PROEVE
DER
DRUKKERYEN
BY
ERIK JAN DROS

Also

Type assortment in fourteen Leiden printing offices
in the seventeenth and eighteenth centuries

containing:

Various kinds of Arabic, Syriac, Aramaic, Samaritan,
Ethiopian, Russian, Greek, Hebrew, Rabbinic,
roman, italic, German and Dutch blackletter
and many more types.

Erik Jan Dros MA, s1155393

First reader: prof. dr. P.G. Hoftijzer, second reader: dr. P.A.F. Verhaar
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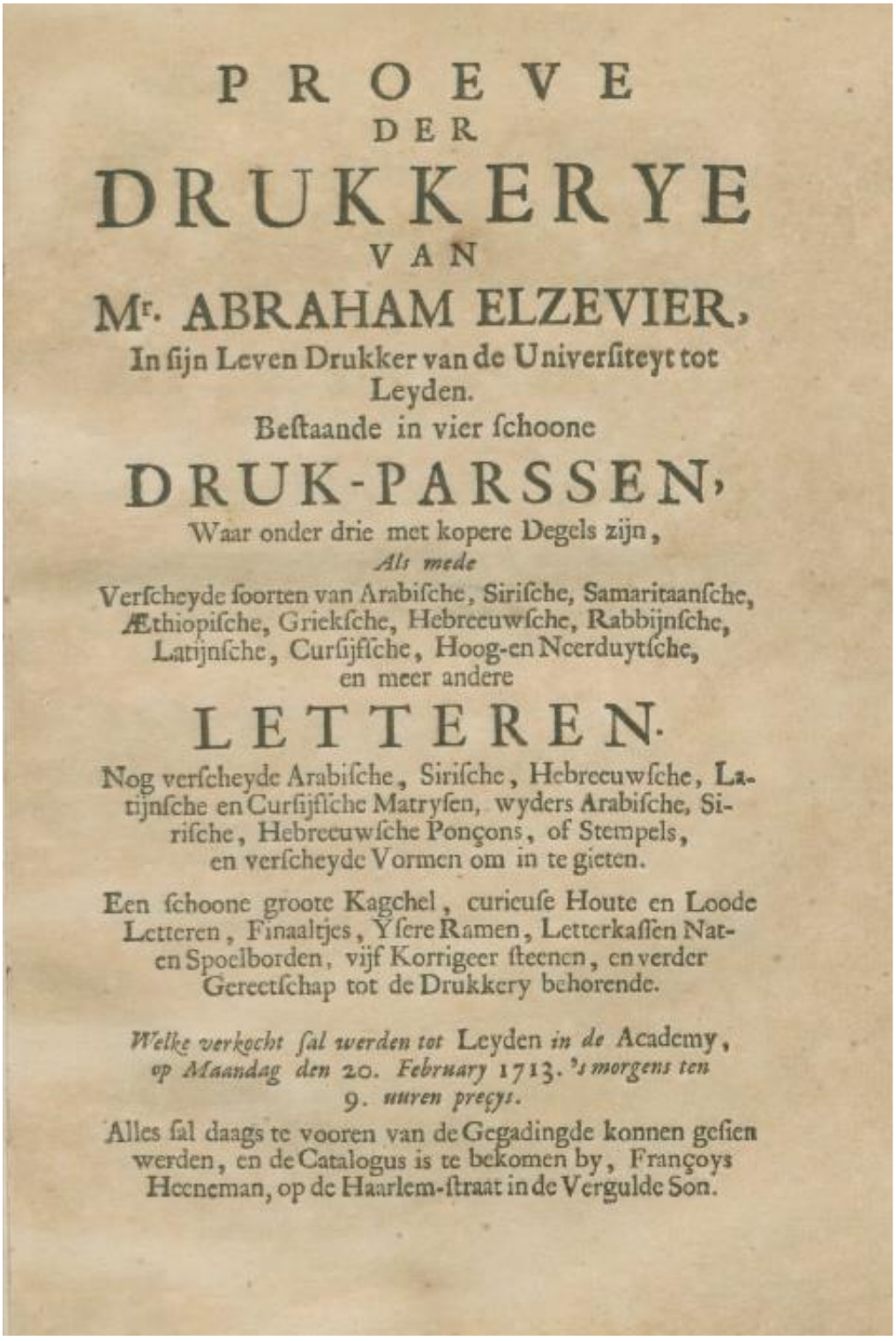

PROEVE
DER
DRUKKERYE
VAN
Mr. ABRAHAM ELZEVIER,
In ſijn Leven Drukker van de Univerſiteyt tot Leyden.
Beſtaande in vier ſchoone
DRUK-PARSSEN,
Waar onder drie met kopere Degels zijn,
Als mede
Verſcheyde ſoorten van Arabiſche, Siriſche, Samaritaanſche, Æthiopiſche, Griekſche, Hebreeuwſche, Rabbijnſche, Latijnſche, Curſijfſche, Hoog-en Neerduytſche, en meer andere
LETTEREN.
Nog verſcheyde Arabiſche, Siriſche, Hebreeuwſche, Latijnſche en Curſijfſche Matryſen, wyders Arabiſche, Siriſche, Hebreeuwſche Ponçons, of Stempels, en verſcheyde Vormen om in te gieten.
Een ſchoone groote Kagchel, curieuſe Houte en Loode Letteren, Finaaltjes, Yſere Ramen, Letterkaſſen Nat- en Spoelborden, vijf Korrigeer ſteenen, en verder Gereetſchap tot de Drukkery behorende.
Welke verkocht ſal werden tot Leyden *in de* Academy, *op Maandag den* 20. *February* 1713. *'s morgens ten* 9. *uuren precys.*
Alles ſal daags te vooren van de Gegadingde konnen geſien werden, en de Catalogus is te bekomen by, Françoys Heeneman, op de Haarlem-ſtraat in de Vergulde Son.

Figure 1: Title page of the auction catalogue of the printing office of Abraham Elzevier, auctioned on February the 20th, 1713. Source: Digital Collections, Leiden University Libraries.[1]

[*] The title page is loosely based on the title page of *Proeve der drukkerye van Mr. Abraham Elzevier* (s.l.: s.n., s.a. [Leiden: François Heeneman, 1713]).

[1] *Leiden University Libraries' Digital Collections*, 'Proeve der drukkerye van Mr. Abraham Elzevier' <http://hdl.handle.net/1887.1/item:1551695> (18 April 2020).

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Introduction

It was a stormy day in January 1646, when a sudden uproar startled the residents of Rapenburg in Leiden. The new façade of Rapenburg 52, which was still in scaffolding, had collapsed in the wind. The mason blamed the carpenter, who in turn accused the mason. At the end, all damage had to be paid by the owner of the building, bookseller and -printer François de Heger. De Heger had had a thriving business at Rapenburg 52; an A-location, right across the university of Leiden. The new façade should have radiated De Heger's prosperity, but it became his financial ruin: on 13 April 1646 he was officially declared bankrupt.[2]

For the settlement of the bankruptcy, an estate inventory was made, in which among other things the real estate (apart from Rapenburg 52, a house in Kloksteeg) and the inventories of the bookshop and printing office of De Heger was listed. In this inventory a list of the type De Heger owned can be found.[3] On the basis of this list, and list that can be found in similar inventories, I will analyse the type material of fourteen Leiden printing offices from the seventeenth and eighteenth centuries. To what extent can an analysis of the different type faces and sizes of these offices inform us about the Leiden book industry in general?

