12 (1931), 63–64.
- ⁶ Jenő Vértes, 'A betűöntödei anyagból készült szignetről [= On the signet composed by using typographical material]', in Grafikus művezetők évkönyve 1932, ed. by Sándor Müller (Budapest: Magyarországi Magántisztviselők Szövetsége Grafikus Művezetők Szakosztálya, 1932), 95–104.
- ⁷ Gusztáv Wenczel, 'Francia nyomdászjelvények és jeligék [= French printers' marks and mottoes]', Magyar Nyomdászat, 5 (1910), 157–158; 6 (1910), 188–189.
- ⁸ Gyula Végh, Régi magyar könyvkiadó- és nyomdászjelvények: I. Budai könyvárusok jelvényei 1488–1525 [= Old Hungarian printers' and publishers' marks: I. Publishers' marks of booksellers in Buda] (Budapest: Magyar Bibliophil T., 1923); Julius von Végh, Ungarische Verleger- und Buchdrucker-Zeichen: I. Ofner Buchhändlermarken 1488–1525 (Budapest 1923).
- ⁹ Mihály Kun, 'Mütyürkék, monogramok, szignetek [= Nick-nacks, monograms,
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signets]', Magyar Grafikai Kérdések, 2 (1946), 35–6 & 49; Mihály Kun, 'Tiposzignet-változatok egy téma körül [= Variations on a typosignet]', Magyar Grafikai Kérdések, 2 (1946), 100–2 & 113–27.

There were only two exceptions to the rule: Gedeon Borsa, 'Adalékok a ¹⁰ középkori budai könyvkereskedők történetéhez [= Some additions to the history of the booksellers in Buda in the Middle Ages]', Magyar Könyvszemle, 75 (1955), 296–98; János Ötvös, 'Huszár Gál nyomdászjele [= The printer's device of Gál Huszár]', Egyháztörténet, 3 (1958), 186–88.

E.g. Erzsébet Soltész, 'Ungarische Druckerzeichen im 16. Jahrhundert', ¹¹ Gutenberg-Jahrbuch, 67 (1992), 125–33; Gedeon Borsa, 'Il rapporto dei primi editori di Buda con Venezia e le loro marche (1480–1526)', Il Corsivo 3 (1999), 9–32; Judit V. Ecsedy, 'The printer's device of the Elzeviers in Hungary', Quaerendo 21 (1991), 125–38; Gedeon Borsa, 'L'activité et les marques des éditeurs de Buda avant 1526' in Le livre dans l'Europe de la renaissance: Actes du XXVIIIe Colloque internationale d'études humanistes de Tours, julliet 1985 ed. by Pierre Aquilon and Henri-Jean Martin (Paris: Promodis, 1988), 170–81.

Melinda Simon, Kiadói és nyomdászjelvények: Szakirodalmi szöveggyűjtemény ¹² [= Chrestomathy on printers' and publishers' marks], 2 Vols (Szeged: Juhász Gyula Felsőoktatási Kiadó, 2009-10).

Melinda Simon, Kiadói és nyomdászjelvények: Hagyomány és korszerűség [= ¹³ Printers' and publishers' marks: Tradition and modernity] (Budapest: Balassi Kiadó, 2014).

E.g. Leonid Markovich Soskin, Izdatel'skie marki Petrograda-Leningrada ¹⁴ (Moscow: Novyĭ Svet, 1995); Mogens Haugsted, 'Ældre danske bogtrykker- og forlæggermærker I-III', Fund og Forskning 2 (1955), 39–58; 3 (1956), 44–61; 4 (1957), 7–23; Arthur Sjogren, Något om aldre svenska bokforlåggaremårken (Stockholm, 1914); Steme editoriale = Buletinul cărții. Bucharest, 1923.

Judit V. Ecsedy and Melinda Simon, Kiadói és nyomdászjelvények ¹⁵ Magyarországon 1488–1800 [= Hungarian printers' and publishers' devices

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1488-1800] (Budapest: Balassi-OSZK, 2009).

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Melinda Simon, Kiadói és nyomdászjelvények Magyarországon 1801–1900 [= Hungarian printers' and publishers' devices 1801–1900] (Budapest: Balassi-OSZK, 2012).

- ¹⁷ The Központi Értesítő [Central Bulletin] was extant between 1874–1949 (around 112.000 pages altogether).
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Katarzyna Krzak-Weiss, Polskie sygnety drukarskie od XV do połowy XVII wieku (Poznań: Wydawnictwo "Poznańskie Studia Polonistyczne", 2006).

¹⁹ 3 devices in the 15th century and 73 devices in the 16th century.

- ²⁰ Hana Beránková and Marie Růžičková and Anežka Baďurová, Signety tiskařů a nakladatelů ze 16. a 17. století v tiscích z fondu Knihovny Akademie věd ČR (Praha: Knihovna Akademie věd ČR, 2002).
 - I have gathered so far around 240 marks of serials and around 140 marks of associations and institutions.
- E.g. Giuseppina Zappella, Le marche dei tipografi e degli editori italiani del Cinquecento, Vol. I–II (Milano: Editrice bibliografica, 1986) [closing year: 1500]; Henning Wendland, Signete. Deutsche Drucker- und Verlegerzeichen (Hannover: Schlüter, 1984) [1600]; Peter van Huisstede and J. P. Brandhorst, Dutch printers' devices 15–17. century (Nieuwkoop: De Graaf, 1999) [1700].

²³ Annemarie Meiner, Das Deutsche Signet (Leipzig: Schmidt, 1922).

- ²⁴ Lexikon deutscher Verlage von A Z: 1071 Verlage und 2800 Verlagssignete vom Anfang der Buchdruckerkunst bis 1945, Adressen - Daten - Fakten - Namen, ed. by Reinhard Würffel (Berlin: Grotesk, 2000); Würffels Signete Lexikon deutschsprachiger Verlage, ed. by Reinhard Würffel (Berlin: Grotesk-Verlag, 2010).
- ²⁵ E.g. Melinda Simon, 'A jelvényrajzoló Butkovszky Bertalan [= A designer of printers' marks, Bertalan Butkovszky]', Magyar Könyvszemle 3 (2014), 353–66. The person in question was a printer at several different companies in the first part of the 20th century. Although unknown to Hungarian scholarship, I have

identified at least 15 devices designed by him.

Melinda Simon, 'Funkciótlan vagy funkcionális? Nyomdászjelvények, mint ²⁶ könyvtárépületek díszítőelemei [= Functional or not? Printers' devices as decorative elements on library buildings]' in Apró cseppekből lesz a zápor. Bakonyi Géza emlékkötet (Szeged: Juhász Gyula Felsőoktatási Kiadó, 2008.

Justyna Kiliańczyk-Zięba

When is a device not a device? Problematic woodcuts from Krakow printing shops

The book industry of the Commonwealth of Poland-Lithuania was less developed than the early print culture of Italy and the German-speaking countries or France. Consequently the number of printers' devices used in the country was small in comparison with the device inheritance of other European realms. Yet the devices employed in Poland-Lithuania share a number of characteristics with printers' marks used in Western countries. This applies both to the iconographical models and ideological inspirations behind the devices, and to the ways these compositions, often combining word and image, were used in early printed books. It is therefore not surprising that among the questions raised by research material originating from the territory occupied by the realms of the Kingdom of Poland and the Grand Duchy of Lithuania a fundamental one concerns the definition of a printer's device, since the problem of how to distinguish devices from other pictures has frequently attracted book historians' attention.

For example Ronald McKerrow addressed this issue in the introduction to his *Printers' and Publishers' Devices in England and Scotland*, stating: 'I confess to some envy of those who can distinguish at a glance between a device and a mere ornament, or an emblem, or a cut, as the case may be; for I certainly have not yet learnt to do so'.¹ Further, McKerrow made an attempt at formulating some rules for drawing the distinctions, but in his conclusion left it to a researcher's intuition to define the status of a particular picture and, as a result, catalogue it (or not) as a printer's device: 'it is hard to draw up a satisfactory definition; we must be content to regard certain blocks as lying on the border line and include or reject them as we please'.² Of course if a scholar attempting to put together a catalogue of printers' devices did not want to proceed 'as he or she pleases' they would stumble on certain compositions. The same would happen to any

researcher who used existing catalogues as a starting point for their work, if they decided to check the current classifications.

In what follows I am going to discuss some 'problematic woodcuts' from 16th- and early 17th-century books produced in Poland-Lithuania. I will focus on woodcuts that prove difficult to classify as 'a device [...], a mere ornament, or an emblem, or a cut'; compositions that changed their function over time, or those I think should be called non-devices against the accepted scholarly tradition. Before I examine them, however, I will briefly explain where the data on the devices used by printers who were active in Poland-Lithuania can be found.

Among the works that form a point of departure in the study of printers' devices in Poland-Lithuania, the source that deserves acknowledging in first place is Drukarze dawnej Polski do XV do XVIII wieku, a multi-volume compendium on the history of printing in the Commonwealth, edited by Alodia Kawecka-Gryczowa, and later by Jan Pirożyński (published between 1959 -2001). This resource tells the history of printers and printing shops in the territories of Poland-Lithuania between the 15th and the 18th centuries. The devices employed by particular master-printers are mentioned in Drukarze dawnej Polski, and in some cases a protoiconographical description of the woodcuts is provided, along with notes on the symbolic meaning of the compositions. Secondly, chronological, geographical and book-specific data on printers' devices from Poland-Lithuania can be found in a number of bibliographies and monographs about local printers, for example in the series Polonia typographica.³ Finally, there are the catalogues, the earliest of which is Kazimierz Hałaciński's and Kazimierz Piekarski's Sygnety polskich drukarzy, księgarzy i nakładców.⁴ This is a collection of ninety signs used between the 15th and the 18th centuries, gathered with the aim of giving an overview of the marks used by early printers in Poland-Lithuania, rather than attempting to cover all the device material. The woodcuts are reproduced in their original size, and the source for all of them is given. More recent scholarship is represented by Katarzyna Krzak-Weiss, Polskie

*sygnety drukarskie od XV do połowy XVII wieku.*⁵ This volume gathers over a hundred devices used between 1475 and 1650, many of them being woodcuts recycled by subsequent printers. The work adds to the corpus represented by the Hałaciński and Piekarski collection. The original dimension of each device is given, although in most cases the woodcuts are reproduced in reduced form and copied not from the early printed books but from *Sygnety polskich drukarzy*.

These works provide a good starting point for research on the printers' devices used in early books produced in Poland-Lithuania, the volumes by Hałaciński and Piekarski, and then the one by Krzak-Weiss naturally deserving special attention as collections that must be referred to before all others. However, consulting these resources and examining early printed books in library and museum collections reveals that the existing repertoires lack a number of devices used in Poland-Lithuania, do not acknowledge all variants of the included signs and reproduce woodcuts that apparently did not serve as printers' devices.

My research on printers' devices focused on the ideological inspirations and iconographic models of the devices used by early printers. I tried to discover what the printers wanted to communicate when using the devices and how contemporary readers might have understood the devices when viewing them in late 15th- and in 16th-century books.⁶ For my work, the question of whether a particular composition should be classified as a printer's device remained an essential one. If it was a printer's device, I should include it in my analysis, if it was not – I should leave it out. To check current classifications, I started to look at books published in Poland-Lithuania, mainly in the 16th century. I was trying to understand the function or use of the compositions in the examined publications. When doing so I came across a number of woodcuts 'lying on the borderline', and therefore difficult to classify; those whose function changed in different publications or even within the same book; compositions traditionally described as printers' devices that were in fact illustrations or authors' signs, and those that apparently were designed to serve as printers' devices but were

overlooked by cataloguers of Polish-Lithuanian marks.

Regarding these woodcuts, I will discuss a selection of compositions from books produced in Krakow, the hub of early printing in Poland-Lithuania, and the first Polish city where printing was introduced in 1473. The first case is that of representations whose use or function changed. Naturally that could happen when woodblocks were recycled by subsequent printers, and what had been a device might cease to function as one. A good example of this is a woodcut with Florian Ungler's sign (Hausmarke) at the bottom of the composition. The woodcut represents Saint Stanislaus, the 11^{th} -century Krakow bishop and patron saint of the Kingdom of Poland. Ungler employed this woodcut as his device between 1511 - 1514 [fig. 1].







fig. 2

But later, when Johann Haller, another Krakow printer, bought Ungler's blocks, the woodcut also served as an illustration. For example in 1522, Haller used it on the title page of a neo-Latin poem by Paweł z Krosna (Paulus Crosnensis) *Panegyricus ad divum Stanislaum* as a picture that alluded to the content of the publication [fig. 2]. Interestingly, when reusing woodblock, Haller did not remove Ungler's sign from it.

The reverse situation was possible too, and a picture whose function was not that of a printer's device might start to serve as one. Sometimes it occurred years or decades after the woodblock had been cut and used for the first time. This was the case with Jan Januszowski's device – the obelisk. Januszowski, a printer active in Krakow from 1578 and the owner of Drukarnia Łazarzowa (Officina Lazari), put the obelisk on the title pages of his books regularly. I have found it in 72 editions out of 227 that I have inspected. Januszowski used six woodblocks, cut to suit different book formats. He started to employ the obelisk as his device in 1583 [fig. 3]. When doing so he reused the woodblock he inherited from his father, Łazarz Andrysowic, as is attested by the appearance of the obelisk on the title page of an Andrysowic book from 1557 [fig. 4]. The obelisk here looked very much like a printer's device. But we can say for sure that it was not the case not only because Andrysowic normally used other devices, but thanks to an easily discernible connection between the obelisk, the content of the 1557 publication, and the author of its text.

DE VERÆET FALSÆ ECCLESIÆ DISCRIMINE, Ad Screniffimum STEPHANVM I. Poloniç Regent STANISLAI SOCOLOVII Libri tres. Ted. 4955 Ex facris Scripturis, vetuftifimorúmque Patrum fententijs collecti ac concinnati. ibm adiella est, pro dignofcendis & fugiendis falfe RACOVIA In Officina Lazari. Anno Domini: M. D. LXXXIII. Sumptu & impenfa Regia



fig. 3

fig. 4

The book on whose title page the obelisk appeared in 1557 was a pamphlet by Georg Joachim Rheticus. Publishing it, Copernicus' disciple announced that he was preparing an edition of Johann Werner's works: *De triangulis sphaericis* and *De meteoroscopiis*. The pamphlet contained an introduction to the edition (*Proemium*). Rheticus mentioned in this text that the observatory had been set up for him in Krakow with the obelisk as the main instrument to measure the apparent movements of celestial bodies with the use of trigonometry. He praised obelisks as mathematical tools of heavenly origin (*'non igitur obeliscus humanum est inventum sed Deo auctore institutus'*). This suggests that in 1557 an obelisk was used as a title page illustration that signaled the publication's content. At the same time, however, it could have been understood as the author's sign. Earlier on, when Rheticus published his writings with German printers, obelisks reproduced from various woodblocks appeared on the editions' title pages [fig. 5].

In 1583 Jan Januszowski gave the obelisk cut a new life endowing the representation with a new function – that of a device. But even in his own workshop the obelisk appeared in roles other than that of a device, for instance as a *pictura* of an emblem. One example of such a usage is to be found in a laudatory publication addressed to cardinal Jerzy Radziwiłł, *Columna in felicem ingressum Georgii Radivili* printed by Januszowski in 1592. The obelisk on the title page of this book was a printer's device. The obelisk on the verso of the same page served as an icon of an emblematic composition, a kind of paper monument, commemorating the cardinal [fig. 6].

It was also possible that a woodcut was used first as a picture of an emblem, and only later adopted to a new role, that of printer's device. One Krakow example comes from the workshop of Maciej Wirzbięta, who started his career as a printer in 1557. From the very beginning Wirzbięta used a device whose central element was a willow-tree.⁷ The device combined old heraldic models with new symbolic tendencies, as most probably the willow-tree at its centre was to be understood as a symbol of perseverance in Christian faith. It was also a pun on Wirzbięta's





fig. 6

name, as willow-tree is *wierzba* (*wirzba*) in Polish [fig. 7]. In 1562 Wirzbięta published a collection of epigrams by Mikołaj Rej entitled *Źwierzyniec*. One of the emblems in the volume was *Wirzba na stałość* (The willow-tree as a symbol of constancy). In the epigram, the willow-tree was presented as a sign of patience and constancy, in fact a symbol of evangelicals (both Wirzbięta and Rej were Calvinists) who persevere in their faith. The *pictura* of that emblem represented a goat nibbling at a willow-tree [fig. 8]. Soon – from 1563 onwards – Wirzbięta started to use it as one of his willow-tree devices [fig. 9]. Simultaneously, the woodcut reappeared as the emblem's *pictura* in re-editions of *Źwierzyniec*.







fig. 7

fig. 8

fig. 9

In all the examples mentioned above, identification of the woodcuts as a device or otherwise is possible when we take into account the context in which the picture was used each time. When this context changes, the function of the particular composition may evolve – not only over time or when the woodblocks change hands, but even in the same workshop and, more interestingly, in the same volume. But it may happen that the semantic context in which a particular composition appeared in the early printed book remains incomprehensible to us, thus affecting our ability to recognise the past function of a woodcut. A Polish example is a very familiar picture, a *caduceus*. In 1549 it appeared in a book printed by Barbara Wietorowa, the widow of Hieronim Wietor [fig. 10]. Wietor was a master-printer active first in Vienna, and later in Krakow (from 1518 until his death about 1547). This is the only known instance of the use of the *caduceus* woodcut in the Wietor printing shop. Books produced there were either given a titlepage framed with Wietor's initials or displayed the Terminus device whose







fig. 11

imagery was undoubtedly based on Erasmus' medal [fig. 11]. Thus it would be easy to dismiss this woodcut as not being a device, following Dennis E. Rhodes who wrote: 'Fairly often one comes across a small woodcut [...], and at first this looks like a printer's device. But if it occurs nowhere else in a particular printer's output, and if he can be shown to have regularly used another device, or other devices, then one can assume that this single appearance is only an ornament'.⁸ However, I hesitate to adopt such a firm position. Firstly, printers, especially those active in the first decades of print, did not use devices in the majority of their books. For example the above-mentioned Krakow printer, Florian Ungler, had seven different devices. They appear in only 27 editions out of the 199 that were examined in the process of preparing the bibliography of Ungler's books.⁹ Maciej Wirzbieta is known to have used four devices. These are found in 27 editions out of the 139 that have been preserved to the present day and were inspected to produce his bibliography.¹⁰ There are compositions that certainly served as printers' devices, even if this can be attested only by incidental appearances of those woodcuts in books preserved until today [fig. 12].