Historiography

The study into Dutch type has a long history. Already in the eighteenth century Johannes Enschedé, a printer and type founder from Haarlem, collected type material. This early study into type in the Netherlands mainly revolved around the research into the supposed Dutch inventor of printing with moveable type, Laurens Jansz. Coster. From the second half of the nineteenth century onwards the study into typography would become more academic. One of the most influential works, *Fonderies de caractères et leur materiél dans les Pays-Bas du XVe au XIXe siècle*,[4] was written by Charles Enschedé, a grandson of Johannes Enschedé. In the last decades, the research into typography got a boost with the introduction of digital ways to compare type. For instance, in 2007, P. Dijstelberge obtained his PhD with a dissertation about the ways a database of typographical material could be used to identify prints of unknown origin.[5] The ongoing project The Short Title Catalogue, Netherlands, is without a doubt one of the most important projects in

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[2] T.H. Lunsingh Scheurleer, C. Willemijn Fock and A.J. van Dissel, *Het Rapenburg. Geschiedenis van een Leidse Gracht. Deel Vb: 's Gravensteyn* (Leiden: Rijksuniversiteit Leiden, Afd. Geschiedenis van de Kunstnijverheid, 1990), pp. 650-651; H. Deneweth, 'Renovating early modern Leiden: New perspectives on the building trades', in I. Wouters, S. van de Voorde, I. Bertels, B. Espion, K. de Jonge and D. Zastavni (eds.), *Building Knowledge, Constructing Histories. Volume I* (Boca Raton/London/New York/Leiden: CRC Press, 2018), pp. 537-545, here p. 543; Research Archive P.G. Hoftijzer, LEIDENH (Heger, Frans jr. de).

[3] Ibidem.

[4] C. Enschedé, *Fonderies de caractères et leur materiél dans les Pays-Bas du XVe au XIXe siècle* (Haarlem: Bohn, 1908).

[5] P.G. Hoftijzer and O. Lankhorst, *Drukkers, boekverkopers en lezers tijdens de Republiek* (Den Haag: Sdu Uitgevers, 2000[2]), pp. 112-116; P. Dijstelberge, *De beer is los!* (Amsterdam: Stichting A D&L, 2007).

the Netherlands in which ultimately the descriptions of all books that were published in the Netherlands and all books published in Dutch outside the Netherlands will be included. The database currently contains more than 200,000 titles, which through a wide variety of search tools can be used for bibliographic research.[6]

Most research within this field is analytical-bibliographic or focusses on the introduction and development of certain kinds of type in the Netherlands. It is partly based on the comparison of matrices, such as the collection of the Haarlem type founder Enschedé, but mostly it relies on the output of printers: texts and other prints. Research into the input, that is to say, the kinds of type printers had in stock and between which they could choose to print with, is much less done and focuses mainly on individual printers and printing offices. This kind of research has been done on, for instance, Platin and Elzevier.[7] The research in this field is not extensive, which is partly due to the fact that the sources that give some information about the type printers had, are rare. As will be discussed in more detail later, these sources are catalogues of auctions of printing houses and notarial documents, such as auction reports, contracts, testaments and other inventories.

Although notarial archives can be a rich source for documents about the Dutch book industry, quite little research has been done into these archives. Moreover, most of the research that has been done is again focused on just one printer or printing office. One of the main exceptions is the research of Paul Hoftijzer, who has conducted in the past decades an extensive and quite systematic book historical research in various archives, most importantly the notarial archives of Leiden.[8] The result is a very detailed research archive concerning the Leiden book industry and many books and articles by Hoftijzer on the Leiden book industry. In the context of this thesis I want to highlight two titles. *Stad van boeken: handschrift en druk in Leiden, 1260-2000*, published in 2008 on the occasion of a major exhibition in museum De Lakenhal, gives a general overview of the Leiden book industry. The middle part, concerning the seventeenth and eighteenth century, has been written by Hoftijzer.[9] Four years earlier Hoftijzer published an

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[6] 'Geschiedenis van de STCN', *Koninklijke Bibliotheek*, <https://www.kb.nl/organisatie/onderzoek-expertise/informatie-infrastructuur-diensten-voor-bibliotheken/short-title-catalogue-netherlands-stcn/geschiedenis-van-de-stcn> (11 May, 2019); 'Short-Title Catalogue, Netherlands (STCN)', *Koninklijke Bibliotheek*, <https://www.kb.nl/organisatie/onderzoek-expertise/informatie-infrastructuur-diensten-voor-bibliotheken/short-title-catalogue-netherlands-stcn> (11 May, 2019).

[7] Hoftijzer and Lankhors, *Drukkers boekverkopers en lezers tijdens de Republiek*, pp. 127-129.

[8] P. Verhaar, 'Durable access to book historical data', *Digital Scholarship @Leiden*, 30 September 2019 <https://digitalscholarshipleiden.nl/articles/durable-access-to-book-historical-data> (8 March 2020).

[9] A.Th. Bouwman, B.P.M. Dongelmans, P.G. Hoftijzer and E.T. van der Vlist, *Stad van boeken. Handschrift en druk in Leiden, 1260-2000* (Leiden: Primavera Pers/Ginkgo Pers, 2008), especially P.G. Hoftijzer, 'Veilig achter Minerva's schild: Het Leidse boek in de zeventiende en achttiende eeuw', pp. 153-265

article *Leidse drukkerijen in de zeventiende eeuw* on the practical sides of the Leiden book industry, such as working conditions, management and inventories of Leiden printing offices.[10]

Database

In 2018-2019 the research archive of Hoftijzer was the subject of the project *Durable access to book historical data/Duurzame toegang tot boekhistorische data*. In this project, the research archive, which consisted mainly of semi-structured Word documents, was transformed into an organized dataset in such a way that the data could be (re-)used by other book historians. During the transformation, the database was the topic of the BA-course *Boekgeschiedenis in de praktijk* at Leiden University, in which the students (or in other words, the future book historians) could work with the database and do their own research on the basis of the obtained data. With the experience of the students, the database was refined and improved.[11]

In the margin of this project, although at a considerably slower pace, I started with my thesis, working with a specific part of Hoftijzer's data: the estate inventories of Leiden printers in the seventeenth and eighteenth century. During his research, Hoftijzer had collected estate inventories, or likewise documents, concerning circa thirty Leiden printers from the period 1589-1793. Within these documents there was a large diversity, both in form (both printed and handwritten) as in information density. Auction reports can provide detailed information about the auctioned items, including weight, number, price and buyer. In some cases, the auction catalogue has also been preserved, through which it is even possible to research the quality of the auctioned letters. In other cases, however, the information is much scarcer. The late sixteenth-century type specimen of the Leiden city printer of Jan van Hout, which has been preserved in a unique copy, does not give any information about the amount of each type face and size Van Hout had in his office, let alone the value of the type.[12] This diversity of information made it difficult to capture all the data of these documents in one structured form.

Two important choices were made, when creating the dataset for this thesis. First, not every source that Hoftijzer found was useable for the database. Only the sources that said something about the quantity of the different types of material are included. The result was that almost half of the original corpus is left out: only fifteen printers are included. The second choice concerned the type of information that was included in the database. In most of the document

[10] P.G. Hoftijzer, 'Leidse drukkerijen in de zeventiende eeuw', in J. Biemans, L. Kuitert and P. Verkruijsse (eds.), *Boek en letter. Boekwetenschappelijke bijdragen ter gelegenheid van het afscheid van prof. dr. F.A. Janssen* (Amsterdam: De Buitenkant, 2004), pp. 295-318.

[11] Verhaar, 'Durable access to book historical data' (8 March 2020).

[12] Erfgoed Leiden en Omstreken (ELO), Stadsarchief (SA), inv. no. 1052, Letterproef Jan van Hout (1600).

there is a strict division between the (lead) type material, which is noted by weight, and the other materials and supplies, noted by amount. To make the database as structured as possible, I decided to include only the type material. This material will therefore be at the centre of this thesis, while the other items that are mentioned are used as illustration. When it is mentioned in the sources, the value of the materials was also noted in the database. The database has been added as two appendices.

Sources

Although the data has been uniformed, the documents behind the data are of course still very diverse. They can be divided in three groups: documents concerning auctions, sale or lease contracts and estate inventories. The first group is the largest. To give an example, after the death of Cornelius Hackius, one of the three brothers who led the *Officina Hackiana*, the *Officina* was auctioned to pay out the widow of Cornelius. Notary Leendert Leffen wrote the report of the auction, which nowadays can be found in the old notarial archive in the municipal archive of Leiden.[13] Similar reports have been handed over of the auctions of the printing offices of IJsbrandt van Leeuwen in 1687, Abraham Elzevier in 1713, Jan Willem de Groot in 1749, Johannes van Abkoude in 1760 and Cornelis Heyligert in 1792.[14] Normally, a catalogue of the items to be auctioned was printed. Especially for the type material, these catalogues are very interesting, because they show pieces of texts, printed with the type that was auctioned. In a few cases, these catalogues have survived the ages, such as the catalogue of the Elzevier auction, the De Groot auction and the Heyligert auction.[15] In the case of the auction of the printing office of Christiaan Vermey in 1724, there is only the auction catalogue: an auction report has not been found.[16]

Whereas during auctions the inventory of the printing office was sold in pieces, there are also a few documents, in which the sale as a whole was arranged. In most cases these sale contracts seem to have been drawn up in the context of debts: the printer transported the ownership of his printing office to a debtor, but he kept on working in the office. This is

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[13] ELO, Oud Notarieel Archief (ONA), inv. no. 1260, deed no. 95 (19 July 1677).

[14] Van Leeuwen: ELO, ONA, inv. no. 1085, deed no. 251 (1 November 1687); Elzevier: ELO, ONA, inv. no. 1735, ff. 315-342 (20 February 1713); De Groot: ELO, ONA, inv. no. 2092, deed no. 105 (22 July 1749); Van Abkoude: ELO, ONA, inv. no. 2294, deed no. 123 (19 August 1760); Heyligert: ELO, ONA, inv. no. 2437, deed no. 19 (28 February 1792).

[15] Elzevier: *Proeve der drukkerye van Mr. Abraham Elzevier* (copy of Leiden University Libraries (UBL), 20651 D 50; De Groot: *Proeve der drukkerye gebruikt by Jan Willem de Groot* (s.l., s.a. [Leiden: Willem Boot, 1749]) (copy of the National Library of the Netherlands, The Hague (KB), 3110 E 40); Heyligert: *Proeve der drukkerye, nu laatst gebruikt bij Cornelis Heyligert* (Leiden: D. de Mortier & Son, J.J. Thyssens, 1792) (copy of UBL, 21181 E 5).

[16] *Proeve der drukkerye, van Christiaan Vermey* (s.l., s.a. [Leiden: Johan Arnold Langerak, 1724]) (copy of UBL, 20651 F 11).

certainly the case with the contracts between printer Nicolaas Hercules and debtors Petronella Bueric and Simon van Leeuwen in 1661 and the contract between Isaac van der Mijn and debtor Sigebert Haverkamp in 1741.[17] The context of the contract of 1627 between printer Johannes Cornelisz. van Woerden and Willem van Dobben is a bit vaguer, but Van Woerden kept on printing after the sale, so it is likely that there was a similar construction.[18] An interesting case is the contract between printer Willem Christiaensz. van der Boxe and Petrus Scriverius from 1632.[19] In this contract, Van der Boxe transports his printing office to Scriverius by which he becomes more or less the private printer of Scriverius. This construction will be discussed in more detail in chapter two. In the same year Van der Boxe would lease type from punch cutter Arent Hogenacker.[20] This construction will be treated in chapter one.

The last group of documents relates to estate descriptions drawn up in the events of a bankruptcy, marriage or death. There is the aforementioned estate description of François de Heger from 1646, of Abraham Verhoef from 1672 made on the occasion of his marriage, and of Philippe de Croy from 1675 and Jacob Huysduynen from 1720 after their death.[21]

When working with these documents there are of course several problems that need to be taken into account. First, there is the problem that all are mere snapshots and it is difficult to determine how these snapshots relate to the entire period that the printer was active. In addition, it is impossible to check the accuracy of the documents. In the case of the auction reports, the weights will have been measured fairly accurately to prevent possible complaints from buyers, but it is very well possible that the measurement did not have to be that accurate when making a general inventory, which often were compiled in a hurry. Moreover, it may well be that some items are missing in the inventory because they were already sold. Thirdly, there is just documentation for quite a small part of the Leiden book printers who were active in the seventeenth and eighteenth century and you can argue that not all printers are as representative as you would hope. This is especially the case when you consider that quite some 'snapshots' were taken at the moment a printer was in financial problems. Although these problems must be taken into account, the reality is that there are no more sources and that we have no other choice than to use them, how problematic they might be.

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[17] Hercules: ELO, ONA, inv. no. 454, deed no. 83 (1 April 1661); Van der Mijn: ELO, ONA, inv. no. 1931, ff. 686-693 (26 December 1741).
[18] ELO, ONA, inv. no. 351, deed no. 13 (21 May 1627).
[19] ELO, ONA, inv. no. 192, deed no. 172 (12 June 1632).
[20] ELO, ONA, inv. no. 366, deed no. 62 (3 August 1632) and inv. no. 265, deed no. 69 (22 September 1636).
[21] De Heger: ELO, ONA, inv. no. 704, deed no. 53 (13 March 1646); Verhoef: ELO, ONA, inv. no. 1040, deed no. 113 (8 April 1672); De Croy: ELO, ONA, inv. no. 1258, deed no. 132 (18 November 1675); Huysduynen: ELO, ONA, inv. no. 1473, deed no. 29 (25 February 1720).