Secondly, the Krakow *caduceus* is a clear copy of Johann Froben's device, which was imitated throughout Europe by a number of printers.¹¹ And Froben's authority must have been of special importance to Wietor who was the first to print Erasmus' writings in Poland, and who modelled the structure of his Terminus device on Froben's printer's mark when surrounding the woodcut with mottos in Latin, Greek and Hebrew.¹² Finally, if we were to make assumptions about the use of this woodcut in the Helena Wietorowa book we would have to say that it was used here in a device-like manner – certainly not as an illustration, but together with the imprint, on the book's final leaf. It is not entirely impossible that the *caduceus* in the Wietor printing shop was employed as a printer's device, only that more editions that could have confirmed this assumption have not survived. The *caduceus* from the Wietor workshop reappeared in books produced by Krakow printers in the following decades. For instance we can





fig. 13

find it on the title pages of books printed by Jan Januszowski in 1583 [fig. 13]. 1583 was the year when the obelisk started to serve as Januszowski's printer's device. Previously Januszowski had used either the cuts he inherited from his father Łazarz Andrysowic, or the device produced for him *circa* 1580. 1583 was also a transitional year, as both old devices and obelisks were employed in Januszowski's books as printer's devices. The caduceus may thus seem to be yet another woodcut whose device potential was tested by the printer. Consequently it was counted among Januszowski's devices by the cataloguers.

I suppose that the *caduceus* was not used by Januszowski as a printer's device. The three known books printed by Januszowski with a *caduceus* on their title pages were all literary works composed to commemorate the wedding of Poland's chancellor Jan Zamojski and Gryzelda Batory, the niece of the king, Stefan Batory. Mercury's staff was a complex symbol, replete with many meanings. Mainly due to *Hypnerotomachia Poliphili*, it functioned as a hieroglyph of peace and concord. As such it was an appropriate symbol to appear on books printed on the occasion of a marriage. To conclude, in Januszowski's editions of 1583 the caduceus was not a printer's device, but a titlepage illustration, a good omen, a wish of peace and concord for the newlywed couple.13

To finish this overview, I have chosen another Krakow woodcut which has traditionally been catalogued as a printer's device. The woodcut, from the early 17th-century printer Franciszek Cezary,¹⁴ shows a tree shedding leaves, accompanied by the motto *'Mens immota manet'* (*'The mind remains unmoved'*) [fig. 14].¹⁵ This would be a fine printer's device: enigmatic, combining words and image. Suspicion arises that this woodcut never served as one when we realise that Cezary regularly used the familiar obelisk as his device [fig. 15], and the *'mens immota manet'* woodcut is known only from a single publication by Cezary's printing shop: a pamphlet of 1621 bringing news about the anti-Turkish war in the eastern periphery of Poland-Lithuania, *Posel z Woloch*.¹⁶ I believe that it is possible that the alleged printer's device was a consciously chosen title page illustration, as there seems to be a connection between the pamphlet's subject and the symbolic meaning of the woodcut, whose imagery is related both to Roman literature and 16th-century emblem collections.





fig. 14

fig. 15

Let us follow the motto that is a quotation from the Virgil's Aeneid. The line 'mens immota manet, lacrimae volvuntur inanes' [IV, 449] ['the mind remains unmoved, the tears fall useless'] closes the description of Aeneas' fight with his desires, when the hero, hastened by his destiny, has to leave Dido. In an earlier passage Virgil depicts Aeneas' struggle by means of a Homeric simile, comparing the hero with a mighty oak that opposes the mountain storm. The 'mens immota manet' line identifies the woodcut tree as an oak, a mythical tree of life that in Christian symbolism represented perseverance in faith and the power of virtue that opposes worldly temptations and adversities. More importantly it links the whole composition to the tale of Aeneas. Aeneas' story was already being interpreted allegorically in antiquity, but more prominently in the medieval and Renaissance literary and philosophical tradition. Aeneas' story symbolised the human existential journey towards wisdom and maturity, while demonstrating that spiritual growth is possible only if all desires are subdued to mens, 'mind i.e. rational soul'. When Aeneas leaves Dido, 'mens immota manet' - the ethical ideal is achieved in the most perfect way - through effort and renouncement. Aeneas – compared to the oak opposing the storm – was thus seen as an ideal hero, 'a stoic saint'.¹⁷

The scope of this text does not allow for a detailed discussion of this symbolical tradition. I am mentioning it, however, because it explains why both the phrase *'mens immota manet'* and the image of an oak rocked by a storm appear in a number of *imprese* and emblems, most often embodying the value of constancy.¹⁸ One of those compositions is to be found in the work of Alciato. The emblem's inscription reads *Firmissima convelli non posse* ('The firmest things cannot be uprooted'). The icon shows an oak opposing a tempest, and the epigram reads:

'Though Father Ocean rouses all his waves, though, barbarous Turk, you drink the Danube dry, yet you shall not break through the boundary and burst in, while Emperor Charles shall give to his peoples the signal for war. Even so, holy oaks stand firm with tenacious roots, though the winds rattle dry leaves.'¹⁹ Alciato must have been aware that the Turks had entered Hungary and were threatening Habsburg domains and the states of central Europe. He argued however that Charles V relentlessly opposed the threat of Turkish invasion in Europe and assured his readers that the emperor and his soldiers were like 'holy oaks [that] stand firm with tenacious roots, though the winds rattle dry leaves'.²⁰ The meaning of Alciato's composition seems comprehensible at first sight: put simply, the poet compares the emperor to the royal tree. Nevertheless, the core of this panegyric emblem is constituted by the reference to the *Aeneid* and the comparison of the emperor and his deeds to the fortunes of *Aeneas*. The emperor's mind remains unmoved, and he can be compared as an equal to *Aeneas*, who (also for 16th-century readers) was deemed an embodiment of the ideal man.

Alciato's work was widely known in early modern Europe and eagerly read in Poland. Therefore it is conceivable that the emblem *Firmissima convelli non posse* was also known to the person who decided to place the '*mens immota manet*' woodcut on the title page of a news pamphlet published in 1621 in Krakow. The book provided information about the struggles between Polish-Lithuanian and Turkish forces in the battle of Chocim (Khotyn) in autumn 1621. A fortified camp defended by Polish and Lithuanian forces was the main point of resistance against Sultan Osman II's army. After weeks of bloody fighting and faced with the threat of approaching winter, both sides signed a treaty that reinstated former relations between the Polish-Lithuanian Commonwealth and Turkey. There was no winner, but for propaganda reasons the battle was presented in European lands as a success for the Christian forces.²¹ The 1621 *Posel z Woloch* was one of the publications that reinforced the early 17th-century perception of a 'Turkish defeat'. The pamphlet contained praise of Polish soldiers, and stressed that the battle was a defeat for Turkey.

Perhaps the 'mens immota manet' woodcut was meant to indicate the report's content and to shape its interpretation, alluding to the similarities between

the stance of the Commonwealth army and the virtues of the epic hero and the former emperor. It is possible that some of the 17th-century readers of *Posel z Woloch*, certainly those familiar with classical tradition and emblem collections, understood the relation between the laudatory content of the work and the picture on its title page since it could be seen as a symbol of universal heroic perseverance and resistance to an enemy threatening the Christian world, i.e. Turkey.

Early printers placed symbolic compositions on the title pages of their books, rightly arguing that the page that opened the work should serve for effective communication with the reading public. Thus *picturae loquentes* that appeared together with the name of the author, the book's title and the imprint rarely served as a mere ornament. More often they referred to the work's content, attempting to provide a visual summary by alluding to traditions that an aware reader could take into consideration.²² Or they served as printers' devices. The function of these pictures and of the pictures placed on the final leaves of books is not always clear today. Their use remains debatable especially if there are only one or two publications in which a particular composition appears, and when there is no verbal commentary such as a motto to help us recognise a device-like structure or guide us in understanding the image. Nevertheless identifying the past uses or functions of those pictures is worth the effort, especially if attempting to create reliable catalogues of printers' devices.

Notes

1

² McKerrow, p. xiv.

³ Pt, vol. I: Kasper Hochfeder, 1503–1505, ed. by Kazimierz Piekarski and Maria

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Ronald B. McKerrow, 'Introduction', in Printers' and Publishers' Devices in England and Scotland 1485–1640 (London: The Bibliographical Society, 1949), p. xii.

Błońska (Wrocław: Ossolineum, 1968); Pt, vol. IV: Jan Haller, 1505-1525, ed. by Helena Kapełuś (Wrocław: Ossolineum, 1962); Pt, vol. V: Druga drukarnia Floriana Unglera 1521-1536, ed. by Henryk Bułhak (Wrocław: Ossolineum, 1964); Pt, vol. VII: Druga drukarnia Floriana Unglera, 1521–1536, ed. by Henryk Bułhak (Wrocław: Ossolineum, 1970); Pt, vol. VIII: Aleksander Augezdecki. Królewiec-Szamotuły 1549-1561 (?), ed. by Paulina Buchwald-Pelcowa (Wrocław: Ossolineum, 1972); Pt, vol. IX: Maciej Wirzbięta. 1555/7-1605, ed. by Alodia Kawecka-Gryczowa (Wrocław: Ossolineum, 1974); Pt, vol. X: Maciej Wirzbieta, 1555/7-1605, ed. by Alodia Kawecka-Gryczowa (Wrocław: Ossolineum, 1975); Pt, vol. XI: Maciej i Paweł Wirzbiętowie 1555/7-1609, ed. by Alodia Kawecka-Gryczowa (Wrocław: Ossolineum, 1981). See also: Alodia Kawecka-Gryczowa, Ariańskie oficyny wydawnicze Rodeckiego i Sternackiego. Dzieje i bibliografia (Wrocław: Ossolineum, 1974); Maria Wojciechowska, Z dziejów książki w Poznaniu w XVI wieku (Poznań: Fiszer i Majewski Księgarnia Uniwersytecka, 1927); Leonard Jarzębowski, Druki toruńskie XVI wieku (Warszawa: Państwowy Instytut Wydawniczy, 1969).

Kazimierz Hałaciński and Kazimierz Piekarski, Sygnety polskich drukarzy, ⁴ księgarzy i nakładców (Kraków: Koło Miłośników Ekslibrisu przy Towarzystwie Miłośników Książki, 1926–1929).

Katarzyna Krzak-Weiss, Polskie sygnety drukarskie od XV do połowy XVII ⁵ wieku (Poznań: Wydawnictwo Poznańskie Studia Polonistyczne, 2006). See as well the review by Radosław Grześkowiak, 'Związki sygnetów dawnych polskich drukarzy z emblematami Alciatusa', Barok, 14, 1 (2007), 257–77.

The result is my book Sygnety drukarskie w Rzeczypospolitej XVI wieku. Źródła ⁶ ikonograficzne i treści ideowe (Kraków: Wydawnictwo Societas Vistulana, 2015).

Howard W. Winger, 'The Cover Design', Library Quarterly, 45, 4 (1975), 419–
⁷ 20; Justyna Kiliańczyk-Zieba, 'A Goat Nibbling at a Willow Tree: The Printer's Devices of Maciej Wirzbięta and Their Emblematic and Iconographical Context', Emblematica, 18 (2010), 33–51. The 1557 device had two variants, both were

modelled on the marks of Andreas Gessner from Zürich.

8

Dennis E. Rhodes, 'Giuseppina Zappella, Le marche dei tipografi e degli editori italiani nel '500. Repertorio di figure, simboli e soggetti e dei relativi motti' [review], The Library, series 6, 2 (1989), 66.

9

The bibliography of Florian Ungler in Polonia Typographica, vol. V, vol. VI, vol. VII reports 240 editions.

10

The bibliography of Maciej Wirzbięta in Polonia Typographica, vol. IX, vol. X, vol. XI lists the total of 169 editions.

11

Anja Wolkenhauer, Zu schwer für Apoll. Die Antike in humanistischen Druckerzeichen des 16. Jahrhunderts, Wolfenbütteler Schriften zur Geschichte des Buchwesens, 35 (Wiesbaden: Harrassowitz Verlag, 2002), pp. 205–06.

- ¹² Wacława Szelińska, Książka Erazma z Rotterdamu w środowisku krakowskim w XVI wieku (Kraków: Wydawnictwo Naukowe WSP, 1990); Maria Cytowska, 'Erasme en Pologne avant l'époque du Concile de Trente', Erasmus in English, 5 (1972), 10–15; Jacqueline Glomski, 'Erasmus and Cracow (1510–1530)', Erasmus of Rotterdam Society Yearbook, 17 (1997), 1–18; Justyna Kiliańczyk-Zięba, 'Zagadka krakowskiego Terminusa. O sygnecie drukarskim oficyny Hieronima Wietora, propagatora erazmianizmu w Polsce', Roczniki Biblioteczne, 53 (2009), 129–46.
- ¹³ Hałaciński/Piekarski, plate 66; Krzak-Weiss, plate XXVII.
- ¹⁴ Paulina Buchwald-Pelcowa, Dawne wydania dzieł Jana Kochanowskiego (Warszawa: Wydawnictwo Naukowe PWN, 1993), pp. 113–15.

¹⁵ Hałaciński/Piekarski, plate 83; Krzak-Weiss, plate XLIV.

¹⁶ Detailed discussion of the woodcut's role and its ideological inspirations, references and symbolic meanings see in Justyna Kiliańczyk-Zięba, "*Mens immota manet*" – Polish Application of an Emblematic Commonplace', in The Art of Persuasion. Emblems and Propaganda, ed. by Sabine Mödersheim and Christine McCall Probes, Glasgow Emblem Studies, 17 (Genève: Librairie Droz, 2014), pp. 103–16. Marian Malicki, Repertuar wydawniczy drukarni Franciszka Cezarego ¹⁷ starszego, 1616–1651. Part 1: Bibliografia druków Franciszka Cezarego starszego, 1616–1651 (Kraków: Księgarnia Akademicka, 2010). The unique copy of the pamphlet is held in Biblioteka XX. Czartoryskich in Krakow (12175 I).

Janina Abramowska, "Eneida" czytana przez Macieja Kazimierza ¹⁸ Sarbiewskiego', Pamiętnik Literacki, 72, 3 (1981), 6–9.

For the discussion of 'the early coining of the phrase or concept in emblematic ¹⁹ contexts' see Alison Adams, '*Mens immota manet*: An Exploration of an Emblematic Commonplace (Sambucus, Vaenius, etc.)', in Otto Vaenius and his Emblem Books, ed. by Simon McKeown, Glasgow Embelm Studies 15 (Glasgow: Glasgow Embelm Studies, 2012), p. 91–106.

Andreas Alciatus, Emblemata (Lyon: Macé Bonhomme, Guillaume Rouille, ²⁰ 1550), trans. by Betty I. Knott (Aldershot: Scolar Press, 1996), p. 49. (Oceanus quamvis fluctus pater excitet omnes: | Danubiumque omnem barbare Turca bibas. | Non tamen irrumpes perfracto limite: Caesar | Dum Charlus populis bellica signa dabit. | Sic sacrae quercus firmis radicibus astant, | Sicca licet venti concutiant folia.)

Alciatus, p. 115.21Henryk Wisner, Zygmunt III Waza (Wrocław: Ossolineum, 1991), p. 172.22Karl Josef Hölgten, 'Emblematic Title Pages and Frontispieces: The Case of23Early Modern England', in Companion to Emblem Studies, ed. by Peter M. Daly24(New York: AMS Press, 2008), pp. 393–95.23

Elisabeth Klecker

Signa Vides? Devices of Viennese printers brought to light and to life

The title of the CERL-workshop "Signa vides" pays tribute to a Viennese printer and his signet, but regarding printers' devices in Vienna, it is more a case of "signa non videmus". Early modern Vienna cannot compare with the great centres of European book production, either in number or the artistic quality of printers' devices.¹ Furthermore, printers' devices have not received due attention in studies on Viennese book culture. There is only one small booklet exclusively dedicated to devices of Viennese printers,² in which reproductions of 16 devices, from Johannes Winterburger (active 1492-1519) to Johann Thomas Trattner junior (active 1802-1805), are accompanied by brief information on each press. The booklet aims for aesthetic appeal rather than scholarship.

Scholarly interest in Viennese printers' devices dates back to the historian Xystus Schier $(1727-1772)^3$, whose dissertation on the beginnings of printing in



fig. 1

Vienna (*Commentatio de primis Vindobonae typographis*. Vindobonae: Schulz 1764) reproduced Winterburger's device on the title page (fig. 1).

His work was followed by the Jesuit Michael Denis (1729-1800)⁴, a librarian at the Theresianum and the court library, who included a plate of 16th century devices in his *Wiens Buchdruckergeschicht bis M.D.LX*. (Wien: bey Christian Friedrich Wappler, Matthias Andreas Schmidt 1782; fig. 2). Denis' mainly bibliographical study was continued by Anton Mayer (1838-1924) in his monumental two volume history of printing in Vienna (*Wiens Buchdruckergeschichte 1482–1882*. Wien 1883–1887). The survey is structured around biographies of printers, with information on their publishing programme as well as the outstanding products of their press. Devices are included, although not discussed, while there are chapters dedicated to the development of book illustration. Mayer's focus on the early period is apparent from the title page, a mosaic of coloured versions of 16th century devices and arms (fig. 3).