Jargon

In both the notarial documents as the auction catalogues the same jargon is used to describe the type. Especially the naming of the different sizes needs some extra explanation. Although it would take until the nineteenth century before real standardization in type production took place, there was already since the late fifteenth century an elaborate system of type sizes that was used by printers, as also can be seen in figure 2. Whereas nowadays the (twelve) point system is used to define the size of type, until the end of the nineteenth century each type size had its own name. In most cases, these names were derived from an author or genre that was as a rule printed in the specific type size. For instance, the aforementioned *brevier* was a small letter, traditionally used to print breviaries used in catholic liturgy. Again, these names were not standardized and there were, big differences, especially between different countries. The *augustijn*, for instance, in Dutch named after the (late) classical author and church father Augustinus of Hippo, was named *cicero* in France after the classical author Cicero.[22]

The point system would make its introduction in the Netherlands at the beginning of the nineteenth century, but until the end of the century, the old jargon continued to be used alongside or in addition to the new system. Figure 2 gives the conversion from the old terminology to the point system and the English pendant, as it was formulated in the nineteenth century. For the seventeenth and eighteenth centuries, this table can only function as an approximate indication. Although, for example, the *mediaan* was always smaller than the *augustijn*, it would not have necessarily been in the ratio 11:12.[23] Because the conversion between the Dutch and English terminology is also an approximate indication in the seventeenth and eighteenth century, I will use the Dutch terminology that is used in the sources, in this thesis.

In the sources, the weight of the type is given in pounds of Holland, which is 0,492 kilogram.[24] Prices are given in guilders, *stuivers* and *penningen*, whereby 12 *penning* make a *stuiver* and 20 *stuivers* make a guilder. In this thesis I will use pounds, guilders and *stuivers* without conversion to metric numbers. However, in Appendix II the prices of the type will be noted with the decimal number system, whereby a *stuiver* is 0,05 guilder and a *penning* is 0,0042 guilder.

[22] G.W. Ovink, 'From Fournier to metric, and from lead to film', *Quaerendo*, 9:2 (1979), pp. 95-127, here p. 98.
[23] Ibidem, pp. 123-124.
[24] P.G. Hoftijzer, 'Sic transit gloria… The end of the officina Hackiana', *Quaerendo*, 26:4 (1996), pp. 258-273, here 271.

Dutch	English	Points
Parel	Non parelje	5
Joli	Emerald	6,5
Brevier	Brevier	7,5
Garamond	Long primer	9
Dessendiaan	Small pica	10
Mediaan	Pica	11
Augustijn	English	12
Dubbele brevier	Double brevier	15
Text	Great primer	16
Paragon	Paragon	18
Dubbele dessendiaan	Double small pica	20
Dubbele mediaan	Double pica	22
Dubbele augustijn	Double English	24
Canon	Two lines great primer	28
Grote canon	Two lines double pica	32
Parijse canon	French canon	36

Figure 2: Dutch terminology for type sizes and their approximate size in points.[25]

Structure

Analytical and quantitative research on the basis of a digital database can reveal new insights that previously could not be seen, or at least were more difficult to see. However, interpreting data is virtually impossible without the context of the more traditional historical research. This thesis will therefore largely fall into two parts: the last section being formed by analysis of the data from the database, the first by the historical context. In chapter one, the production of and the trade in Dutch type in the seventeenth and eighteenth century will be treated: how did the Leiden printers got their type and what were possible problems to look out for when buying type? The historical context of the book industry in Leiden in the early-modern period will be discussed in chapter two. Chapter three will contain an analysis of the data, especially of the ratio of the different kinds of typeface in the database in general and of the individual printers in particular.

[25] After H. van Krimpen, *Boek over het maken van boeken* (Veenendaal: Gaade Uitgevers, 1986), p. 23; Hoftijzer, 'Sic transit gloria…', pp. 271-273; and J. Johnson, *Typographia, or the Printers' Instructor* (London: Longman, Hurst, Rees, Orme, Brown & Green, 1824), p. 76.

Cast by the attendee himself[26]

Dutch type in seventeenth and eighteenth centuries

In November 1624, Thomas Erpenius died at the age of forty in Leiden. For the last nine years of his life, Erpenius had been professor in Arabic, Oriental languages and, from 1619 onwards, Hebrew at the university of Leiden. In this position, he had built quite a reputation throughout Europe as an expert in Arabic, publishing the first Arabic grammar in Europe in 1613. In order to print his work with Arabic types, Erpenius founded his own printing office, which was known as the *Typographia Erpeniana linguarum orientalium*. Starting a new printing office was not cheap. This was in particular the case with Erpenius, who had to make special fonts in Arabic and other languages. To compensate him somewhat for the costs, the university of Leiden offered financial support. After Erpenius' death, his collection of Eastern types was highly sought after by Leiden printers. In the end, Isaac Elzevier, the official printer of the university, would buy the collection from Erpenius' widow for the huge sum of 8.000 guilders, nearly eight times the average annual salary of a Leiden professor. The collection would be one of the crown jewels of the Elzevier printing office until its closure in 1712.[27]

It may be too obvious to mention, but obtaining type material was an absolute necessity for printers to print. As the example of the *Typographia Erpeniana* shows, buying type was a big investment for printers, especially when they were dealing with extraordinary type fonts, such as Erpenius. At the same time, although it would wear out after extensive use, type could last quite some time, which made a lively second-hand market feasible. This production of and trade in the type material in the Dutch Republic, and particularly Leiden, is the subject of this chapter: how did the Leiden printers get their material?

Type founding

When Erpenius ordered his first set of type to be made around 1625, the process of making type had not changed for over 150 years (and would not really change for the following 250 years). Although Johann Gutenberg was, of course, responsible for the invention of printing with movable type, he and his followers were confronted with some teething problems. One of these problems was the quality of the type itself. The type, which Gutenberg used to print his bible with, got worn too quickly because of its specific composition and therefore had to be replaced

[26] 'Door hem comparant selfs gegooten', ELO, ONA, inv. no. 1931, ff. 686-693 (27 December 1741), f. 687r.
[27] P.G. Hoftijzer, 'Veilig achter Minerva's schild', p. 187; W. Otterspeer, *Groepsportret met Dame. Het bolwerk van de vrijheid. De Leidse universiteit 1575-1672* (Amsterdam: Bert Bakker, 2000), p. 83.

often. The process of making type was perfected by the French punchcutter Nicolas Jenson, who worked in Venice around the 1460s and 1470s. He made type that could be used intensively for many years. The procedure started with the cutting of a punch for each character in steel. With this punch, the character was stamped in a small piece of soft metal, mostly copper: the matrix. This matrix was used as a mould to cast the type, using an alloy of lead, tin and antimony.[28]

Jenson, just as Gutenberg, made the type he used in his printing office himself. In general, the very first printers cut their own letters, made their own matrices and cast their own type, although in the fifteenth century type could be resold and reused by different printers. This principle is widely used in the study of incunabula of which the printer is unknown. By comparing the typeface of anonymous incunabula with the typeface in books of which the printer is known, it is in many cases possible to attribute the incunabula to a printer. From the beginning of the sixteenth century onwards independent type founders made their appearance, although the big printing offices on the whole continued to cast their own type.[29] In Leiden, this was for instance the case with the *Officina Platiniana*. Christoffel Plantin had come to Leiden in 1583, after an invitation of the university of Leiden. He already owned the biggest and most influential printing office north of the Alps in Antwerp where, in its heyday during the 1570s, sixteen printing presses could be found, in addition to a flourishing bookshop and an in-house type foundry. The Leiden branch shop, located at Breestraat, also had its own type foundry. Nevertheless, specialization took place. Plantin and his son-in-law and successor Franciscus Raphelengius, who arrived in Leiden in the spring of 1586, made use of an independent type founder: Thomas de Vechter, who also came from Antwerp.[30]