As an active member of the "Wiener Alterthumsverein" Mayer clearly shared the 19th century predilection for medieval and Renaissance art.

On the whole, the present state of research is rather unsatisfactory, as devices are hardly ever reproduced in recent dictionaries of printers.⁵ Regarding case studies, only Winterburger attracted attention due to a possible relationship with Aldus' famous anchor-dolphin-device.⁶ Although catalogues have been compiled for early Viennese woodcuts, including printers' marks and publishers' devices⁷, Mayer's pioneering study is still essential for the period after 1550. Unfortunately it is not always possible to verify his data or to reconstruct which copies he used for his illustrations, as he did not cite shelf-marks, and it appears sometimes quoted from memory. In addition, the libraries and archives that he consulted suffered from the effects of two world wars. Compiling a catalogue up to 1800 at the minimum would be the first task, as cataloguing baroque devices is believed to the most pressing aim. An initial and rather superficial attempt to catalogue these devices⁸ resulted in the discovery of possibly Vienna's only Greek device⁹



Entworfen und gezeichnet von J. SCHÖNBRUNNER.

Chromo-Xylographie und Druck von H. KNÖFLER jun, in Wien,

fig. 3

as well as two baroque devices not recorded in Mayer's *Buchdruckergeschichte*. It had not been noticed that Matthaeus Cosmerovius (*1606; 1640-1674) and Johann Baptist Schilgen (*1687; 1720-1743) employed a device or at least attempted to promote one. Cosmerovius adopted a vignette of a pelican feeding her young with her blood, which was widely used by German printers between 1550 and 1650.¹⁰ Schilgen's bouquet of violets surrounded by a laurel wreath was accompanied by a motto inspired by Alciato's emblem *In colores* (for the first time in: *Emblematum libellus*. Venetiis: Aldus 1546): *Quisquis sorte sua contentus ianthina gestet* (Anyone content with his lot may wear the colour of violets).

As digitization projects such as *Austrian Books Online* (ABO) will soon allow for a better survey of the Austrian production, this paper focuses on the requirements of a future database of Viennese/Austrian devices. The presentation of two case studies will demonstrate the limits of conventional definition, which usually exclude ornamental elements within the body of the book, and to provoke interest in the contemporary perception of devices as well as their adaptation in new media beyond their original function.

Hidden devices? Johann Jakob Kürner the younger and Leopold Johann Kaliwoda

Since the first decades of printing, marks formed by the printer's initials surmounted by a cross, or the cipher 4 (a symbol for book-trading) are commonplace. Vienna was no exception, as Johannes Winterburger, Hieronymus Vietor, Johannes Singriener all employed their initials to sign their prints. Winterburger seems to have been inspired by Venetian marks, while Vietor and Singriener incorporated their monograms in the woodcut borders of title pages. In the Baroque era the fashion of mirror-image monograms made from interlaced and hardly discernible letters was used in different artistic objects, such as glass goblets. The same practice of signing was adopted by 18th century printers in Italy (e.g. Modesto Fenzo in Venice) and Strasbourg (e.g. Johann Reinhold Dulssecker, † 1737¹²). Their monograms appear on the title-page, and can be easily classified as printers' marks¹³. However mirror-image monograms may appear elsewhere in the book.

This is the case of Johann Jakob Kürner the younger (*1653; active 1675-1729) and Leopold Johann Kaliwoda (1705-1775), two Baroque printers, who were regularly commissioned by the university to print *encomia* which were delivered at the annual celebrations of the faculties' and academic nations' patron saints. Mayer did not list any of their marks, and none appear on their printed title pages (fig. 4; 5). However, turning the page to the beginning of the main text, one can see that the upper part of the page regularly has a decorative woodcut heading.

In Kürner's print for the tercentenary of the celebration of St. Cosmas and Damian, patrons of the faculty of medicine¹⁴, this heading was composed of a special configuration (fig. 6). This involved branches with birds and flower children symmetrically enclosing a central medallion, which at first sight seems to feature an insect such as a butterfly, with a closer inspection it is clear that it is the printer's initials J(ohann) K(ürner), intertwined with their mirror-image.





fig. 4

fig. 5



fig. 6





Kaliwoda displays or conceals his initials in a more sophisticated way in the same genre of university prints (in the 1750s and 1760s).¹⁵ Just like Kürner, the image of interest is the woodcut heading at the beginning of the main text (fig. 7a). While Kürner's initials form the central element of the heading, Kaliwoda's inner picture is a hieroglyphic composition. It depicts an obelisk (a common symbol of eternity) with the vigilant crane keeping watch on its top. One the left of the obelisk (to the right for the reader) *Spes* (with an anchor as her typical attribute) endures patiently a heavy shower of rain. On the opposite side, a personification of Austria (with the so-called "Bindenschild") enjoys bright sunshine. This central element may reappear as a tail ornament at the end of the text (fig. 7b).

It is the frame which is important here, as it is formed by intertwined initials J(ohann) L(eopold) K(aliwoda) and their mirror-image. The image is a visual riddle, which deliberately misleads the reader and viewer, whose attention is distracted by the detailed picture inside, and is likely to overlook the frame.



fig. 7b

In addition to the signing function, there appears to be a kind of "metamessage" conveyed by the whole composition. Taking into account the printer's intermediary position between writer and reader, a possible interpretation is that the printer presents his work as the frame for the message of the text and its author. As soon as the reader becomes aware of the nature of the frame, he may reflect upon the importance of the printer's work which is easily overlooked but shapes the text and thus influences, even controls its perception.

Unfortunately, there does not appear to be any regularity in Kaliwoda's usage of these mirror-image framed elements. It might seem likely that they would introduce speeches in praise of Saint Leopold, patron of the Austrian academic nation, and Saint John the Evangelist, patron of the faculty of theology, as these were Kaliwoda's own patron saints. But the same heading can be found in speeches dedicated to Saint Catherine¹⁶, patroness of the faculty of arts, and Saint Ursula, patroness of the *natio Rhenana*.¹⁷ It is possible that the frequency in these elements recur in university prints may be due to their particular structure. University information may fill the title page with a kind of corporate design, leaving no room for an elaborated device. Instead the printer could take advantage of a common element of book decoration which he was free to design. However, this explanation is not completely satisfactory, as the monogram frame



fig. 8

made its first appearance almost two decades earlier, at the beginning of a funeral oration delivered by the Jesuit Sigismund Calles for Emperor Charles VI in 1740.¹⁸ In this case the medallion is filled with a prospect of Vienna (fig. 8). It is clear that only a bibliography of Kaliwoda's entire production will clarify this issue.

Are these monograms printers' devices? Traditionally, they would not be seen as printers' devices. But if it is considered that they were clearly inspired by devices, and most importantly, do not differ from printers' devices in functions, they would need to be included in any future database.

A printer's life told by his device: Johann Thomas Trattner

Johann Thomas Trattner (*1717; active 1748-1798) was the most famous Baroque printer in Vienna, notorious for his unauthorized reprints of contemporary German authors.¹⁹ An orphan boy from the then Hungarian village of Jormannsdorf (today part of Bad Tatzmannsdorf / Burgenland), he started his career as a typesetter at van Ghelen's and acquired Johann Jakob Jahn's printing office in 1748. He consolidated his business by publishing cheap schoolbooks and was appointed court printer in 1752. Imperial favour won him exceptional privileges, (such as the establishment of paper mills and a type-foundry), which
assured his outstanding position in the Hapsburg territories. At the same time he climbed the social ladder, and was styled the prince of printers. At different occasions he received dedications of encomiastic prints as would befit a prince. The most complete collection is preserved in the archives of the Salzer holding. Trattner's grandson sold the press to Carl Ueberreuter, whose heirs passed it to Mattaeus Caspar Salzer in 1866.²⁰

Trattner's device exists in several versions in woodcut and copper plate, although Mayer distinguishes only three. The central scene is a printing shop, enclosed between two or four columns, surmounted by Hapsburg crowns. The basement steps may be inscribed with the Latin motto *labore et favore* (through hard work and imperial favour). The personification of typography leans against a type case, above an eagle carries a banderole with the motto *altius*, which, in the two columns version at least, seems reminiscent of Charles' V famous *plus ultra* (fig. 9).







When Trattner was promoted to the equestrian nobility in 1764, his employees and colleagues of the printers' guild offered him the first of a series of congratulatory prints:²¹ Ode auf den Edlen Heil. Röm. Reichs-Ritter Johann Thomas von Trattner, als Er von Seiner Röm. Kaiserl. Majestät zu diesem Stande erhoben (Wienbibliothek C-18558). A full-page engraving, signed M(arkus) Weinmann, accompanies an encomium in German (fig. 10). In this engraving, the personification of typography stands in a printing office with putti performing various tasks of book production. In the upper part, the scene shows an allegory of the Holy Roman Empire (Maiestas imperii Romani) handing down the patent of nobility. On her left, Minerva, goddess of handicraft and the arts, presents Typography with Trattner's motto labore et favore. Typography stretches out her arm to receive this paper which constitutes a link between the two halves of the engraving, as labour in the lower part is rewarded by heavenly favour, represented by the country's authorities. The Virgilian quotation below the scene (Aeneid 10,467 Sed famam extendere factis, hoc virtutis opus - to prolong life's glory by great deeds is virtue's endeavour) claims that high quality craftsmanship is entitled to the fame traditionally reserved for heroic exploits.

In 1775, when Trattner made his son Joseph Anton his partner in the printing business, the pictorial decoration of a poem (*Feyerliche Wünsche an den Herren Joseph Anton Edl. Von Trattnern, als ihn sein Herr Vater … zu Führung seiner Kunstgeschäfte sich zugesellet*) keeps closer to the mark. The heading of the first page (signed Johann Ernst Mansfeld, 1738-1796; fig. 11) shows Trattner junior climbing the steps to the printing office, as the personification of typography (leaning against the type case as in the mark) invites him into the printing shop, making welcoming gestures. The eagle is another element derived from the device, displaying Trattner's coat of arms instead of the usual banderole. Though the text of the motto is not inscribed, Trattner junior obeys the exhortation *altius,* and the motto's inherent dynamics is turned into action. Similarly, Minerva appears in the sky, reminiscent of the earlier engraving, alluding to the same protection



fig. 11

and favour that his father enjoys.

In 1796, to celebrate Trattner's name day (*Auf das hohe Nahmensfest des … Herrn Joh. Thom. Edlen von Trattnern*), the eagle and the motto *altius* were set in the centre of an entirely new composition, purified of obsolete baroque allegories (fig. 12). The device is visualized by Trattner climbing the steep path to the temple of Virtue and Honour as the inscription says (*tendit in ardua virtus –* virtue aims for the heights; Ovid, *Ex Ponto* 2,2,111). By working hard he had won the favour of the monarchs, with *labore et favore* he could reach the top.

In 1798, when Trattner looked back upon 50 years of printing (*Zum frohen Andenken des fünfzigsten Jahres das Joh. Thom. Edler von Trattnern des heiligen römischen Reiches Ritter, … als Druckerherr und Prinzipal feyerte.* ÖNB 209.837-D), there is a return to an idealized printing office run by putti. Typography (now in front of a press) crowns Trattner's bust with a flower wreath (fig. 13). The vignette recurred almost identically when Trattner's grandson took over the company after his grandfather's death in July 1798 (*Zur frohen Feier als Johann Thomas Edler von Trattnern … den 12.Mai 1802 die Stelle seines seligen Grossvaters als Druckerherr und Prinzipal antrat.* Wienbibliothek 18559 C). Here Typography has metamorphosed into Divine Providence, securing the press and protecting Trattner junior, symbolized by the phoenix on an altar of





fig. 12b



fig. 13



fig. 14

Conclusion

Aion/Eternity which has replaced Trattner senior's bust (fig. 14).

The illustrations in these five prints gradually transform Trattner's device, or single verbal and pictorial elements, into narrative. In designing a picture story, they clearly respond to the claims of social prestige expressed by the ambitious imagery of the device, with a summit of self-confidence reached in 1802. The phoenix on the globe is found on imperial medals, and the allegory of Divine Providence in a similar pose is more commonly used to represent heaven caring for the House of Hapsburg than for a printing and publishing company.

Given the present state of research, it might be too early to deal with what could be called fringe phenomena. On the other hand, if we take them into account at this early stage, it will be possible to find solutions on how to add these items in a database in progress. Though their diversity will be a real challenge for a database, the relatively small number of "regular" devices in the early modern period in Vienna will actually encourage addition and adaptation. Furthermore, including devices in the context of various strategies of authorizing, advertising and social self-representation might add greatly to the value of a database, especially regarding interdisciplinary studies.

Notes

¹ There is a single-leaf collection of about 500 European printers' devices in the MAK (Museum für Angewandte Kunst / Museum of Applied Arts, Vienna), accessible on the web via "ornamental prints" (http://www.ornamentalprints. eu/de/info_mak.html). The collection was assembled in the 19th century with a view to documenting changing styles in book decoration, but also to provide sources of inspiration for contemporary artists. It was not meant to satisfy the demands of book history.

² Alte Wiener Buchdrucker- und Verlegerzeichen (Wien, 1926).

- ³ Miksch, Der Augustinerhistoriker Xystus Schier 1727-1772. Ein Beitrag zur österreichischen Gelehrtengeschichte am Beginn der Aufklärung (Würzburg: Augustinus-Verlag 1969).
- ⁴ Hofmann-Wellenhof, Michael Denis. Ein Beitrag zur Deutsch-österreichischen Literaturgeschichte des XVIII. Jahrhunderts (Innsbruck: Wagner 1881); Schmidmaier, 'Michael Denis als Bibliothekspädagoge', Könyv és könyvtar, 13 (1982), 149-158.

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Lang, Die Buchdrucker des 15. bis 17. Jahrhunderts in Österreich mit einer Bibliographie zur Geschichte des österreichischen Buchdrucks bis 1700. (Baden-Baden: Koerner, 1972); Paisey, Deutsche Buchdrucker, Buchhändler und Verleger 1707-1750 (Wiesbaden: Harrassowitz, 1988); Reske/Benzing, Die Buchdrucker des 16. und 17. Jahrhunderts im deutschen Sprachraum (Wiesbaden: Harrassowitz, 2007); Frank / Frimmel, Buchwesen in Wien 1750-1850 (Wiesbaden: Harrassowitz, 2008). Durstmüller, 500 Jahre Druck in Österreich (Wien, 1982) is largely dependent on Mayer for the early modern period.

Gollob, Winterburgers buchkünstlerische Beziehungen zu Oberitalien (Mainz: Verlag der Gutenberg-Gesellschaft, 1936); Grimm, Deutsche Buchdruckersignete des XVI. Jahrhunderts (Wiesbaden: Pressler, 1965), 55-58; Zykan, Die Holzschnitte in den Werken des Wiener Druckers Johann Winterburger (Wien: Prüfungsarbeit am Institut für Österreichische Geschichtsforschung (masch.), 1965); Wolkenhauer, Zu schwer für Apoll (Wiesbaden: Harrassowitz-Verlag, 2002), 98-99.

Gollob, Systematisches beschreibendes Verzeichnis der mit Wiener ⁷ Holzschnitten illustrierten Wiener Drucke vom Jahre 1460-1552 (Strassburg, 1925).

Elisabeth Klecker, Nach Mayer ... vor der Datenbank. Eine vorläufige ⁸ Zusammenschau von Wiener Druckersigneten 1500-1760. The booklet was distributed at the CERL workshop, Vienna March 2015.

TH APETH KAI NAYAΓHΣAMENΩ ΥΠΕΡΒΑΛΛΕΙΝ ΕΧΕΣΤΙ (by virtue's aid it is possible to overcome even a shipwreck). Hieronymus Arconatus, Carminum hactenus non impressorum farrago. Viennae Austriae: Nicolaus Pierius 1592 (ÖNB *38.E.68). It cannot be disregarded that the emblem could refer to the author who had travelled a lot (and made his travels, e.g. his stay in Crete, a subject of his Latin poems).

- ¹⁰ Only two prints using the image could be identified: Johann Heinrich Schmelzer, Arie per il Balletto a Cavallo. Vienna d'Austria: Matteo Cosmerovio 1667 (Getty Research Institute) on the title page; Nicolaus Avancini, Theodosius Magnus justus et pius imperator. Viennae Austriae: Cosmerovius 1654 (ÖNB 658139-C.Adl.1) as a tail ornament. Grimm, Deutsche Buchdruckersignete des XVI. Jahrhunderts. Geschichte, Sinngehalt und Gestaltung kleiner Kulturdokumente (Wiesbaden: Pressler, (1965), 182-186.
- ¹¹ Only two prints could be identified; in both the device is on the title page: Augustinus a Div. Thoma Aquinate, Constitutiones clericorum regularium pauperum matris Dei scholarum piarum. Viennae Austriae: Schilgen 1718 (ÖNB 43.Y.40); Ad anonymum de passionibus duarum rectarum sese intersecantium scitantem. Viennae Austriae: Schilgen 1720 (ÖNB 72.M.77). There is a slight inaccuracy in applying Alciato's verse to a bouquet of violets, as *ianthina* means clothing of the flowers' colour.
- 12

Heitz, Elsässische Büchermarken bis Anfang des 18. Jahrhunderts (Strassburg: Heitz, 1892), 114, pl. LVII.

- ¹³ The only specialized study on the subject deals with Hebrew books: Heller, Mirror-image monograms as printers' devices on title pages of Hebrew books printed in the seventeenth and eighteenth centuries. Printing history 40 (2000), 2-11 = Marvin J. Heller, Studies in the Making of the Early Hebrew Book. Leiden [u.a.] 2008 (Studies in Jewish history and culture 15), 33-43.
- 14

Joseph Paul Pock, Jubilaeum seculare in SS. geminis ex Arabia Cosma et Damiano panegyrico seculari celebratum (Viennae Austriae: typis Joannis Jacobi Kürner, 1699) (UBW 2000 /1699; ÖNB 79.D.143).

15

Ferdinandus de Fillenbaum, Panegyricus divo Leopoldo Austriae marchioni (Viennae: E typographeo Kaliwodiano, 1759) (UBW 2000/1759; ÖNB 300.159-C); Augustinus Engelsheim, Panegyricus divo Joanni evangelistae dictu (Viennae: E typographeo Kaliwodiano, 1759) (UBW 2000/1759); Carolus Teigel, Panegyricus divo Joanni evangelistae dictus (Viennae: E typographeo Kaliwodiano, 1765)

(ÖNB 240.688-D).

Franz Georg de Kees, Oratio de laudibus Divae Catharinae virginis et martyris ¹⁶ dicta (Viennae Austriae: E typographeo Kaliwodiano, 1761) (ÖNB 220.155-C).

Bernhard Ignaz Steiner, Panegyricus divae Ursulae virgini et martyri ... ¹⁷ dictus (Viennae Austriae: E typographeo Kaliwodiano, 1758) (ÖNB 303.543-C. Adl.6); Celestinus Schopper, Panegyricus divae Ursulae virgini et martyri dictus (Viennae Austriae: E typographeo Kaliwodiano, 1764) (ÖNB 240.694-D).

Oratio Funebris Ad Solennes Exequias Caroli VI. ... celebratas. 1740 (UBW ¹⁸ I-184954). There seems to be complete arbitrariness in the choice of vignettes for the *Annales Ecclesiastici Germaniae* by the same author (1756-69; UBW III-176449/1-6): The heading appears at the beginning of book 1 in volume 3; the tail ornament at the end of volume 4.

For his career and a history of the company see Castle, Geschichte einer Wiener ¹⁹ Buchdruckerei (Wien: Ueberreuter, 1948); Cloeter, Johann Thomas Trattner (Graz: Böhlau, 1952); Giese, Johann Thomas Edler von Trattner (Wien: Diss. (masch.), 1959) and Jaklin, Das österreichische Schulbuch im 18. Jahrhundert aus dem Wiener Verlag Trattner und dem Schulbuchverlag (Wien: Praesens Verlag, 2003) for a particular (most profitable) segment of his production.

I am grateful to Thomas Salzer for access to the holding's archives and for ²⁰ permission to take photos.

Reproductions are already in Cloeter (1952), but they are illustrative only.

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Marina Venier

Italian printers' devices databases: from edit16 to SBN and not least Mar.T.E.

The printer's or publisher's device has always functioned as a trademark, identifying the printer or publisher. At the beginning of the sixteenth century, a distinction appeared between manufacturing brands and trademarks. The latter, belonging to those who had invested capital, soon moved to the first page of the book, the title page.¹

The close link between the device and the material aspects of the book has led to scholarly attention on this element in the description of the hand printed book. In Italy, Emerenziana Vaccaro was the first to undertake an overview of sixteenth-century printers' and publishers' devices, although she limited her work to only one library collection, the Biblioteca Angelica, Rome.² Giuseppina Zappella followed with a monograph on devices in the sixteenth century.³

A major turning point came when early printed books were catalogued in the SBN.⁴ It is now possible to link the description of a device and its image in preestablished bibliographical sources to the bibliographic file. Additionally, it is also possible to link it directly to the image file in the SBN.

The number of devices described in this union catalogue, containing many libraries, has multiplied, overcoming chronological and territorial boundaries, and becoming an important tool for scholars and librarians.

Apart from the SBN, there are two other databases, EDIT16 (Census of Italian 16th Century Editions) and Mar.T.E. (Marche Tipografiche Editoriali). In EDIT16, the link to the device has added an important element to the bibliographic description of the census, while in Mar.T.E. seventeenth-century Italian devices are described and linked to their images, important for comparison and identification.

The devices in ${\rm SBN}^{\rm 5}$

Ricerca marca > Sintetica marche > Analitica > Dettaglio							
Liv.	71						
Citazione standard	0 9	27	Q 71		v	539	
Mid	BVEM0003	31:					
Descrizione II genio dell'Industria salva la Fortuna dalle acque. In una comice figurata. Motto: Fortuna forti sublevanda Industria.							
Motto	Fortuna for	ti sublevanda l	ndustria				
Parole chiave	FORTUNA	FOR GENI	0	INDUSTRIA	FC	ORTUNA	
Nota							
Data inseri	m. 2009-05	5-15 Ultimo a	ogiornam.	2014-07-04			

fig. 1

cheda: 2/149	Scheda Unimarc Scarico Unimarc Scheda Marc21 Scarico Marc21
Livello bibliografico	Export Endnote Export Refworks Citazioni OAggiungi a praferiti Monografia
	Testo a stampa
	Panvinio, Onofno <1529-1568>
	Onuphrii Panuinii De primatu Petri & Apostolicæ sedis potestate libri tres contra Centuriarum auctores
Pubblicazione	Veronæ : apud Hieronymum Discipulum, 1589
	[44], 330 [i.e. 332, 4] p. : 4 ^a
Note generali	- Marca (V539) sul front
	Cors. : rom
	- Segn.: #* 2#* 3#* #* #* #* A-2T* 2V# x*
	- Carta x2 bianca
	- La p. 327 erroneamente ripetuta nella numerazione; carta 2T4v. omessa nella numerazione
	 Il fasc, ZV, contenente aggiunte al testo, è stato inserito successivamente.
	· Iniziali xil.
Impronta	· uan-tus. s-n-p(Ep (3) 1589 (R)
Marca editoriale	Il genio dell'industria salva la Fortuna dalle acque. In una comice figurata. Motto: Fortuna forti sublevanda industria. (Q71.\\539.0927) [motto]: Fortuna fo sublevanda industria Sul front.
Variante del titolo	De primatu Petri et Apostolicae sedis potestate libri tres contra Centuriarum auctores.
Nomi	- [Autore] Panvinio, Onofrio <1529-1568> + scheda di autorità
	· [Editore] Discepolo, Girolamo + scheda di autorità
Luogo normalizzato	Verona
Lingua di pubblicazione	LATINO
Paese di pubblicazione	ITALIA
Codice identificativo	ITNICCU/BVEE\006296

fig. 2

The National Library Service (Servizio Bibliotecario Nazionale - SBN) is the network of Italian libraries promoted by the Ministry of Cultural Heritage and Activities and Tourism, with the cooperation of regional administrations and universities. The libraries taking part in SBN are grouped together into local hubs (POLI,) including a variable number of libraries which manage all their services through automated procedures. The hubs are linked to the SBN Index (INDICE SBN) system, the core of the network. This system, managed by ICCU, the Central Institute for the Union Catalogue of Italian Libraries and Bibliographic Information, manages the collective catalogue of the publications acquired by the SBN libraries. Through SBN procedures, libraries can work independently while being integrated in a cooperative system based on a national network. The main feature that makes this integration possible is shared cataloguing. Indeed, within the SBN system, any given document is catalogued only by the first network library that acquires it. All the other libraries that need to catalogue the same document can capture its bibliographic description, already extant in the Index, and add their own location.

The database is enlarged online by libraries carrying out shared online and remote cataloguing through the loading of the inserted data in accordance with the SBN-MARC protocol, thus augmenting the services at the disposal of users. The index is currently being opened to non-SBN library systems requesting certification, and is being set up for different levels of participation in the National Library Service, according to different cooperation levels. These might include data capture only, location of the library's own holdings, addition of new cataloguing descriptions, and online correction of information through the direct interface with the Index. In the union catalogue of SBN, the database for early printed material contains records for editions from the early days of printing up to 1830. As of January 2015, it contained 870.662 titles. In the database it is possible to create records of the printers' or publishers' devices with linked images and link them to the bibliographical record. In the search options, the parameter "marca" ("device") makes it possible to select publications by a given publisher over a certain period, through description of the image, motto - if present - and identification code for the device.



The devices in EDIT16 database⁶

fig. 3

The EDIT16 database was created as part of the national Census of Italian 16th Century Editions project, carried out by ICCU, the Central Institute for the Union Catalogue of Italian Libraries and Bibliographic Information. It aims to record Italian editions printed during the 16th century and also to survey the related holdings at a national level. It contains editions printed between 1501 and 1600 in Italy in any language, as well as those written in the Italian language and printed abroad. Participating institutions currently include 1,571 Italian libraries, the State Library of the Republic of San Marino and several libraries belonging to the Vatican City, including the Vatican Apostolic Library. The Census of these editions, which is being carried out in alphabetical order, is in progress. As of January 2015 the database contained:

- 67,711 bibliographic records, of which 27,973 had images of title-page, colophons and other pages of interest
- 5,689 records relating to publishers, printers, booksellers, etc., of which 2,600 refer to the preferred form of names of printers. Publishers are supplied with biographical notes, bibliographical references, information on date and place of activity, addresses and/or emblems, and the devices used. They also contain bibliographical references and names documented both in reference sources and in the editions recorded in the database
- 2,520 publisher/printer devices. Records relating to devices are supplied with a description of the main figurative symbolic elements in addition to indications on the relevant publishers, dates of use (both generic and regarding single publishers) and to any existing printed mottos. All devices are also supplied with images.
- EDIT16 DB also contains 3,946 links to digital copies and 56,915 images, 49,567 of which are related to titles, 2,725 to marks and 4,623 to dedications.

Each device is characterized by one or more standard citations which identify it unambiguously. The standard citation identifies the figure of the device within pre-established bibliographical sources and consists of an alphabetic character that identifies the repertory, and numerical characters identifying the device within the repertory (number of the figure). E.g. *Z534 (Z=Zappella 534=number* of the device in the repertory). A device may have several standard citations because it may be present in one or more of sources. In the database there are also printers' devices with standard citations beginning with the letter U. These are devices (not reported in the mentioned list) that are collected and described by the Census staff. The search can be carried out through description, standard citation, motto, name of publisher etc. In the 'description' field it is possible to include one or more words regarding the figurative elements present in the publisher's device. In the field "standard citation" it is possible to include both

THE DEVICES STANDARD CITATIONS

- A F. Ascarelli, La tipografia cinquecentina italiana. Firenze, Sansoni Antiquariato, 1953.
- T F. Ascarelli M. Menato, La tipografia del '500 in Italia. Firenze, L.S. Olschki, 1989.
- Q F. Ascarelli E. Vaccaro, Marche poco note di tipografi editori italiani del sec. XVI dalla raccolta della biblioteca universitaria Alessandrina in "Miscellanea di studi in memoria di Anna Saitta Revignas". Firenze, L.S. Olschki, 1978, p. 29-52.
- K P. Kristeller, Die italienischen Buchdrucker- und Verlegerzeichen bis 1525. Strassburg, J.H. Ed. Heitz, 1893 (ripr. facs.: Naarden, A.W.Van Bekhoven, 1969).
- V E. Vaccaro, Le marche dei tipografi ed editori del secolo XVI nella Biblioteca Angelica. Firenze, L.S. Olschki, 1983.
- Z G. Zappella, Le marche dei tipografi e degli editori italiani del Cinquecento. Milano, Editrice Bibliografica, 1986.
- O Mar.T.E.
- U devices (not reported in the list of bibliographic sources) that are collected and described by the Census EDIT16 staff

fig. 4

the character that identifies the repertory and the number within it, e.g. Z534 (Z=Zappella, 534=number of the device in the list).

In the field "motto" it is possible to include one or more words present in it. Finally, it is possible to search by the "publisher's name" (nome dell'editore).

Presently only around 9.000 bibliographical records out of 50,000 monographs present in the database have links to devices because these were not initially envisaged in the original EDIT16 rules. Hence the information concerning the publishers who used a given device and the dates when they were used is not complete. The information does not derive from external sources but from the links between devices, editions and publishers present in the data base.



The devices in Mar.T.E. (Marche Tipografiche Editoriali)⁷

fig. 5

This database contains records on the devices of printers, booksellers and publishers in seventeenth-century Italian editions. Mar.T.E. - Marche Tipografiche Editoriali (devices of printers and publishers) - was conceived at the same time as the "Seicento" (seventeenth century) project which carried out cataloguing "book in hand" and online inputting into the SBN database. The focus was on early printed books, covering around 30,000 seventeenth-century editions from the National Central Library of Rome. The standard citation in SBN records is "O", followed by the number of the record.

There are three ways to access MARTE: through the specific url, through the BNCR's OPAC, or through the new BNCR's internal ERMES Interface (to be launched by 2015). This database has been enlarged by the library and, thanks to the function "cataloguing", it is open to external contributors. The BNCR checks the proposals before inserting them in the database. Furthermore, with the function "Modify", it is also possible to suggest corrections and integrations to records that are already in the database as well as new bibliographical information concerning devices, printers, publishers or booksellers. To take part in cataloguing in MAR.T.E., users need to register.

The record for each device includes the picture, the description, the keywords

as well as the name of the printer, the publisher and the bookseller related to the device. Other details include the place, the final date of usage derived from the examined editions and then the dimensions of the mould, and the bibliographical reference. The iconclass code, which is included in the database, means that the database can be consulted without any language barriers.

Some Problems arose in the creation of Mar.T.E. Devices, particularly in this period, not only pose unanswered questions but also raise interesting conundrums. It is not by chance that the logo of the database is a device, or, better, a "probable" sixteenth-century device, attributed to the Venetian printer Comin da Trino but probably the device of the writer Marco Guazzo, a nonprofessional publisher of his own works.

A major problem is incorrect identifications. This is the case of the device (Mercury and Pan. Motto: *Fortasse licebit*) attributed sometimes to Nicolò Tebaldini from Bologna and sometimes to Nicolò Schiratti from Udine. But, after an analysis of the editions, including those of other printers, it seems to be the device that Fortunio Liceti, author of medical, philosophical and erudite works, used on



the title-pages of his works from 1606. Even if it is not technically a device, it was nevertheless included in Mar.T.E., but the record has no printer's name.

The habit of signing shared editions only with a device continued through the



fig. 7



seventeenth century. However the lack of indexes and scholarship on this period make it difficult to see clear evidence of this kind of collaboration. In the *Isaccio tragedia* by Francesco Contarini, Venice 1615, the collaboration between Giovan Battista Ciotti, who signed the edition, and Antonio Pinelli, the owner of the device, is clear.

On the contrary, the cooperation inspired by the title page of *Iusti Lipsii & Iohannis Voelli … De ratione conscribendi epistolas, utilissimae praeceptiones,* Venice, 1618, seems unlikely. The title page is internal to a main work (which has the device of Valentini). The internal title-page is signed by Giorgio Valentini but with the device of Comin da Trino (the only one attributed to him). It was printed with the same mould at the one used for the edition of Paris' *De Puteo De Syndicatu*, Venice 1556, 62 years before. The mould of 1618 shows wear. It is obvious this is not a case of a shared edition between Comino and Giorgio Valentini, but rather a re-use of the old block through Giacomo Vidali, Alessandro Griffio and Matteo Valentini, Giorgio's father.





fig. 10

In this example, it is hard to determine the meaning of the device. Is it still a device or simply a decorative element?

Typographical material, acquired for different reasons by people other than the original owner, belonged to the people who had bought it. It is necessary to consider whether the decision to use that device in that specific position gives it its original legal value. It has been noted that it cannot be considered legally as a device, as it does not have the function of indicating where the product comes from, since the company did not exist anymore, but only has an illustrative function. In Mar.T.E., the first interpretation has been chosen, with the appropriate explanations.

In the seventeenth century, the reutilization of printers' and publishers' devices, mostly from the sixteenth century, was very common and had a purely decorative purpose. In this context we can consider the two following examples. The edition of *I sei libri dell'Architettura di Sebastiano Serlio*, published by Combi & Lanou in Venice, in 1663, with the device of the two editors (the Minerva) on the titlepage contains inside eighteen devices from more or less well-known Venetian booksellers of the previous century, such as Paolo Manuzio, Melchiorre Sessa or Gabriele Giolito de'Ferrari. These eighteen devices are used at the end of

the text, most probably as decorative items. The Venetian publisher Giovanni Giacomo Hertz uses in his edition of the Opere of Orontio Fineo, Venezia, 1670, a boat as his device on the title-page, and the devices showing Peace, formerly belonging to Francesco Bolzetta, and of the star, formerly belonging to Ognibene Ferretti, in the text. These cases of "surviving material" are indicated in Mar.T.E. The heading under the printer or the publisher and the indication of the place are omitted, but a detailed explanatory note is added. These kinds of cases help document the history of transfers and amalgamations of printing shops or illustrate further the commerce in used typographical material.

I wish to emphasize two elements concerning the structure of Mar.T.E. database. The first is the introduction, in the search screen, of the iconclass code. Iconclass is a standard for the classification of iconographical documents, created by Professor Henri van de Waal in the 1950's and published for the first





ferentemente per tutti i calculi aftronomici a culata accuratifimamente dal detto Orontio.





fig. 12

time in English in the years 1970-1980. He described figurative representations through decimal codes. This allows normalization of the contents, useful for both the collection of data during cataloguing and the retrieval of the same data, when searching the database. Furthermore, the alphanumeric descriptors and the multilingual version make iconclass a classification system which is language independent. In this way, the possibility of searching remote databases, each in their own national contexts, over language barriers, is growing.

Secondly, Mar.T.E. is a database in progress, whose growth, updates and improvement is the responsibility not only of the Biblioteca Nazionale Centrale di Roma (BNCR) but also, and for the most part, of the academic community of librarians and non-librarians. Cooperation is in fact the only instrument we have to fight the endemic decrease of human and financial resources in the field of cultural heritage. The external user, once registered, can also propose the introduction of new devices or the modification of existing records or give supplementary information on existing studies concerning devices, printers, publishers or booksellers.

Mar.T.E. has the possibility of becoming an effective working tool on the seventeenth-century Italian book trade for the academic community. In the field of cataloguing, it follows all existing repertories that contribute to the standardization and uniformity of the data included in the bibliographical descriptions. The shared catalogues allow data to be standardized and to conform.