De Vechter's business appears to have been closely connected to the Raphelengius printing office. Not only was the foundry located at the same premises, the printing office must also have been the biggest customer of De Vechter. As long as the Raphelengius' office flourished, so did the foundry. After the death of Thomas de Vechter in 1602 his son continued the business at the same place. Around 1617 the foundry had financial troubles and De Vechters had to sell two sets of matrices, which were valuable items, because they could be used to make new type. Matters went from bad to worse, when the two sons of Raphelengius sold their establishment. In the following years, the foundry changed ownership. In at least three stages Arent Corsz. Hogenacker took over De Vechter's foundry. The exact connection between Hogenacker and De Vechter is not entirely clear. It is possible that Hogenacker, who was also active as a punchcutter, cut some

[28] L. Hellinga, 'The Gutenberg Revolutions', in S. Eliot and J. Rose (eds.), *A Companion to the History of the Book* (Oxford: Blackwell Publishing, 2007), pp. 207-219, here 208-209.
[29] Dijstelberge, *De beer is los!*, pp. 50-51.
[30] Hoftijzer, 'Veilig achter Minerva's schild', pp. 160-161 and 213.

punches on behalf of De Vechter. From at least 1622 onwards, but a date as early as 1614 might also be possible, Hogenacker had his own foundry on Haarlemmerstraat. In 1623, De Vechter jr. sold his last sets of matrices to Hogenacker, effectively closing his own foundry.[31]

Both the foundries of De Vechter and Hogenacker had a large range of customers, not only in Leiden, but throughout the Dutch Republic and possibly beyond. During the seventeenth and eighteenth centuries, no more than four or five independent type foundries appear to have been active at the same time in the Dutch Republic. Before the 1650s there were only just two or three. This meant that there were plenty of potential customers for Hogenacker. Although evidence is scarce, he had without doubt customers in Amsterdam, Franeker, Delft and of course Leiden. In his article about the foundry, Lane has argued that it was Hogenacker who cut and cast the type Erpenius used in his printing office. It is also possible that Hogenacker cast (some of) the type that was used by the Elzeviers. Again, there is no direct evidence, but in 1631, Hogenacker wrote about himself that he was the type founder of the university of Leiden, what suggests that his type was used by Abraham and Bonaventura Elzevier, who were in that time the official printers of the university. Hogenacker's type even made its way into England. At Oxford University, various punches and matrices made by Hogenacker, can still be found.[32]

Most of the printing offices who used Hogenacker's type were small and poorly financed printing offices and quite a lot went out of business after a few years of production. Nevertheless, Hogenacker's foundry was profitable enough to make him financially well off. This has partly to do with his business model, which was quite exceptional for the seventeenth century. He did not only sell type to printers, but, as is demonstrated by at least two cases, he gave it out on loan. In 1632, he rented 1400 pounds of type to Floris Willemsz. Clinckhamer in Amsterdam. Clinckhamer in return had to pay 600 guilders for a period of six years. As it turns out, he could not even pay the first instalment. A second contract is, in the context of this thesis, more interesting. Not only does it relate to a Leiden printer, Willem Christiaensz. van der Boxe, but the contract also specifies which kinds of type he rented. Van der Boxe rented 2000 pounds of type in 1632 for a period of ten years at 80 guilders a year. Next to lines, flowers and almanac signs, nineteen different type faces – roman, italic and blackletter, but also Greek and Hebrew – are named in eight sizes – from *canon* to *dessendiaan*.[33] Lane argues that it is likely that Hogenacker rented his type to other customers as well. For printers this was a suitable way to obtain type,

[31] Hoftijzer, 'Veilig achter Minerva's schild', p. 213; J.A. Lane, 'Arent Corsz. Hogenacker (ca. 1579-1636): an account of his type foundry and a note on his types. Part one: the family and the foundry', *Quaerendo*, 25:2 (1995), pp. 83-113, here pp. 88-89, 91-92 and 94-95.

[32] Lane, 'Arent Corsz. Hogenacker. Part one', pp. 98 and 104-109.

[33] ELO, ONA, inv. no. 265, deed no. 69 (22 September 1636).

without having to make a big financial investment. Lane calculates that in this way printers had to only pay half of the price they would have had to pay when they purchased new type.[34] For Hogenacker, on the other hand, this way of business meant that he stayed the owner of the type. He did not have to worry about buying new casting material, because he could melt the type that was returned after the expiration or termination of the contract.[35]

Arent Hogenacker died in 1636. His eldest sister Marytgen inherited his house and type foundry, but the business was probably managed by her brother-in-law Reynier Heynricsz. Hummerdinck, who was married to a second sister, Haesgen. After Reynier's death in 1655, a cousin took over the printing office: Bartholomeus Bartholomeusz. Hogenacker, son of an older brother of Arent, who had already died in 1619. Although the house would remain property of the family until 1746, the type foundry ceased production in 1672, when Bartholomeus Hogenacker died. Although it is not exactly known who acquired the punches, matrices and other materials of the Hogenacker foundry, some of the matrices can be traced some fifty years later in the foundry of Anthonie and Hendrik Bruyn in Amsterdam. This development is indicative of the general trend for type foundries in the Dutch Republic. While Leiden functioned as the innovative centre of type production through the work of Thomas de Vechter and his successors around 1600, soon Amsterdam would take over the lead thanks to the activity of various renowned type founders. After the closure of the Hogenacker foundry, Leiden played a secondary role in the type founding industry. In the eighteenth century, Haarlem would rise next to Amsterdam as a centre of type founding, especially with the establishment of the foundry of Izaak Enschedé in 1743.[36]

The type that was used by the Leiden printers did not only come from Hogenacker or one of the foundries in Amsterdam, but was also imported from abroad. Especially Frankfurt, with its famous book fair, was the source of a large amount of imported type.[37] While independent type founding came to an end in Leiden with the closure of the Hogenacker foundry, some printers would keep on casting their own type. One of these printers was Isaac van der Mijn, who in 1741 owned 830 pounds of *augustijn* Arabic 'cast with vocals by the attendee himself'.[38] This was a massive amount; not only did Van der Mijn own 'just' 223 pounds of Arabic type in other sizes,

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[34] Here must be kept in mind that normally the printers could have resell their type as casting material, what reduces the financial benefit. At the same time, it remains the case that the starting capital of the printers did not have to be as big as when the bought their type.

[35] Lane, 'Arent Corsz. Hogenacker. Part one', pp. 109 and 111-112.

[36] H. de la Fontaine Verwey, 'Het Hollandse wonder', in D. Boon Czn, A. Koningsveld and F.G. Meyer (eds.), *Boeken in Nederland. Vijfhonderd jaar schrijven, drukken, en uitgeven* (Amsterdam: Koninklijk Verbond van Grafische Ondernemingen, 1979), pp. 55 and 61; Lane, 'Arent Corsz. Hogenacker. Part one', pp. 98-100.

[37] De la Fontaine Verwey, 'Het Hollandse wonder', p. 55.