Stall To Stall To S	MAR.T.E. Merche Tipografiche Editoriali	E Stell Pre Stell Tre
To take part in Cataloguing in MAR.T.E. you have to l	be registered. You simply have to send the form below, duly fulfill	led. You will receive your access Password by E-mail
Name (*)		
Sumame (*)		
E-Mail (*)		
Address(*)		
City		
Institution	State Barrier	
User Name (*)		
I agree that my personal data are processed and used only to	have access to the Cataloguing process in MAR.T.E.(*)	a there address

fig. 13

Furthermore, as many copies are checked against the same bibliographical description, the description is likely to be a complete description of the complete copy. But good shared catalogues survive only thanks to a very strong spirit of cooperation, since "quality" is often in opposition to doing things cheaply and rapidly.

Notes

- ¹ P. Veneziani, 'Il frontespizio come etichetta del prodotto', in Il libro italiano del Cinquecento: produzione e commercio (=Exhibition catalogue) (Roma: Istituto poligrafico e zecca dello Stato, 1989), p. 99-126.
- 2

E. Vaccaro, Le marche dei tipografi ed editori italiani del secolo XVI nella Biblioteca Angelica di Roma. Firenze: L. S. Olschki, 1983.

3

G. Zappella, Le marche dei tipografi e degli editori italiani del Cinquecento (Milano: Editrice bibliografica, 1986).

⁴ The National Library Service (Servizio Bibliotecario Nazionale - SBN) is the network of Italian libraries promoted by the Ministry of Cultural Heritage and Activities and Tourism, with the cooperation of regional administrations and universities. The SBN Catalogue is the collective catalogue of the libraries participating in the National Library Service and it is enlarged online by libraries carrying out shared online and remote cataloguing.

- ⁵ http://www.sbn.it/opacsbn/opac/iccu/antico.jsp
- ⁶ http://edit16.iccu.sbn.it/web_iccu/ehome.htm
- ⁷ http://193.206.215.10/marte/

Neus Verger Arce The "Printers' Devices Database" of the University of Barcelona

Although the main subject of this conference is on the images of printers' devices, I believe that an introduction to the "Printers' Devices Database" is necessary.¹ Image processing is integrated into the printer records and the connections between the printer and their devices are inseparable.

The "Printers' Devices Database" started in 1998. Currently (November 2015), there are 1689 printer records and 2847 device images. The geographical and chronological framework is wide, as our collection includes books from *incunabulae* to 1820. This is the date when we mark the division between early printed books and modern book processing.

The basic instrument for the database is the University of Barcelona Catalogue², from where Authority Records of the printers are imported. The catalogue works with the Marc21 format and uses the Millennium program. Until recently, the Anglo-American Rules (Second Edition) were the guidelines used for writing of bibliographic and authority records, but this pattern has been substituted by the Resource Description and Access from the Library of Congress.

The program of the Database is a CGI type, which the computer scientists of the University have adapted for both this database, Printers' Devices, and the Former Owners³ database, another database created by the Early Printed Book and Manuscripts Library of the University of Barcelona. Both databases have the same structure.

The text of the Printers Authority Records is linked to the cataloguing process of the early printed books. Normally, this task is organized by chronological blocs. For example, last year cataloguing of sixteenth-century books was finished. Currently, we are revising the incunabula records, and we will combine this work with the cataloguing of those seventeenth- and eighteenth-century books that still lack bibliographic cards. The cataloguers of early printed books create the Authority Records for all the printers, and the Authority Record is expanded with information about the image of these printers' device, if they have any. It will be precisely these records that will pass to the database. The importation of the Authority Records is not complete, since some fields are rejected for the database.

The database is updated weekly with new printer records and images.

In the UB Authority catalogue⁴ all printers are listed, whether they have devices or not. In the OPAC version of this catalogue, all printers are listed, but the specific local fields for the database which do not follow standard rules are not shown.

The data of all printers introduced into the UB Authority Catalogue have been introduced into the CERL Thesaurus⁵. In November 2012, more than 2.000 printer authority records were uploaded to the CERL server and two years later new and modified records were added.

After a trial period, the printer records could be seen in their entirety in the CERL Thesaurus with all corresponding fields, including those that present devices with the corresponding image, as is the case, for example, with the printer Abraham Usque from Ferrara.⁶ General fields include the printer, information and a link of the devices, and finally the sources and the variant names. In all records there is a link to the "Printers' Devices Database". The intention is to update the CERL Thesaurus twice a year.

Furthermore, Catalan printers have been moved to the collective repository "Memòria Digital de Catalunya"⁷ which compiles different digitized collections connected to Catalan heritage. The great advantage of this repository is that the printers are recoverable from Google which is not possible with the printers in the database. Navigation through the different levels of the record poses significant problems as it is an image repository and the structure does not allow for accurate research. Regarding the "Pinters' Devices Database", I will present its structure:

- A Home page⁸ with the explanation of its nature and operation
- A Search page⁹
- A Bibliography page¹⁰ which includes a list of both printed and digital reference works that have been used to write the printer records. These key works help assign the accepted entry as well as providing important biographic data. It is a long list which includes the actual authority catalogues as well as other more specific works about printers or other library catalogues. In the case of being unable to find the printer in any reference work, the catalogue of the UB can become the main source to write the printer Authority Record.

This bibliography is also accessible from each printer record.

There are Catalan, English and Spanish interfaces. In the Spanish and English ones, only the names of fields and the content of the field "Term" is translated. The rest of the record is in Catalan.

The printer records of the database include the following fields which have a parallel structure to the Authority records in the catalogue.

		r a l'Aprenentatge i Investigació	B Universit	Universitat de Barcelona	
		Printers' Devices			
Home	Search	Bibliography	In Catalan	In Spanish	
		Words or phrase: Ind records matching: All words (AND) Any word (OR) Exact phrase Browse selected index		vpe: • ARCH Heb	
-		e de Recursos per a l'Aprenentatge i la Investig	ació, All rights reserved		

I will use the example of Laurent Houry to show how the database works. Some general fields are:

- Search in catalogue: As all the bibliographic records have a secondary entry for printers, these appear in the author index with this designation added at the end (impr.), so they can be distinguished from the authors. So, this link goes to all the bibliographic records of this printer.
- Persistent link to this record
- Printer: corresponds to the 1xx field of the Authority Record.
- Alternative name: names not accepted, corresponding to the 4xx field of the



Authority Record.

- See also (in case of associations or lineages): corresponds to the 5xx field of the Authority Record.
- Country: corresponds to the first subfield of the 370 field of the Authority Record. It is possible to navigate to other printers of the same country.
- City: includes the city of activity followed by the name of the country in case
 of foreign printers or the name of the autonomous community in case of
 Spanish printers. Followed by the period of the activity, that is, the first and
 the last year of activity. Corresponds to the 370 field of the Authority Record.
 The first part of this field, the city, permits the navigation too.
- Note: normally contains biographic information, which will be in Catalan. Corresponds to the local 678 field in the Authority Record.
- Ensign: corresponds to the local 667 field in the Authority Record, in case the printer has one.
- Source: It includes citations from where the information about the printer has been taken. It corresponds to the 670 field in the Authority Record. In the database's initial stages, it only included the name of the source, put in the same field. Now we complete this field with the brief citation of the source and the exact form of the printer in it. Each source is put in a different line. The complete citations are available in the Bibliography page. We can find both models in the database.

A dividing line separates this general information about the printer from information about its devices, all kept in the local 856 field of the Authority Record with a specific structure that we have organized in different subfields in order to process them to present the database.

Another example to show this part of the authority record is the Esteve Liberós record.



fig. 3

- Device/Motto: First, the description of the device in free text in Catalan. Secondly, there is the transcription of the motto if present, and thirdly, a note field if necessary. This note is normally reserved for the red ink devices and for the devices used by different printers. It is also written in Catalan.
- Mark term: this field is displayed in the language selected at the beginning of the search (Catalan, Spanish or English). It contains the key terms of the image, not more than 4. The three different languages are introduced in the 856 subfields reserved for them.

These terms follow an index created by us that we have in a excel file shared by all the cataloguers.

The following illustration shows the first page of this file, distributed in 3 columns, by language.

Català	Castellà	Anglès
abecedari	Abecedario	alphabet
abella	Abeja	bee
Abraham	Abraham	Abraham
Abundància	Abundancia	Abundance
àguila	Águila	eagle
àguila bicèfala	águila bicéfala	Double-headed eagle
aixada	Azada	hoe
ala	Ala	wing
altar	Altar	altar
alzina	encina	oak
àmfora	ánfora	amphora
Amistat	Amistad	Friendship
àncora	áncora	anchor
ànec	Pato	duck
anell	anillo	ring
àngel	ángel	angel
Anunciació	Anunciación	Announcement
anyell	cordero añal	yearling lamb
Apollo	Apolo	Apollo

	-	
arada	arado	plow
aranya	araña	spider
arbre	árbol	tree
arbre de la ciència	árbol de la ciencia	science tree
arbust	arbusto	bush
arc de Sant Martí	arco iris	rainbow
arcàngel Gabriel	arcángel Gabriel	Gabriel (archangel)
arcàngel Rafael	arcángel Rafael	Raphael (archangel)
Arió	Arión	Arion
arquitecte	arquitecto	architect
Art	Arte	Art
artesà	artesano	artisan
Atenea	Atenea	Athena
Aurora	Aurora	Aurora

Each time that a new term is added the file is updated. At the moment, the list contains more than 550 terms.

In order to see this list in one language from the database you just need to search by the field "Term mark" and select the option "Browse selected index".

From this term in the printer record we can arrive to all the printers' devices that use the same motif in the device. For example, from the term "salamander" we reach all the printers that use a salamander in their devices.

The incorporation of these device terms through this list took some years to be completed. Because of this, there is not a field for all the printer records yet. It is being introduced gradually.

CRALUS SELLUS	Centre de Recursos per a l'Aprenentatge i la Investigació	U Iniversitat de Barcelona
	Printers' Devices : Search results	
	You searched: Mark term = [salamander] 34 selected.	
	[From 1 to 10 of 34 selected] Sersanders, Alexandre	
	Cramer et Perachon Tradate, Melchiorre	
	Tournes, Samuel de, 1669-1752	
	Gabriel Graells i Girald Dòtil Ritter, David, m. 1721	
	Perachon, Philibert, <u>1667-1738</u> Frères Cramer	
	Philibert, Claude	
	Moreau, Denis	
	New search ? Help	

```
fig. 4
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At the moment we do not follow any controlled vocabulary and it does not have thesaurus structure, therefore there are no "see" or "see also" references.

We are conscious of the structural and intellectual weakness of the list. The introduction of the terms is in some way quite intuitive. We detect the principal motifs of the image and, for the moment, we put them in the list to have a minimum control over the terms used.

In cases where the motifs can give duplicated or parallel concepts, we try to reach consensus on them between us, and try to always use the same term, but some uncertainty always remains. Moreover, we must have clearer criteria about the motifs included in this field. Just the main ones? Or also the secondary or even those that are in the ornamental context?

Using the UB thesaurus was considered, but our experts have advised against it due to the difficulty of mixing a textual thesaurus with an iconographic one. One of the guidelines that is clear is the introduction of the terms in singular. But it is obvious that some standards are missing, and there is the need to create coherent vocabulary. The plan is to migrate these terms into a normalized list. The following field of the printer record is the image. It comes from the subfield that contains the server URL where the image is kept. The name of the image will always be the Authority Record number followed by a letter a, b, c, etc. depending on the images that we present from the same printer.

In the initial stage of the database, the image was done without a ruler and with a poor quality black and white scanner. In the last years, we have captured the images with a camera and with the incorporation of a ruler, as we believe measurements of the devices are useful for its identification. Progressively, we are replacing the old images with new ones.

At the end of each record, there is the link to the Bibliographic Record of the catalogue from which we have taken the image. This field is not included in all the printer records since, at the beginning of the database, this information was put in the copy record of the catalogue, without giving this link. The intention is to incorporate this field into all the records, but this task is very time-consuming.

In case one printer has different devices, there are two processes. The first one is for the devices of a printer that are iconographically the same but with little variants. In this case we put them together in the same 856 field with the different URLs, so they can be seen one after another in the same divisor line. An example of this case are two devices used by Janon Carcain,¹¹ which are iconographically the same but different in measures.

However, if one image is totally different to another, or if one of them has a motto which the other one lacks, each one will be in a 856 different field and therefore the display will be separated by the divisor line. An example to illustrate this case is the device of Bernardino Vitali.¹²

The search in the database can be done through different fields and in four different ways: searching by all the words introduced, this means using the AND operator, using the OR operator, the exact phrase and finally by browsing the selected index, which we have introduced as the defect search.

The different searches can be done by these different fields:
- Printer: Here we will obtain the accepted as well as the unaccepted forms.
- Device/Motto: Here the description is in Catalan, so the search has to be in this language. The motto can also be found here.
- Ensign: In the original language.
- Country: In Catalan.
- City: The search can be done by the name of a city in Catalan.
- Mark term: In this case it has to be done in the language selected at the beginning as it refers to the list of terms.

The last possible search is by keyword of any place in the printer record.

The principal shortcomings of the database are the following. Some issues are technical, and at the moment there are no short-term solutions in some cases or possible changes are being studied for others. The main three computing problems are the following:

After an index search through the fields that include different printers, these do not appear in alphabetical order but in a random order. This is a programming problem that for the moment remains unsolved. For example, if we search Venecia in the city field,¹³ we can see this problem.

Centre de Recursos per a l'Aprenentatge i B Universitat de Barcelona la Investigació **Printers' Devices** In Catalar In Spanish Hom Words or phrase: earch type Printer Find records matching Ensign All words (AND) City Any word (OR) Country Exact phrase Mark term Browse selected index Keyword

Another important problem is that the printer records are not available through

Google search. From next year onwards all the UB catalogue will be included in one collective catalogue of the main libraries in Catalonia. It is still unknown if the new system will adopt a linked open data system, but if this is the case, this problem will be solved.

It is not possible to search with two different fields at the same time, for example by city and mark term. This problem can be solved by a modification in the program but for the moment we are not sure if it is necessary, as a keyword search can achieve the same results.

It is not possible to search by a chronological period.

Another kind of problem is due to the introduction of the records.

There is no standardization for all the printers' entries. As the database is quite old and some criteria for the introduction of the printers' names have been changed, these different ways are reflected in the database. I refer to the association and printers entities, in particular.

For example, initially in case of associations, different printers were introduced separately. After, they were considered as just one entry.

Another example is the entry for a printer's heir. In the beginning, the input was back to front, that is, first the name of the printer followed by the designation of Heir, "hereus" in Catalan (for example, Gast, Matías, hereus).¹⁴ Now the criteria has changed to the direct order, this is, Heir and the name of the printer (Hereus de Joan Pau Martí).¹⁵

Finally, there is a structural problem in the database, regarding the application of an iconographic classification for the mark terms. We are examining alternatives, before choosing one that is the most appropriate, and the adapting the database to this new vocabulary.

Apart of the new vocabulary, writing a good mark description with the adequate terms is a fundamental issue. It would be helpful to have adequate resources and a specialist contact to ask on iconographic doubts, in order to keep the quality of the "Printers' Devices Database".

Notes

See http://www.bib.ub.edu/fileadmin/impressors/cerca_eng.htm	1
See http://cataleg.ub.edu/*eng	2
See http://www.bib.ub.edu/fileadmin/posseidors/cerca_eng.htm	3
See http://www.bib.ub.edu/fileadmin/autoritats/	4
See http://thesaurus.cerl.org/cgi-bin/search.pl	5
See http://thesaurus.cerl.org/cgi-bin/record.pl?rid=cnio0048519	6
See http://mdc.cbuc.cat/cdm/landingpage/collection/marqimpress	7
See http://www.bib.ub.edu/fileadmin/impressors/home_eng.htm	8
See http://www.bib.ub.edu/fileadmin/impressors/cerca_eng.htm	9
See http://www.bib.ub.edu/fileadmin/impressors/bibliografia.htm	10
See http://www.bib.ub.edu/cgi-bin/awecgi?db=imp&o1=query&o2=exact&x1=	11
IMP&k1=carcain,+janon	
See http://www.bib.ub.edu/cgi-bin/awecgi?db=imp&o1=query&o2=exact&x1=	12
IMP&k1=vitali,+bernardino+dei,+actiu+1494-1539	
See http://www.bib.ub.edu/cgi-bin/awecgi?db=imp&o1=getent&pa=10	13
&k1=11490	
See http://www.bib.ub.edu/cgi-bin/awecgi?db=imp_eng&o1=query&o2=exact	14
&x1=IMP&k1=gast,+matias,+hereus	
See http://www.bib.ub.edu/cgi-bin/awecgi?db=imp_eng&o1=query&o2=exact	15
&x1=IMP&k1=hereus+de+joan+pau+marti	

Hans Brandhorst Cataloguing printers' devices in the age of digitalization and collaboration¹

Already in 1999, when the catalogue *Dutch printers' devices 15th-17th century* was published, the form of publication was an issue. Some reviewers considered the printed version of the catalogue – a book in three volumes – not only as old-fashioned, but even as completely superfluous. To a certain extent Peter van Huisstede and I provoked those comments ourselves by offering the information both in a book and in an electronic format.

This electronic version – a Windows 95 application on a CD-ROM – offered a range of additional functionalities that could not be provided by a book. Surprisingly – or maybe not – those remarks were quite frequently made by reviewers who had little or no experience with electronic publishing themselves.





Their faith in technology has by now proven a little too optimistic, since the computerized version of the catalogue can no longer be used in most modern computers. Programs designed for the Windows 95 platform often fail to install. On top of that, modern computers often lack a CD-ROM drive.

The book, obviously, still 'works', thanks to its technological simplicity. Still, it is difficult to predict whether in the future we shall continue to look for this type of catalogue information in printed books.

Updating the CD-ROM would have been relatively cheap and easy. But, in addition to the technical issues I've just mentioned – the lack of CD-drives and the incompatibility of the operating system – it would also have been problematic from a publishing and a scholarly point of view. If only for the simple reason that the contents of the CD-ROM would no longer have matched that of the book.

In both its guises, then, the catalogue was a static snapshot of a dynamically expanding corpus. No use could be made of the further development of the thesaurus of printers' names, nor of the expanded Iconclass² system. These



fig. 3



standards, moreover, not only enriched their contents in the past 15 years, but also developed technologically, becoming part of the connected network of resources of the internet.

So, while our smallest 'unit of information' still consists of an image printed from a specific woodblock (or copper plate), the name(s) of (a) person(s) to which we ascribe the act of printing or selling the edition the image appears in (dated in a certain year), such a unit no longer is a static piece of information. Today, the unit is a reference to a digital image, which may be replaced by a better photograph. It is linked to iconographic concepts of which the definition may change slightly, i.e. because translations in other languages are added to Iconclass. It is also linked to biographical information about printers and publishers which continues to be improved, as more data become available.

When the original contract with our publisher³ expired, the exploitation rights of the catalogue's content fell back to us. This allowed us to incorporate the





static database into the dynamic environment of the web resource we had been working on since the early years of the century.

In this new web-based environment, called Arkyves⁴, we are able to dynamically link the 'old' dataset of our catalogue to other web-based resources. These include thesauri, like that of STCN, and the webservice of the Iconclass system.

I propose to discuss this transformation in a very pragmatic way, illustrating it with the help of the actual data files we use.

The device

To start with: a picture of the first device with its metadata record. Digitized in the 1990's, the quality of these pictures is modest. Whenever new photographs become available, they are replaced.

The metadata consists of an identifier, followed by an indication of the type,





which is necessary because the printer's devices are now incorporated into a much larger database, consisting of a variety of material. Iconclass concepts are included simply as notations – their textual definitions are dynamically loaded from the Iconclass browser webservice. A short description in English is added and the motto is transcribed diplomatically and also given in a normalized version.

Printers and booksellers

The information about the device (block or plate) is combined with the information about the people who are connected to a specific instance of its use.

In this case three people are mentioned in the book as responsible for production and sales: Joannes Maire, Salomon Wagenaer and Daniel Willemsz van der Boxe.



All three have a unique internal identifier – originally borrowed from the thesaurus of printers and bookseller, created by Hans Gruijs and Clemens de Wolf.

In addition we recently included their identifier (PPN) taken from the Short Title Catalogue of the Netherlands (STCN). We have also started to include a CERL thesaurus number. Incorporating these identifiers allow us to link the devices to external systems. Between Arkyves and STCN there now exists a bidirectional link, available to users of both databases.

The publication date of the edition a device is found in, is kept in a 'usage' file, where every instance of usage – i.e. device + printer(s)/bookseller(s) + dates – is stored in a separate record.





fig. 9

Needless to say that the inclusion of the identifiers from biographical authority files (STCN, CERL) only makes sense in a networked environment.

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9	9	Apolionivs Snellius, V					iscital	a Ap	oloni Pe	rgə	aei	[_]9	eom	oria.															
9	10	Legende o Vignier, N				maire	de It	istion	e[I] des	ren	res	men	dians	de l'o	rdre d	e Dom	nique.	8. de	Fran	çois									

	en (en) 🔹 auter	ur • sorteer op	p jear van publicatie *	gebruiker: STCN default login (inloggen) utlogen
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A	Naam: Plaats: Beroep: Adree: Uithengbord: Naamsvariant: URL: Recordinummer:	Bashaensz, Mathijs Roterdam, 1603-1625 bockeriler, 1603-1625 Watz nauwa-iandr (1), 1004-163 Swycher (1), 1611-1625 (Sint) Josephus (n), 1604-163 Bashaensen, Mathijs Sebashaensen, Mathijs Sebashaensen, Mathijs Sebashaensen, Mathijs Sebashaensen, Mathijs		
publicatio	as bewaren			

fig. 12





Toolbox	Maire, Joannes ('	(601 - 1657)	
Show current result set	Record Identifier	cn100031651	
Print this record	Headings	Maire, Joannes (GyGeGBV)	
A Change Font	Dates of Activity	1601 - 1657	
	Activity	Drucker (1601-1657)	
	Place of Activity	Leiden (1601-1657)	
Your Clipboard	PermanentLink	http://thesaurus.cerl.org/record/cni00031651	
You may exit records to this clipboard during your session by clicking the C icon next to a record or ballow a necord's full display.		Last Change: 2086-11-27 Add this record it:	your clipb
Other Formats	Sources		
internal Format	Round in	[Gruys-Well (1989), S. 62]	
RDFXML	Variant Names		
	Variant Namas	Maire, Ioannes	
		Maire, Ioannis	
		Maire, Johannes	
		Maire, Jan le	
		Maire Johannes	

fig. 14

Some additional screenshots illustrate the principle of the bi-directional linking. Although Arkyves is a subscription website, the links from STCN provide open access to the devices of printers and booksellers. In future this will also be the case for the CERL thesaurus, once the STCN information that is incorporated in CERL, has been updated.



fig. 15

Iconclass

For the iconographic information about the devices Iconclass concepts were used.The original introduction to the printed catalogue⁵ explained the strategy of our iconographic indexing. It also described the way Iconclass was used at the time.

The iconographic index took up 330 pages in the printed catalogue. On the CD-ROM a complete copy of Iconclass – as it was in 1999 – was included in a special 'retrieval variant'.

Iconclass is a classification system that is sometimes misunderstood or misrepresented. One of the prejudices is that it mainly covers narrative biblical and classical subject matter. Of course it does, and in a quite unique way. However, as you can see, it also covers a very wide range of concrete objects and situations as well as a wide variety of abstract ideas.

Outline - Edits - Clipboard		Search	
a Abstract, Non-representational Art: b Religion and Magic 2 Nature b Ruman Being, Man in General 4 Society, Civilization, Culture 46 social and economic life, transport and communication 462 traffic and transport 462 traffic and traffic and transport 462 traffic and traffic and transport 462 traffic and transport 462 traffic and transport 462 traffic and traffic and transport 462 traffic and traffic and transport 462 traffic and traffic and traffic and traffic and transport 462 traffic and traffic and traffic and traffic and traff	Concrete objects 46215(MKORX+0) (+ variant) 46215(MKORX+1) (+ view ~ vehicle, ship, etc.) 46215(MKORX+1) (+ inumber of parsons ~ traffic and transport) 46215(MKORX+1) (+ traffic ~ places) 46215(MKORX+1) (+ traffic ~ places) 46215(MKORX+1) (+ traffic ~ places)		
Abstract Ideas and Concepts Abstract Ideas and Concepts History Rible Uterature Classical Mythology and Ancient History	<pre>-#cats(weekey.ex) (+ departure and arrival ~ traffic and transport) uscats(weekey.ex) (+ zoological aspects of animals in traffic and transport uscats(weekey.ex) (+ unusual way of sitting on riding-animal) #cats(weekey.ex) (+ accident, collision, crash ~ traffic and transport) #cats(weekey.ex) (+ accident, collision, crash ~ traffic and transport) #cats(weekey.ex) (+ accident; collision, crash ~ traffic and transport) #cats(weekey.ex) (+ accident; collision, crash ~ traffic and transport)</pre>		













fig. 20

Our reason for using it at the time was very simple and practical. It covered the themes and the subject matter we observed in the devices and it was available in a computerized form. From a wider perspective, needless to say, by using it, we conformed to a system that is an accepted standard for the creation of subject access to cultural documents, both visual and textual.

With the original dataset of printer's devices integrated in the general retrieval system of the Arkyves website, iconographic searches will also retrieve printer's devices. So matching printer's devices with emblems has become much easier.⁶

Usually a query in the Arkyves database starts as a straightforward search for words, e.g. *anchor* + *hope*.

In a second step the precision of the query is enhanced by substituting these words by concepts. To accomplish this Iconclass concepts are selected from the list of concepts with which one of the devices was tagged.

A search for the combination of 46C215(ANCHOR) parts of ship's exterior: anchor, and 56D1(+11) Hope; ,Speranza', ,Speranza delle fatiche' (Ripa) (+ abstract concept represented by female figure) will retrieve 12 devices. In Iconclass the concept Hope as one of the three Theological Virtues is also included: 11M32 • Hope, ,Spes'; ,Speranza divina e certa' (Ripa) ~ one of the Three Theological Virtues. This concept occurs 19 times, combined with anchor.

In Arkyves, therefore, a query that asks for a combination of anchor and either one of these variants of Hope, will retrieve 31 devices. (This is not illustrated in my screenshots).

By expanding the query to include other material than merely devices, we would at present (June 2015) find 94 pictures in the Arkyves database.

In this specific case – the device used by (a.o.) Jordaan Luchtmans at the end of the 17th century – it is immediately evident that the picture is a copy of the emblem with the motto *Spes alit agricolas* in Gabriel Rollenhagen's *Nucleus emblematum selectissimorum*⁷.

Annotations in Arkyves

Both the book and the CD-ROM version of the printer's devices catalogue, as I mentioned earlier, were static snapshots of the situation as it existed around 1999.

Additional metadata has now made it possible for the catalogue to function as part of an continuously evolving network. New information is easily merged with the existing one, and the updated whole is instantly available to the researcher. While this first feature is typically at the disposal of the editors of the website, the researchers using the database can actually add their own information, using the Annotation functionality.

A first option is demonstrated to the left of the Rollenhagen *pictura* of Hope ploughing the field with a team of oxen. User-created hyperlinks refer researchers to the devices that use the same imagery.

Another option for annotating is that users can add new metadata which is then shown as a supplement to the existing information.

I selected an engraving by Maarten de Vos and Hieronymus Wierix representing Hope (*Spes*), from the collection of the Herzog August Bibliothek in Wolfenbüttel.

The original metadata used the concept of Spes as Theological Virtue but the personification of this concept is conflated with the figure of the angel who instructs Adam how to work the land.





fig. 22

To cause this picture to be retrieved in queries like the one I have used to find devices with Hope and anchor, the appropriate Iconclass concepts need to be added to the original tags. The next slides demonstrate how that is done.

The first step in the procedure is the creation of a login for the Iconclass online browser system. It is a little outside the scope of this presentation, but you can find an explanation online⁸.

Once a user is logged into the Iconclass browser, he can create his own individual Iconclass Clipboard. The clipboard is a place to store (series of) Iconclass concepts that need to be transferred to e.g. a catalogue's database record. The clipboard of an individual user is identified by a unique number that is also included in the Iconclass URI. It can therefore be addressed over the internet.

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	the manufacture	1080
	SU	CHE BILD-BROWSER PROJEKT GLOSSAR KONTAKT COPYRIGHT English
Suchoptionen	Ergebris Werk	
Institution	Herzog August Bibliothek	
Signatur	Graph. A1: 2814i	
PURL	http://diglib.hab.de/?grafik=graph- a1-2814i	
Titel	Spea	
Inschrift	SPES FIDEI SENEN die blijven stankuastich	Mar Proventier
Person	Vos, Maarten de $\overset{\mathcal{D}}{\to} \mathbb{D}$ (Inventor); Wierk, Heronymus $\overset{\mathcal{D}}{\to} \mathbb{D}$ (Stecher)	THE AND DEPART