[38] 'door hem comparant selfs gegooten met vocalen', ELO, ONA, inv. no. 1931, ff. 686-693 (27 December 1741).

the 830 pounds constitutes up to forty percent of all the Arabic type that can be found in the database used for this thesis. It is therefore likely that Van der Mijn casted type partially for sale to other printers.[39]

Problems and practice

The diverse supply of so many type foundries in the Dutch Republic and abroad caused a problem for the printers. Each foundry worked according to its own custom, so printers could not use type of different foundries interchangeably. David Wardenaar, who wrote the first Dutch printer's manual *Beschrijving der Boekdrukkunst* in 1801, formulated the problem as follows: 'Most of the letters, cast by different type founders are not on the same line and therefore they are crooked or they are too low or too high and one can absolutely not change this.'[40] It even occurred, according to Wardenaar, that type from the same foundry could not be used interchangeably:

> One letter should not even be a hair longer than another, which sometimes happens when one uses type from different foundries, yes sometimes even when one uses type from the same foundry, which is negligent and extremely inconvenient and causes a lot of trouble. I myself have experienced that out of four new types, two had been cast so long, or one would rather say so high, that I was forced to send them back, so that they could be made shorter, what was done so poorly, that I had to grind and pat hundreds of them to make them somewhat useful.[41]

In practice, this could cause chaotic circumstances in printing offices. Every individual size of every individual type font of every individual type founder had to be kept separate from each other. When different kinds of type had to be used on the same page, the printers had to be creative to fill up holes and to make everything even.[42] When the *Officina Hackiana* was auctioned in 1677 no more than 1.517 pounds of roman *brevier* in six lots were sold together with 765

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[39] ELO, ONA, inv. no. 1931, ff. 686-693 (27 december 1741).

[40] '[D]at de meeste Letters, van onderscheidene Gieters, altoos buiten de Linie, en dus scheef, of hooger en lager staen, da men volstrekt niet veränderen kan.' F.A. Janssen, *Zetten en drukken in de achttiende eeuw. David Wardenaar's* Beschrijving der Boekdrukkunst *(1801)* (Haarlem: Joh. Enschedé en zonen, 1986), p. 223.

[41] '[D]e eene behoord zelf geen hair breed meerdre lengthen te hebben, dan de andere, dat wel eens plaets vind, wanneer men ze van onderscheidene Gieterijen gebruikt, ja ook zomwijlen wel, van dezelfde Gierij, 't welk onächtzaem, bijzonder ongemaklijk, en veel moeite onderhevig is. Ik hebbe ondervonden, dat van 4 nieuwe Letters, twee zoo zeer te lang, of men zoude liever kunnen zeggen te hoog, gegoten waren, dat men zich genoodzaekt vond dezelven terug te zenden, om afgenomen te worden, het welk zoo slegt wierd uitgevoerd, dat men honderden moest afslijpen, en opkloppen, om ze eenigzints bruikbaer te maken.' Janssen, *Zetten en drukken*, pp. 240-241.

[42] Ovink, 'From Fournier to metric', p. 99.

pounds of italic *brevier*, also in six lots. The Hackius brothers had printed quite popular octavo editions in their *brevier* type, which explains why they had so much of it: the four smallest printers had in total less type than the Hackius brothers had only in *brevier*. Although it is possible that the type was divided over different lots to make it easier to auction, it is more likely that Hackius had different kinds of roman and cursive *brevier*, which were kept in separate cases. This idea is strengthened by the differences between the lots. Not only do they differ in weight – the biggest roman lot consists of 338 pounds *brevier*, the smallest of 157 pounds – but also the price that was paid for them differs hugely. While on average four *stuivers* were paid for one pound *brevier* during this auction, the most expensive lot costed more than six *stuivers*, the cheapest less than three.[43]

Printers could possess quite much of the same type, as the roman *brevier* of the *Officina Hackiana* shows. However, one can imagine that for most kinds of type, there will have been an approximate amount that was ideal to print with. If a printer had too little type, he would not be able to compose the text. On the other hand, too much of the same type would not only be bothersome to handle and store, but it was often also the case that more type did not necessarily meant more productivity: printers also needed to have the composers, printers and printing presses to put the type to work. In general, it is not the case that the big printing offices had averagely more of the same type in comparison to their smaller colleagues. When the amount and diversity of type of the Leiden printers in my corpus is plotted, it becomes clear that on average they go hand in hand, as can be seen in figure 3. There are clearly some exceptions: Van Leeuwen and Vermey had a relatively large assortment for the amount of type they owned. When looking at their inventory, is indeed true that they both had quite a large variety of sizes of roman, italic and Dutch blackletter of which the majority weighed just a few pounds.[44]

Van der Mijn's situation is exactly the opposite: in 1741 he had of a few types an incredible amount. Next to the aforementioned 830 pounds Arabic *augustijn*, he also owned 1.144 pounds of Greek *augustijn* and 2095 pounds of roman *mediaan*. In the previous years, Van der Mijn seems to have invested heavily. In 1739 and 1740 he and his wife had borrowed in 6.500 guilders in total from Sigebert Haverkamp and with this money Van der Mijn had bought a lot of type: in the inventory 6.119 pounds of type, over thirty percent of the total (in sixteen lots) are marked as 'new' or 'never used'.[45]

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[43] ELO, ONA, inv. no. 1260, deed no. 95 (19 July 1677); Hoftijzer, 'Sic transit gloria…', p. 268.

[44] At the auction of the printing office of Van Leeuwen 35 different kinds of type were sold, at Vermey's 48. The six biggest lots at Van Leeuwen's auction, four roman type and two Dutch blackletter, were responsible for more than half of the total weight. Half of the total weight at Vermey's auction consisted of the seven biggest lots, four sizes of roman type and three sizes of Dutch blackletter.

[45] Research archive P.G. Hoftijzer, LEIDENM (Mijn, Isaac van der); ELO, ONA, inv. no. 1931, ff. 686-693 (26 December 1741); for the bonds see ELO, ONA, 1929, ff. 632-633 (26-9-1739); and ELO, ONA, 1930, ff. 1076-1077 (23-11-1740)