Datierung	1573 - 1601	and the second s
Technik	Kupferstich 🖉	
Maße in mm	Blatt: 290 x 333	
Serie	Die vier Feinde der Rechtschaffenheit und der christlichen Tugenden ⁽²⁾ ([2])	
Wandbach	Hollstein Dutch & Remish, Bd. DCV1, S. 36, Nr. 1702	¹ Sing an data wang pinakan sa data wang sa
Vennela	Graph. A1: 2814h ₽; Graph. A1: 2814⊨₽; Graph. A1: 2814k ₽	die der anseite der Leine in der Anders der Beiter anderen der Beiter anderen der Beiter
Tounclass	11G* Engel 2: 11M32* Hoffnung, Spas (Ripa: Sparanza dikina a certa), als aine der drei theologischen Tugenden 2: 11U4* Maria und Johannes der Taufer mit Christus als Weltenrichter (fror dem	Original source's metadata

Outline - Edite - Clipboard	
 Abstract, Non-representational Art Religion and Magic Nature Human Being, Man In General Society, Civilization, Culture Abstract Ideas and Concepts Bothope and Fear Hope; "Speranza', "Speranza delle fatiche" (Ripa) Hope; "Speranza', "Speranza delle fatiche" (Ripa) (+ personification) soci(+1) Hope; "Speranza', "Speranza delle fatiche" (Ripa) (+ personification) soci(+2) Hope; "Speranza', "Speranza delle fatiche" (Ripa) (+ abstract concept represented by female figure) Hope - Ripa - Speranza - Speranza delle fatiche - Spes - abstract (dea - allegory - emotion - spea - personification - woman [Editi, Jadie [Comment Issee 	Select additional subject metadata sep:(+111) (+ nude) sep:(+112) (+ partially clothed) sep:(+112) (+ clothed)
Savethis notation to your online clipboard) 7 Bible 8 Literature 9 Classical Mythology and Ancient History	-

Iconclass	Options - Help - About - Logout Hans Bra
Outline Edts - Clipboard	
Clipboard for Hans Brandhorst with the unique ID: 53E60	7
к +sczis(ArcHon) parts of ship's exterior: anchor	
🗴 5601(+11) Hope; 'Speranza', 'Speranza delle fatiche' (Ripa) (+ abstract concept	represented by female figure)
Clear Clipboard	
Browse History	
Help on using this clipboard in other applications	
This clipboard can be used from other applications like collections management so	ftware, library catalogs, contert management systems,
Formats we expose at the moment are:	
 plaintext one notation per line, or with semi-colons on one line, or with sem RDF/SKOS 	i-colons one per line (dbtext formaat)
A JSON blob	
Any other reasonable requests users might have	

When a clipboard is opened, the user's name and number are shown, plus the concepts that are on the clipboard at any given moment. The clipboard's content can be imported into a database either manually or automatically.

Registered Arkyves users can manually import the content of their Iconclass clipboard to supplement the descriptive metadata of an Arkyves record. To open the import functionality, the Edit button is used.

The procedure is very straightforward. The type of metadata is selected: IC for Iconclass notations and then the content of the IC clipboard is fetched.







) Helpfulbess and Cooperation	4 11 6 11	BRILL
Parental and filial love	Annotate fields	
Visible poverty	URL	IC
King alcohol	COMMENT	PERSON
Uverticals and Twisters	LATLON	
🗊 Friendship	LAILON	
Aspects of vision	46C215(ANCHOR)	
]] Adages	56Di(+11)	
] Hobby-horse		
🗊 Departure and Arrival		
] Transformation		
] Lifting the hat, crown, cap,		
🔄 Old age		
J The labours of Adam		
🕤 Gender matters		
Sweat of thy face		
🔄 Piskijkers		
] Vrouwenlisten		
🗉 Indexing the Invisible		
🔄 Memento Mori		
🗇 Alexander		
Meet the makers		

fig. 28

This results in the addition of the notations on the clipboard. After the import the new notations are saved.

Once saved the new concepts are shown on the website, where the text that belongs to a notation is retrieved through the Iconclass Linked Open Data webservice.

The name of the user and the date and time that the new annotation was added, are shown to notify other users.

New metadata, including Iconclass concepts, are added to the indexing system of Arkyves in real time, so a query for those concepts will instantaneously retrieve the enriched records.

In this way cataloguing can be done collaboratively.









fig. 31

The other type of annotation to augment existing information was mentioned above: a cross reference, in the shape of a new hyperlink, can be added by any registered user. I demonstrated the effect with the help of the Rollenhagen emblem *Spes alit agricolas*.

With a few mouseclicks anyone can create a new hyperlink, for one's own benefit or to alert other users to interesting connections between documents.

We may notice, for example, that a saying found in the *Adagiorum chiliades*, is also used as the motto of an emblem or, as interests us here, a printer's device.

With the help of the Clipboard button, the identifier of an entry in Arkyves may be temporarily stored on the clipboard of your computer.

The (send to) Clipboard command is complemented by the Link this object and your clipboard command. This command actually links the two documents in Arkyves.













The *adagium* where the quote about Occasio was found, is thus linked to several printer's devices and emblems.

The link can be made reciprocal in the same way, i.e. from the printer's device to the *adagium*.

I concluded with two more devices that use the phrase from the *Nosce tempus adagium*, and one emblem, by Jacob Cats, that connects this concept of 'the right time' with the fisherman who has to know when to pull in his catch.











Notes

This is a reconstruction of the talk as delivered on Wednesday March 18th at	1
the CERL workshop Signa vides at the National Library of Austria in Vienna. The	
presentation was not based on a written text. The slides presented here are the	
original slides as they were used.	
The standard used for the iconographic information, now available as linked	2
open data at: http://www.iconclass.org	
De Graaf Publishers, Nieuwkoop. Brill took over HES & De Graaf in 2014, so	3
the book is now sold by Brill.	4
http://www.arkyves.org	5
http://arkyves.org/static/misc/dpd_introduction.pdf.	
http://arkyves.org/view/emblematicdevices/.	6
Gabriel Rollenhagen, Nucleus emblematum (Arnheim: Van de Passe 1618).	7
http://arkyves.org/static/misc/Iconclass%20Clipboard%202.pdf.	8

Michaela Scheibe / Christina Schmitz / David Zellhöfer Towards a standardised description of printers' devices: authority files and more

More than ten years ago, in June 2004, electronic descriptions and images of printers' and publishers' devices were mentioned in the CERL newsletter for the first time.¹ Subsequently, CERL started a project to digitise reference works, like Ronald McKerrow's *Printers' and Publishers' Devices in England and Scotland* (London 1913), and to join images and text within the "Imprint Names" section of the CERL Thesaurus. The Royal Library in Copenhagen significantly supported the project by digitisation and indexing efforts.

Two years later, the CERL programme of digitising repertories of printers' and publishers' devices was extended to French reference works like *Les marques typographiques parisiennes* by Philippe Renouard (Paris 1926) or the *Bibliographie lyonnaise* by Henri Louis Baudrier (1895-1952), and to relevant entries in the Italian databases EDIT16² and Mar.T.E.³ At the end of the year 2007, the CERL Thesaurus could already boast nearly 9,000 references pointing from imprint name records to images of printers' devices.⁴

In 2008, the Berlin State Library undertook the digitisation of Paul Heitz's 19th century reference work on Alsatian printers' devices *Elsässische Büchermarken bis Anfang des 18. Jahrhunderts* (Strassbourg 1892). The digitisation was completed on schedule – but the project was suspended for a longer period due to in-house discussions on a suitable metadata model regarding the inclusion of authority information and advanced technology for digital libraries. During the past six years, new developments (named below) changed the library system in Germany and worldwide and opened up new possibilities for the Berlin State Library's project on printers' and publishers' devices:

1. The separate national authority files for persons, corporate bodies, and subject headings were merged into the Integrated Authority File (Gemeinsame Normdatei / GND) hosted by the German National Library.⁵ Additionally, the authority file for printers' names of the GBV⁶ union catalogue was integrated into the GND.

- 2. The process of mass digitisation gained momentum. Most German libraries concentrated on digitising books printed in the German speaking countries, and recorded them in the related national bibliographic projects for the 16th, 17th, and 18th centuries.⁷ As a result, a significant amount of high quality images of pages with printers' or publishers' marks were made available in addition to the reference works mentioned above. A large amount of these pages can also be retrieved with the help of metadata indicating that they contain "printers' device" content.
- 3. The content-based retrieval of images has become a vital research area in computer and information science during the last two decades resulting in first nearly end-user ready systems. As a consequence, the similarity-based matching of images is an auspicious method for researching printers' and publishers' devices.
- 4. A vivid discussion on a best practice data model for recording provenance evidence among German library panels and working groups concerned with early printed books⁸ led to the creation of a new kind of authority records in the GND authority file dedicated to recording provenance evidence (e.g., book plates or stamps) in combination with relevant metadata and a link to an image.

It was agreed on that prospective information requirements regarding provenance could better be satisfied by linking those records with records of copies rather than by linking images to the record for the former owner. This is because a lot of descriptive metadata concerning marks of provenance (e.g., size, motive, artist, engraver, motto, period, and place of use) cannot be made retrievable in the authority record for persons or corporate bodies. Instead,
special authority records for provenance evidence contain this information. By using those special authority records for provenance evidence, all copies bearing a certain mark of provenance can be retrieved. Then each record for a certain copy keeps information about which marks of provenance were found in it. This is more detailed information than the bare knowledge of which marks of provenance were used by a certain person or corporate body.⁹

These developments in the last six years enabled the Berlin State Library to deliberate on a new data model for describing printers' devices. The resulting model was proposed last year by the Department of Early Printed Books of the Berlin State Library, and agreed on by the German National Library and the GBV Working Group for Early Printed Books.¹⁰ This model can be regarded as an adaptation of the model used for provenance description. Special GND "device authority records" can now be enriched with a range of relevant metadata for the description of a printer's device and linked to a digital reproduction, as well as to a certain edition in order to file and make retrievable which device was used in a respective edition. Under those auspices the repertory of Heitz has been rather eclipsed by relevant images from mass digitisation projects, primarily those from the VD projects. The details of the newly developed data model and the technical components used in the process will be described below.

Recording and describing printers' devices in the DruckerzeichenWiki

In order to link the digital images to the device authority records, they have to be made available on the Internet. Therefore, the Berlin State Library set up a wiki hosted by the GBV library network, which can be edited by every authorized contributor. This DruckerzeichenWiki (wiki for printers' devices) provides the opportunity to collect relevant data easily, especially the images of printers' devices, and to get into conversation with the contributors. It is based on the widely used Wikipedia software MediaWiki¹¹, and is easy to handle. The workflow includes three working steps: the preparation of the images of the printers' devices, the construction of the page for the printer's device, and the construction of the page for the printer.

The preparation of the images takes some time, as it includes cutting out the device from the digital reproduction of the entire page and assigning a distinct filename, which can be complex. The file names are formed by four components, following the rules for the image file names of the provenance wiki12: the printer's name, motif keywords, the library sigla, and the shelfmark or a shortened form of the name of the repertory (cf. fig. 1). The printer's name contains the family name, the first name(s), and eventually the addition "heir(s)", all components divided by the underscore character (_), and further persons connected with a plus sign (+). For the next component, up to three motif keywords are chosen from a set of 15 categories based on the motifs of the watermark information system (WZIS13), which are similar to those used in printers' devices. As it can be difficult to identify the motifs correctly, it is important to work with a small set of broad categories that every contributor can easily assign images to without requiring art-historical expertise to give some initial information about the motifs. We laid down some rules to determine the three main elements to choose for key motifs, giving priority to initials, marks, names, and mottos (cf. list of motif keywords).¹⁴ The third component of the distinct file name gives the identification code of the holding library, and the fourth element contains the shelfmark or a short name of the repertory.

List of motif keywords:

- Architecture/geometry
- Decorative frames
- Anthropomorphic figure & fabulous creatures
- Orbs
- Fauna
- Flora





- Initials
- Motto
- Name
- Realities
- Symbol
- Scenery
- (other) text
- Arms
- Label/monogram

The DruckerzeichenWiki (cf. fig. 2) is meant to function as the central platform for researching and recording printers' and publishers' devices. By now, a first draft of a German version with a simple main page and some pages for printers and printers' devices is published. Although it is not our current focus, a longterm goal involves turning the wiki into a multilingual platform.

The prepared images are uploaded into the wiki and enriched with metadata on the printer (with link to the printer's page), the main motifs of the device as subject headings, dimensional data (if available), and the proved period of usage,



fig. 2

as well as links to the entry in the online catalogue of the holding library and to the reference page in the digitised print or repertory, and categories which repeat the main motifs to improve the retrieval.

The categories collect every related item and can be enriched with further information later, e.g., explanations and discussions on the set of motif keywords and their different forms, as well as potential problems with the correct identification. The main category "Druckermarke" (printer's device) is mandatory for every entry. Dimensional data is often missing, because in many cases the original printed page with the device has not been digitised with a scale. The images of the Heitz repertory have been added to scale afterwards, but they do not provide any information about the original size. In addition, the time period may be problematic. If there is only one book in hand, only one specific publication date can be established. So the wiki can be characterized as work in progress, and it has to be edited regularly. The pages for the printers' devices include the file history and the file usage, i.e., information about which pages link



fig. 3

to this file. Both sections are generated automatically. The construction of the pages for the devices is straightforward, as the structure is fixed and the content is limited to only few words.

In contrast, setting up the pages for the printers can be very labourious, depending on the amount of provided details. The structure of the page is similar for each entry. It is subdivided into four basic parts:

- a section with biographical information on the printer and links to related printers,
- 2. an overview of the printers' devices if possible in chronological order,
- direct links to the digital sources of the images, e.g. reproductions of repertories or the national bibliographical projects which include digital copies, like the catalogue of the German language prints of the 16th, 17th, and 18th centuries, and
- 4. references to the information given on the page.

Further sections can be added according to the existing information. The overview of the printers' devices consists of thumbnails of the images with a short title and the period of utilization, directly linking to the page for the device. As the example shows (cf. fig. 3), the overview can be very informative, even if it does not show any details: the wide range of quite different devices over the years is striking. Johann Schott even used title borders and decoration originally used for embossings on the binding.

Being stored and presented in the DruckerzeichenWiki, the images of the devices can be linked to authority records for printers' devices.¹⁵

Recording and describing printers' devices in authority file records

Every record in the authority file gets the entity code "wid" to mark it as a printer's device. The example gives an overview of the data sets in the editor's view (cf. fig. 4). The Integrated Authority File (GND) hosted by the German National Library contains data records representing persons, corporate bodies, congresses, geographic entities, topics, and works. These authority records

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5	6 ×	n 🛍 🛍 🕼 🐔 🕼 🕲 🗊 🔮 ZDB * Profikierste * Daterpflege * LBS * Femleihe * Dialogformulare * Unselb. Wer	ke * Zeitschrifte
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et 1	Setgr	öfe 20 Suchkommando suchen ent wid	
1	Tu5	Druckermarke\$phttp://druckerzeichen.gbv.de/Datei.Johann_Schott_Wappen_DE-1_HeitzElsass01.jpg	wid
2	Tu5	Druckermarke\$phttp://druckerzeichen.gbv.de/Datei:Johann_Schott_InitialenSymbolDekorrahmen_DE-1_HeitzElsass05.jpg	wid
3	Tu5	Druckermarke\$phttp://druckerzeichen.gbv.de/Datei.Johann_Schott_InitialSymbolDekorrahmen_DE-1_HeitzElsass10.jpg	biw
4	TUS	Druckermarke\$phttp://druckerzeichen.gbv.de/Datei.Johann_Schott_SzeneFigurSymbol_DE-1_HeitzEisass09.jpg	wid
5	Tu5	Druckermarke\$phttp://druckerzeichen.gbv.de/Datei.Johann_Schott_initialSymbolDekorrahmen_DE-1_HeitzElsass08.jpg	wid
6	Tu5	Druckermarke\$phttp://druckerzeichen.gbv.de/Datei.Johann_Schott_IntilalSymbolName_DE-1_HeitzElsass07.jpg	wid
7	Tu5	Druckermarke\$phttp://druckerzeichen.gbv.de/Datei Johann_Schott_InilialenSymbol_DE-1_HeitzElsass06a.jpg	wid
8	Tu5	Druckermarke\$phttp://druckerzeichen.gbv.de/Datei:G-A_Dolhopff_%28_J-E_Zetzner_FloraDekorrahmen_DE-1_HeitzElsass02.jpg	biw
9	Tu5	Druckermarke\$phttp://druckerzeichen.gbv.de/Datei:G-A_Dolhoptf_%28_J-E_Zetzner_FloraDekorrahmen_DE-1_HeitzElsassD1.jpg	wid
10	Tu5	Druckermarke\$phttp://druckerzeichen.gbv.de/Datei:C_Dietzel_%2B_Ch_vd_Heyden_FigurMarkeDekorrahmen_DE-1_HeitzEisass04.jpg	wid
11	Tu5	Druckermarke\$phttp://druckerzeichen.gbv.de/Datei.C_Dietzel_%28_Ch_vd_Heyden_FigurReatienSzene_DE-1_HetzElsass05.jpg	wid
12	Tu5	Druckermarke\$phttp://druckerzeichen.gbv.de/Datei.C_Dietzel_%2B_Ch_vd_Heyden_FigurMarkeDekorrahmen_DE-1_HeitzElsass03.jpg	wid
13	Tu5	Druckermarke\$phttp://druckerzeichen.gbv.de/Datei.C_Dietzel_%28_Ch_vd_Heyden_FigurMarkeReatien_DE-1_HeitzElsass02.jpg	wid
14	Tu5	Druckermarke\$phttp://druckerzeichen.gbv.de/Datei:Anton_Bertram_FigurFiora_DE-1_HeitzElsass02.jpg	wid
15	Tu5	Druckermarke\$phttp://druckerzeichen.gbv.de/DateiAnton_Bertram_NameMottoFigur_DE-1_HeitzElsass01.jpg	wid
16	Tu5	Druckermarke\$phttp://druckerzeichen.gbv.de/Datei Johann_Schott_IntilaienSymbolMotto_DE-1_HeitzEtsass06.jpg	wid
17	Tu5	Druckermarke\$phttp://druckerzeichen.gbv.de/Datei:Johann_Schott_FloraInitialen_DE-1_HeitzEisass03.jpg	wid
18	Tu5	Druckermarke\$phttp://druckerzeichen.gbv.de/Datei:Johann_Schott_Wappeninitialen_DE-1_HeitzElsass04.jpg	wid
19	Tu5	Druckermarke\$phttp://druckerzeichen.gbv.de/Datei:Johann_Schott_Inttialen_DE-1_HeitzElsass02.jpg	wid
20	Tu5	Druckermarke\$phttp://druckerzeichen.gbv.de/Datei Balthasar Beck FigurSzeneRealien DE-1 HeitzElsass01.jpg	wid

constitute a common, conclusive reference system with persistent identifiers and interoperable metadata.

The GND is actively used not only by libraries, but also by archives, museums, and other scientific and cultural institutions in the German speaking countries. GND authority records contribute to the Virtual International Authority File (VIAF) and are combined with data from other national authority files. As printers' devices have recently been accepted as a special entity in the GND, the Berlin State Library has just tested their description in adequate authority records. These records allow relations to other authority records (e.g., the records for printers and publishers, artists, or places) and data about dimensions, motifs, mottos, period of use etc. One difficult aspect is the correct identification and description of motifs, which requires art-historical knowledge and can be very time-consuming.

In the GND data sets for printers' devices, all kinds of text within the device or related to it are recorded in the original format and a standardized version, which makes it easier to search (cf. category 430 in the example in fig. 5-6). Initials are documented in an extra box, whereas there is no separate category for a monogram. Further categories are the owner of the printer's device, the engraver or woodcutter, the period of utilization, subject headings for the motifs and for the category "printer's device" (mandatory), and the sigla of the holding







library, as well as links to the image (in the wiki) and to the sources. Information on the technique and dimensional data are documented in a comment field. Subject headings and categories relating to persons, like printer or engraver, are created as links to the corresponding GND authority record. At present, some pieces of information have to be entered twice, in the DruckerzeichenWiki and in the authority file records. But prospectively, an automatic data transfer shall be installed.