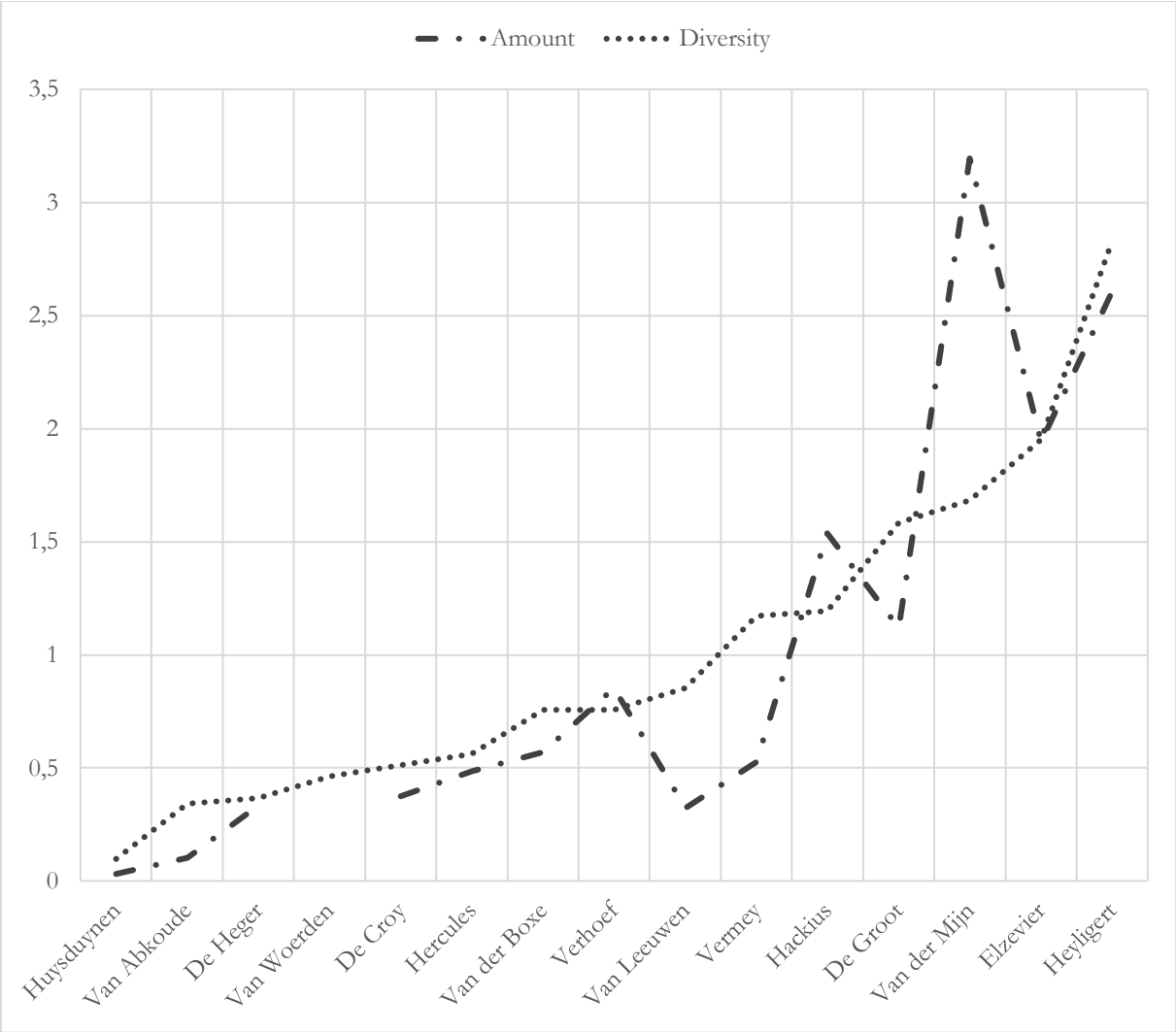

Figure 3: The relative amount and diversity of type of Leiden printers, with 1 being the total average of the printers in my corpus.

Value

To have just the right amount of type – enough to be able to print whatever the printer wanted to print, but also not too much – was also a matter of finances, as the case of Van der Mijn shows. Type was expensive and buying type was the biggest investment a printer had to do. The auction of the printing office of Abraham Elzevier yielded 1.848 guilders, of which 1.200 guilders was paid for the type, over sixty percent. On the other hand, type did not really retain its value. As it was used, it would slowly wear out and subsequently loose its value. The type of Elzevier, who was infamous for his expensive but sloppy printing, was sold for two *stuivers* per pound on average. Some thirty years earlier, the type of the *Officina Hackiana* was sold for more than double:

five *stuivers* per pound; the average selling price in my corpus.[46] However, this was again much lower than the original selling price, which could vary from 9 to 40 *stuivers* per pound. The variation depended mostly on the size of the letter, because there were much more single letters in a pound of a small size, than in a pound of a bigger size.[47]

Of ten printers in my corpus, it is possible to determine how much on average their type was worth per pound at the moment of auctioning or inventorying. As can be seen in figure 4, the type of Elzevier and De Croy was sold the cheapest, with just two *stuivers* per pound. The type of Van der Boxe and Van der Mijn was the most expensive, with eight to nine *stuivers* per pound. Accidentally, in both instances the printing office was officially handed over to an investor: in case of Van der Boxe to the independent scholar Petrus Scriverius and of Van der Mijn to the already mentioned Sigebert Haverkamp, who was the professor of Ancient Greek at the university of Leiden. Although the printing offices were handed over, both printers stayed working in the office, now more or less for Scriverius and Haverkamp. This might be the reason why in both cases quite a high value of the type was set.

The high value of the printing office of Van der Mijn can also be caused by the fact that he had quite some special kinds of type in stock, such as the large amount of Arabic type. As can be seen in figure 5, the prices of the less common alphabets were averagely more expensive than the most common alphabets: roman, italic and blackletter. Whereas Greek and Syriac type are just a bit more expensive than the roman type and blackletter (although still twenty to forty percent more expensive), Hebrew, Arabic type and type in other alphabets are on average twice as expensive. In contrast to the price of new type, the influence of size seems to have been smaller on the price of second-hand type. As can be seen in figure 6, the smallest sizes are as expected the most expensive. For the most common sizes there are only small prices differences.

Printer	**Price per pound**	**Printer**	**Price per pound**
Van der Boxe	9 *stuivers*	Vermey	4 *stuivers*
De Croy	2 *stuivers*	Van der Mijn	8 *stuivers*
Hackius	5 *stuivers*	De Groot	6 *stuivers*
Van Leeuwen	4 *stuivers*	Van Abkoude	3 *stuivers*
Elzevier	2 *stuivers*	Heyligert	5 *stuivers*

Figure 4: Average price per pound of type, sorted by printer.

[46] See Appendix II.
[47] Lane, 'Arent Corsz. Hogenacker. Part one', pp. 111-112, especially n.34.

Kind of type	**Price per pound**	**Kind of type**	**Price per pound**
Roman	5 *stuivers*	Arabic	11 *stuivers*
Italic	4 *stuivers*	Syriac	7 *stuivers*
Roman/italic	3 *stuivers*	Other alphabets	10 *stuivers*
Dutch blackletter	5 *stuivers*	Capitals	6 *stuivers*
German blackletter	5 *stuivers*	Greek capitals	5 *stuivers*
Greek	6 *stuivers*	Other characters	8 *stuivers*
Hebrew	10 *stuivers*		

Figure 5: Average price per pound of type, sorted by kind of type.

Size	**Price per pound**	**Size**	**Price per pound**
>7,5 pt.	9 *stuivers*	*Augustijn* (12 pt.)	5 *stuivers*
Brevier (7,5 pt.)	6 *stuivers*	*Text* (16 pt.)	5 *stuivers*
Garamond (9 pt.)	5 *stuivers*	*Paragon* (18 pt.)	7 *stuivers*
Dessendiaan (10 pt.)	6 *stuivers*	Others 7,5-18 pt.	4 *stuivers*
Mediaan (11 pt.)	6 *stuivers*	>18 pt.	5 *stuivers*

Figure 6: Average price per pound of type, sorted by size.