The second example (cf. fig. 7-8) shows a very complex printer's device, again used by Johann Schott from Straßburg – if it is one. It is filled with many icons and elements, but no single text element and no initials. No element is significantly dominating, whereas each one is difficult to name or identify correctly. There are storks, a nest, a lance, clouds, a tree, a hand, and a horse – to name just a few. Not only the identification can be problematic, but also finding the best fitting subject heading in the set of controlled GND vocabulary. It may help to work with a standardized classification system like iconclass¹⁶ instead, but then the cataloguers would have to have some art-historical expertise to match the motifs correctly to the iconclass element, and not only document what they see. But instead of recognizing St. Catherine of Alexandria for example, it may suffice to record "female figure" and "cart wheel". On the other hand, listing just as many single elements as possible is onerous and not particularly precise. Further







discussions among experts will hopefully lead to a commonly agreed, suitable workflow.

The third example (cf. fig. 9-10) shows a data set of a device used by Friedrich Reusner. He was a university printer in Rostock, and later in Königsberg (now Kaliningrad), who did not use his own device, but the signet of the University of Königsberg to demonstrate his official privilege. To document this detail, the records can be supplemented by categories for the corporation and for geographical information, which allows to record that a printer's device was used by one printer, for example, first in Rostock, and then in Königsberg.

As part of the GND, the records produced by the Berlin State Library are shown in the catalogue of the German National Library. The example (cf. fig. 11) shows that the title is always "Druckermarke" (printer's mark), combined with the name of the image file. The field "Other titles" gives information about all kinds of inscription: initials, mottos, and personal names etc.

With the help of the wiki and a distinct description in the authority files, it will be possible to discuss whether some impressions derive from the same device or from very similar but different devices. The examples below (cf. fig. 12) show the signet of the University of Königsberg, used by the university printers. It is easy to recognize that the two on the left are different from the four above and each of the three ones on the right is different as well, but can we be sure that





fig. 9

Link zu diesem Datensatz	http://d-nb.info/gnd/1063758661
Titel des Werkes	Druckermarke / http://druckerzeichen.gbv.de/Datei:Johann_Schott_InitialenSymbolMotto_DE-1_HeitzElsass06.jpg
Beteiligt	Urheber: Schott, Johann(Signetführer)
Andere Titel	IS Necessitas fortiter ferre: docet consuetudo facile. Seneca NECESSI-[TAS FOR[TITER] FER[RE:] DOCET CONSVE-[TV[D0] FACILE] .SENECA.
Quelle	Bild: http://druckerzelchen.gbv.de/Datel:Johann_Schott_InitialenSymbolMotto_DE-1_HeitzElsass06.jpg Paul Heitz, Elsässische Büchermarken bis Anfang des 18. Jahrhunderts, Straßburg 1892, S. 4f.
Erläuterungen	Definition: Technik: Kupferstich
Zeit	1503-1504 (Ungefahre Zeitangabe)
Oberbegriffe	Beispiel für: Druckermarke
Thematischer Bezug	Initiale Motto
Systematik	2.2 Buchwissenschaft, Buchhandel
Тур	(wid)

fig. 11



fig. 12

the four at the top are prints from the same woodblock? The description and identification of the motifs including very tiny details and dimensional data are the most important, but at the same time the most difficult aspects of the project. One approach to correct identification can be elaborate subject indexing. The simplest method would be borrowing the rough categories used for the file names, which is, however, not detailed enough. Using as many subject headings from the national catalogue as possible to describe the device could be an alternative, but the results would be relatively arbitrary, and the correct identification stays difficult. As mentioned, a promising method could be using a standardised classification like iconclass, but to obtain exact results with this framework requires an art-historical background. Moreover, it is important that librarians are able to handle the methods as part of their daily workflow. Hence, the exploitation of content-based image search is an auspicious approach.

Identifying printers' devices with content-based image search

Based on the open source software LIRe (Lucene Image Retrieval)¹⁷, the Information and Data Management Department of the Berlin State Library developed a first prototypical content-based image retrieval (CBIR) system, which can be utilized to search for identical and similar printers' devices in a collaborative image database.

In order to estimate the feasibility of CBIR-based methods in the domain of printers' devices image retrieval, the prototype was tested in two different experimental usage scenarios.

First, we tried to retrieve digitised pages containing printers' devices from a randomized subset of the digital collection of the Berlin State Library. The subsets contained images of entire digitised pages (13,796 in total) containing both textual and pictorial content. At this stage of development, the prototypical CBIR system has been proven a useful tool for librarians to easily identify pages containing a printer's device in order to enrich the associated metadata record with this information afterwards.¹⁸ The retrieval results were fairly good; although the prototypical system has not been trained or adjusted towards the specific needs of the aforementioned use case yet. The main tests consisted of several query by example runs in which a user submits an image of a printer's device to the system in order to retrieve the most similar images contained in the database.

For the main tests, we worked with cropped images, i.e., images mostly depicting printers' devices and only small regions of the surrounding paper. This step was conducted to increase retrieval effectiveness because the CBIR program assesses everything displayed on the image to determine its overall relevance to a given query image, even tiny disturbances like little mends in the paper, dark staining, black spots of ink of fragments of handwritten entries. If these features are not too dominant, slight blurrings, rotations (cf. fig. 13), skewings, and distortions (cf. fig. 14) will neither affect the result to a large extent as our preliminary results demonstrate. However, as all examined CBIR algorithms are based on global or local statistical features of the actual pixels forming the image, the presence of remaining elements that do not belong to the device like texts, or stamps, lower the overall retrieval effectiveness. Roughly speaking, the used algorithms have no understanding of the semantics of the processed elements. In other words, the algorithms cannot differentiate whether a curve belongs to a printer's device, a stamp added by a library, or a letter. That is, even images sharing only minor features with a given printer's device will occur amongst the list of retrieved images.





fig. 14

From a CBIR perspective, it would be desirable to correct the aforementioned image "defects" manually. However, we believe that this solution is inappropriate as it would take a lot of time, and alter the appearance of the digitised original as well. So it is necessary to decide if disturbances are to correct manually, or if they can be ignored, tolerating possible disturbances. In any case, some of the features will not - or only at considerable expense - be erasable such as library stamps put directly onto or very close to the device. The same holds true for natural effects such as varying colours of paper and effects induced by the scanning process such





fig. 15











fig. 19



as stamps or printed texts shining through from the back (cf. fig. 15-20).

In the main tests, three different CBIR algorithms with a fixed set of 123 printers' devices were used to retrieve ten possible hits, i.e., ten different impressions from (probably) one woodblock of a given printer's device. The preliminary results are always shown as a ranking of the entire set, with the best fitting images ranked on the top positions. Using the global CEDD algorithm¹⁹, the result is four hits within the first 17 images (cf. fig. 21).

The algorithm CEDD/Random, a local feature variant that tries to detect the most "interesting" regions within an image, detects four hits as well but they are found on much better positions, supplemented by another device with a comparable appearance within the first 20 images (cf. fig. 22).

Testing the set with the local feature algorithm CEDD/SURF further increases





fig. 22

retrieval effectiveness: the ranking shows six hits within the first 22 images, plus the similar one from the second test (cf. fig. 23). Unfortunately, the utilized SURF algorithm²⁰ is subject to pending patents and would require proper licensing when used in a public web application.

Unlike Boolean retrieval systems often found in libraries, typical CBIR systems cannot guarantee to retrieve one exact result containing only the relevant images of a queried database. Instead, they produce a rank of (probably) relevant images. As mentioned before, the relevance is only determined on the basis of pixel values - hence the name content-based image retrieval. As the related algorithms operate on another semantic layer than the typical human user, the relevance decision will not be always visually recognizable. This effect is known as the "semantic gap" and will continue to challenge CBIR research during the next



fig. 23

years.²¹ However, it is widely acknowledged in the CBIR research community that fusing relevance judgments derived from image contents and associated metadata can narrow the semantic gap.²² At the current stage of development, no metadata has been used in the tests to improve the retrieval effectiveness. Hence, we believe that the exploitation of metadata will further improve the retrieval results.

An alternative area for further research is the inclusion of machine-based learning techniques. Essentially, the utilization of machine-based learning algorithms will increase retrieval effectiveness as larger sets of images and metadata become available as these algorithms rely on training data to be trained for our specific purposes.

Using more advanced machine-based learning methods, it will also be possible

to search for devices with similar shape but different icons in order to identify imitations and citations, like the device with the Scottish thistle in the shape of the anchor with a dolphin, which is widely known as the printer's device of Aldus Manutius.

Conclusion

The data model developed by the Berlin State Library has yet to be tested on a wider scope. Next steps will be to find a commonly agreed and easy to handle standardised classification for the subject indexing of the motifs of printers' devices, and to develop a collaborative web platform with a database of images of printers' devices. This should include online image search, the upload of images from users and their automatic integration into the database, the collaborative enhancement with metadata, and last but not least the use of authority records to enhance interoperability and enable the linking of bibliographic records to a certain printer's device.

Notes

1	See http://www.cerl.org/_media/publications/newsletterjune04.pdf.
2	EDIT16 (= Censimento nazionale delle edizioni italiane del XVI secolo). See
	http://edit16.iccu.sbn.it/web_iccu/ihome.htm
3	Mar.T.E (= Marche Tipografiche Editoriali). See http://193.206.215.10/
	marte/index.html
4	See http://www.cerl.org/_media/publications/newsletter16.pdf.
5	See http://www.dnb.de/EN/gnd
6	The GBV (= Gemeinsamer Bibliotheksverbund) is the major German library
	network. See https://www.gbv.de/

 ⁷ VD16/17/18 (= Verzeichnis der im deutschen Sprachraum erschienenen Drucke des 16./17./18. Jahrhunderts). See http://www.bsb-muenchen.

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de/index.php?id=180 / http://www.vd17.de/index.php?article_
id=0&wWidth=1280&wHeight=878 / http://vd18.de/
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Anleitung_Bilder.pdf.	
WZIS (= Wasserzeichen-Informationssystem). See http://www.	13
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For the German version of the entire rules cf. DruckerzeichenWiki. See	14
http://druckerzeichen.gbv.de/Hauptseite.	
The Berlin State Library is currently working on an additional module to	15
grant a higher level of long-term persistence for the URLs produced by the wiki.	
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conference on Multimedia, ACM Multimedia Conference Vancouver 2008 (New

York: ACM, 2008), 1085-1088.

- ¹⁸ This assertion also includes the answer time of such a CBIR, which stays in the range of one second without the utilization of performing-increasing index structures.
- ¹⁹ Savvas A. Chatzichristofis and Yiannis S. Boutalis, 'CEDD: Color and Edge Directivity Descriptor, A Compact Descriptor for Image Indexing and Retrieval', in Proceedings of the 6th International Conference on Computer Vision Systems, ICVS 2008 Santorini, Greece (Berlin: Springer, 2008), 312-322.
- ²⁰ Herbert Bay, Tinne Tuytelaars, Luc van Gool, 'SURF: Speeded Up Robust Features', in Proceedings of the 9th European conference on Computer Vision, Part 1, Berlin et al. 2006, 404-417.
- ²¹ Ritendra Datta, Dhiraj Joshi, Jia Li et al., 'Image Retrieval: Ideas, Influences, and Trends of the New Age', ACM Computing Surveys 40 (2008), Nr. 2, 1-60.
- ²² Barbara Caputo, Henning Müller, Bart Thomee, 'ImageCLEF 2013: The Vision, the Data and the Open Challenges', in Information Access Evaluation: Multilinguality, Multimodality, and Visualization, 4th International Conference of the CLEF Initiative, CLEF 2013, Valencia, Spain (Berlin: Springer, 2013), 250-268.

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- Printer's device of Florian Ungler. Source: Michał z Bystrzykowa, Questiones...
 (Kraków: Florian Ungler, 1512), BJ Cim 4016, page dimensions 15,5 by 29,5 cm.
- The woodcut with Florian Ungler's sign, representing saint Stanislaus. Source:
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- The obelisk on the title page of the book edited by Georg Joachim Rethicus.
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- 5 The obelisk on the title page of a book by Georg Joachim Rheticus. Source: Georg Joachim Rheticus, Canon doctrinae triangulorum (Leipzig: Wolfgang Günther, 1551), BJ Cim 5884, page dimensions 19,5 by 26 cm.
- 6 The obelisk as an icon of an emblematic composition. Source: Adam Romer, Columna in felicem ingressum... (Kraków: Officina Lazari, 1592), Ossol XVI. Qu.2461, page dimensions 13,5 by 19 cm.
- Printer's device of Maciej Wirzbięta. Source: Mikołaj Rej, Źwierciadło (Kraków: Maciej Wirzbięta, 1568), BJ Cim 8181.
- "Wirzba na stałość" in Mikołaj Rej, Źwierzyniec (Kraków: Maciej Wirzbięta, 1562), Ossol XVI.Qu.3188, page dimensions 15,5 by 20 cm.
- 9 Printer' device of Maciej Wirzbięta. Source: Piotr Stojeński Statorius, Polonicae grammatices institutio (Kraków: Maciej Wirzbięta, 1568), BJ Cim 315, page dimensions 9,5 by 14,5 cm.
- The caduceus woodcut in the Wietor printing shop. Source: Rhetorica ad Herrenium (Kraków: Barbara Wietorowa, 1549), BJ Cim 142, page dimensions 9,5 by 15,5 cm.
- ¹¹ Printer's device of Hieronim Wietor. Source: Desiderius Erasmus, Opus de conscribendis epistolis (Kraków: Hieronim Wietor, 1523), BJ Cim 92, page

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dimensions 10,5 by 15,3 cm.

Printer's device of Florian Ungler. Source: Jan Cervus Tucholczyk, Institutiones grammatice (Kraków: Florian Ungler, 1533), BN XVI.O.396, page dimensions 10 by 15 cm.

The caduceus woodcut in a book printed by Officina Lazari of Jan Januszowski. ¹³ Source: Jan Kochanowski, In nuPolonia typographicaias Illustrium Ioann[is] de Zamoscio epithalamion (Kraków: Drukarnia Łazarzowa, 1583), BJ Cim 4475, page dimensions 16 by 22 cm.

'Mens immota manet' woodcut. Source: Kazimierz Hałaciński, Kazimierz ¹⁴ Piekarski, Sygnety polskich drukarzy, księgarzy i nakładców (Kraków: Koło Miłośników Ekslibrisu przy Towarzystwie Miłośników Książki, 1926–1929), plate 83.

Printer's device of Franciszek Cezary and his heirs. Source: Szymon ¹⁵ Starowolski, Monumenta Sarmatarum (Kraków: Oficyna Wdowy i Dziedziców Franciszka Cezarego, 1655), BJ 22594 III Mag. St. Dr., page dimensions 20 by 31,5 cm.

Klecker

Commentatio de primis Vindobonae typographis cum variis ad rem litterariam adnotationibus (Vindobonae: Schulz, 1764). (UBW II-252901)

Michael Denis, Wiens Buchdruckergeschicht bis M.D.LX (Wien: bey Christian 2 Friedrich Wappler, Matthias Andreas Schmidt, 1782). (ÖNB 105.692-C; 302210-C)

Anton Mayer, Wiens Buchdrucker-Geschichte 1482–1882. Vol. 1 (Wien: Frick, 3 1883). (UBW II-252901)

Title page of: Joseph Paul Pock, Jubilaeum seculare in SS. geminis ex Arabia 4 Cosma et Damiano panegyrico seculari celebratum (Viennae Austriae: typis Joannis Jacobi Kürner, universit. typogr. 1699). (UBW 2000 /1699)

- 5 Title Page of: Ferdinandus de Fillenbaum, Panegyricus divo Leopoldo Austriae marchioni dictus coram antiquissimae, ac celeberrimae universitatis Viennensis senatu (Viennae: E typographeo Kaliwodiano, 1759). (UBW 2000/1759)
- 6 Decorative heading with Kürner's mirror-image initials: Joseph Paul Pock, Jubilaeum seculare in SS. geminis ex Arabia Cosma et Damiano panegyrico seculari celebratum (Viennae Austriae: typis Joannis Jacobi Kürner, universit. typogr. 1699). (UBW 2000 /1699)
- ^{7a} Decorative heading with Kaliwoda's mirror-image initials: Ferdinandus de Fillenbaum, Panegyricus divo Leopoldo Austriae marchioni dictus coram antiquissimae, ac celeberrimae universitatis Viennensis senatu (Viennae: E typographeo Kaliwodiano, 1759). (UBW 2000/1759)
- 7b Tail ornament with Kaliwoda's mirror-image initials: Ferdinandus de Fillenbaum, Panegyricus divo Leopoldo Austriae marchioni dictus coram antiquissimae, ac celeberrimae universitatis Viennensis senatu (Viennae: E typographeo Kaliwodiano, 1759). (UBW 2000/1759)
- 8 Prospect of Vienna framed by Kaliwoda's mirror-image initials: Sigismund Calles, Oratio Funebris Ad Solennes Exequias Caroli VI. ... celebratas (Vindobonae: ex typographia Kaliwodiana, 1740). (UBW I-184954)
- 9 Trattner's device on the title page of: Musae Francisco et Mariae Theresiae Augustis congratulantur ob scientias, bonasque artes eorum iussu et munificentia Vindobonae restitutas (Vindobonae: Trattner, 1756). (UBW II-116400)
- Ode auf den Edlen Heil. Röm. Reichs-Ritter Johann Thomas von Trattner, als er von Seiner Röm. Kaiserl. Majestät zu diesem Stande erhoben (Wien, 1764). (Wienbibliothek C-18558)
- Feyerliche Wünsche an den Herren Joseph Anton Edl. Von Trattnern, als ihn sein Herr Vater ... zu Führung seiner Kunstgeschäfte sich zugesellet (Wien, 1775). (Archiv Salzer Holding; Karton Festschriften)
- Auf das hohe Nahmensfest des ... Herrn Joh. Thom. Edlen von Trattnern (Wien, 1796). (Archiv Salzer Holding; Karton Festschriften)

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detail Auf das hohe Nahmensfest (Wien, 1796). (Archiv Salzer Holding; Karton 12b Festschriften)

Zum frohen Andenken des fünfzigsten Jahres, das Joh. Thom. Edler von 13 Trattnern ... als Druckerherr und Prinzipal feyerte. (ÖNB 209.837-D)

Zur frohen Feier als Johann Thomas Edler von Trattnern ... den 12.Mai 1802 14 die Stelle seines seligen Grossvaters als Druckerherr und Prinzipal antrat (Wien, 1802). (Wienbibliothek 18559 C)

Venier

Screenshots taken from SBN (fig. 1-2), EDIT16 (fig. 3-4), Mar.T.E. (fig. 5, 6, 7, 8, 10, 11, 12, 13).

Verger

Home page of the Printers' Devices database (http://www.bib.ub.edu/ 1 fileadmin/impressors/cerca_eng.htm)

Laurent d'Houry record in the Printers' Device database (http://www.bib. 2 ub.edu/cgi-bin/awecgi?db=imp_eng&o1=query&o2=exact&x1=IMP&k1=houry ,+laurent+d%27,+-1725)

Esteve Liberós Record of the Printers' Device Database (http://www.bib. 3 ub.edu/cgi-bin/awecgi?db=imp_eng&o1=query&o2=exact&x1=IMP&k1=llibero s,+esteve)

Printers that use salamander as a mark term (http://www.bib.ub.edu/cgi-bin/ 4 awecgi?db=imp_eng&o1=getent&pa=10&k1=34420)

Search page in the Printers' Device database (http://www.bib.ub.edu/ 5 fileadmin/impressors/cerca_eng.htm)

Brandhorst

Screenshots (fig. 1-39) taken from Arkyves, Juni 2015.

Scheibe / Schmitz / Zellhöfer

- 1 Example for a distinct file name. Source: compiled and designed by the authors.
- 2 DruckerzeichenWiki homepage. Source: http://druckerzeichen.gbv.de/ Hauptseite.
- 3 Page for the printer Johann Schott. Source: http://druckerzeichen.gbv.de/ Johann_Schott.
- 4 Overview of the data sets in the authority file editor's view. Source: WinIBW.
- 5 device No. 6 of Johann Schott. Source: http://druckerzeichen.gbv.de/ Datei:Johann_Schott_InitialenSymbolMotto_DE-1_HeitzElsasso6.jpg
- 6 data set of device No. 6 of Johann Schott. Source: WinIBW.
- 7 device No. 9 of Johann Schott. Source: http://druckerzeichen.gbv.de/ Datei:Johann_Schott_SzeneFigurSymbol_DE-1_HeitzElsass09.jpg

8 data set of device No. 9 of Johann Schott. Source: WinIBW.

9 device of Friedrich Reusner. Source: http://druckerzeichen.gbv.de/ Datei:Friedrich_Reusner_FigurRealienWappen_DE-1_32in_Bd0603-50.jpg

10 data set of device of Friedrich Reusner. Source: WinIBW.

¹¹ DNB user view of the data set of device No. 6 of Johann Schott. Source: Online Catalogue of the German National Library. http://d-nb.info/gnd/1063758661

Variations of a printer's device. Sources: Prints by Friedrich Reusner, his heirs and Johann Reusner. Copies from the collection of the Berlin State Library. Shelfmarks: 2 in Ah 12950-1700/14, 3 in Ah 12950-1700/14, 5 in Bd 8603-124, 6 in Bd 8603-89,1/19, 25 in Bd 8603-87,15/29, 27 in Bd 8603-43,20/30, 28 in Bd 8603-88,1/30, 32 in Bd 0603-50, 20 in Bd 8603-95,1/20 and 6 in Bd 8603-104.
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rotated device. Source: http://resolver.staatsbibliothek-berlin.de/ 14 SBB00000EB100000005

handwritten text on the device. Source: http://resolver.staatsbibliothek- 15 berlin.de/SBB00000D6C00000007

handwritten text close to the device. Source: http://resolver.staatsbibliothek- 16 berlin.de/SBB0000182E0000005

library stamp on the device. Source: http://resolver.staatsbibliothek-berlin. 17 de/SBB00000D0F00000009

dark staining on the paper. Source: http://resolver.staatsbibliothek-berlin.de/ 18 SBB0000119D00000806

printed text shining through from the back. Source: http://resolver. 19 staatsbibliothek-berlin.de/SBB00000F4A00000316

library stamp shining through from the back. Source: http://resolver. 20 staatsbibliothek-berlin.de/SBB00000C830000007

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