Conclusion

The image of the type founding industry of the Dutch Republic in the seventeenth and eighteenth centuries is at the same time both diverse and traditional. Printers could buy type from a wide range of type foundries the Dutch Republic and abroad. With almost every foundry having its own punches and matrices and therefore making its own sorts of type, now and again printers must have been forced to combine type that was not ideal to combine. Even type from the same foundry could be slightly different in size. Moreover, there were lots of opportunities in the printing industry for the reusage and resale of type material. The type itself could be resold, but more importantly, the punches and matrices could be used by different foundries and were sold by punchcutters to type founders. This was of course partly due to the traditional nature of the type founding industry in particular and of the printing industry at large: type founding did not change much between the end of the fifteenth century and the end of the eighteenth century. The fact that old punches and matrices were reused by different foundries, meant, among other things, that is was very hard to systematize and standardize production.

During his life printer of the university of Leiden[48]

The book industry in Leiden in the seventeenth and eighteenth centuries

In the previous chapter, eighteenth-century Leiden printer Isaac van der Mijn and his relationship with Sigebert Haverkamp was shortly discussed. Van der Mijn had inherited the printing office of his parents in 1729. In the following ten years, he would lift it to being one of the biggest printing offices of his time. In 1741 he owned nearly nineteen thousand pounds of type, more than one and half times as much as Abraham Elzevier had in 1713. As seen before, the money Van der Mijn invested in his office was largely loaned to him by Sigebert Haverkamp, professor of Ancient Greek at the university of Leiden. Soon became apparent, however, this was too heavy a burden for Van der Mijn to repay. In December 1741 he transferred the ownership of the printing office and its contents to Haverkamp as payment for his debts.[49] Van der Mijn probably kept on working in the printing office, now as an employee of Haverkamp. This situation came to an end when Haverkamp died a year later and the printing office of Van der Mijn was auctioned.[50]

At first glance, one might expect that apart from this financial relation, Van der Mijn and Haverkamp also had a professional link. This does not, however, appear to have been the case. There is only one poem, written by one of Haverkamp's sons, printed by Van der Mijn.[51] Haverkamp's own works were mostly printed by Gerard Potvliet.[52] Van der Mijn's company must just have been a good investment opportunity for the professor. The example shows that the presence of the university and its entourage in Leiden had a major influence on the city's book industry, just as it was the case with the *Typographia Erpeniana*. In this chapter, I will discuss the influence of the university on the Leiden book industry and other special features of Leiden as a book city.

Dutch book industry

Around the 1460s the new art of printing books reached the Low Countries. A precise dating cannot be given, because the first texts, which are now called Dutch prototypography, were printed without mentioning the printer or place and date of printing. The earliest dated books from the Low Countries were printed in Aalst and Utrecht in 1473. In the following years, book

[48] 'In sijn leven drukker van de Universiteyt tot Leiden', *Proeve der Drukkerye van Mr. Abraham Elzevier*, p. 1.
[49] ELO, ONA, inv. no. 1931, ff. 686-693 (27 December 1741).
[50] An auction catalogue or auction report have not been handed down, but the auction has been announced in the Leydse Courant; Research archive P.G. Hoftijzer, LEIDENM (Mijn, Isaac van der).
[51] Abraham Haverkamp, *Carmen elegiacum de eloquentia exteriore* (Leiden: Isaac van der Mijn, 1735).
[52] Research archive Paul Hoftijzer, LEIDENM (Mijn, Isaac van der).

printing caught on quickly in Dutch cities. Until 1480 at least 299 books were printed, a number that would more than double in the next decade, increasing to at least 803 titles between 1481 and 1490. After a minor decline around the turn of the century, the production of books would start to rise again from the 1510s onwards.[53] Although printers could be found in many cities throughout the Low Countries, a number of large production centres soon emerged, such as Leuven and Deventer, both cities famous for their educational institutions. However, the joined production for the years 1470-1540 of these two cities was still smaller than that of Antwerp. At the end of fifteenth century, Antwerp had grown rapidly and by the beginning of the sixteenth century it was the most important commercial centre of Europe. The Antwerp book trade did not fall behind. Between 1500 and 1540, almost three quarters of the total book production in the Low Countries took place in Antwerp, which now housed almost half of all the Netherlandish book printers in this period.[54]

In the shadow of Antwerp, a handful of book printers tried to make their living in Leiden and in the other cities of Holland. The first known printer in Leiden was Heyndrick Heyndricxz. After printing six books in 1483 and 1484 he closed his business for unknown reasons. It took ten years before the next printer would settle in Leiden. From 1494 onwards there was more or less a continuous activity in book printing in Leiden, although the number of printers would stay low and few of them lasted long, the most successful example being Jan Seversz., who was active from 1502 to 1524. This would change dramatically during the 1570s. As a result of the Dutch Revolt, many refugees from the Southern Netherlands came to the Northern Netherlands in search for a new place to live. Among them were many people who had worked in the book production, such as Thomas de Vechter and of course Christopher Plantin and his son-in-law Franciscus Raphelengius.[55]

This influx of refugees from the Low Countries had an immense influence on the revolting provinces, which would soon be known as the Dutch Republic. Their knowledge, experience and, in many cases, money stimulated the Dutch economy in all kinds of industries. When

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[53] These numbers are based on P.M.H. Cuijpers, *Teksten als koopwaar* (Nieuwkoop: De Graaf, 1998), tables 2.1 and 2.2; A.T. Bouwman and E. van der Vlist, 'Van schrijven naar drukken. Het Leidse boek tussen begin en beleg', in A.Th. Bouwman, E. van der Vlist, P.G. Hoftijzer and B.P.M. Dongelmans (eds.), *Stad van boeken. Handschrift en druk in Leiden, 1260-2000* (Leiden: Primavera Pers, 2008), pp. 97-98. Although these numbers give a good indication of the ratio of the production in the different cities, the numbers itself must be treated as the minimal production. Not only did Cuijpers edit his corpus to make it suitable for his research, he also used databases to which new data is still being added; Cuijpers, *Teksten als koopwaar*, pp. 56-58.

[54] Bouwman and Van der Vlist, 'Van schrijven naar drukken', p. 97; M.C. Keyser, 'Druk en onderdrukking', in D. Boon Czn, A. Koningsveld and F.G. Meyer (eds.), *Boeken in Nederland. Vijfhonderd jaar schrijven, drukken, en uitgeven* (Amsterdam: Koninklijk Verbond van Grafische Ondernemingen, 1979), p. 30.

[55] Hoftijzer, 'Veilig achter Minerva's schild', pp. 160-161 and 163.

Antwerp was retaken by the Spanish troops in 1585, Holland, and in particular Amsterdam, became the new economic and financial centre of Europe. The flourishment of the Golden Age, which the Dutch Republic experienced in all kinds of areas, certainly was experienced in the book industry. In the seventeenth century at least 67.000 books were published by hundreds of printers all over the country. Although Amsterdam had taken over Antwerp's role as the main centre of book production – more than a third of all the books were printed in Amsterdam in the seventeenth century – in many other Dutch cities the book industry equally flourished. More books were published in the Dutch Republic than in any other country in the seventeenth century.[56]

Next to the influx of experience and capital from the south, this flourishing of the book industry was also made possible by the political, educational and economic situation in the Dutch Republic. A large part of printed book was intended for export. This was partly due to the booming Dutch economy in general and the growing international trade of all kinds of goods. There existed, for instance, quite a big industry of printing English bibles, which were illicitly sold on the English market. In addition, the industry was much favoured by the relative absence of official regulation. The fragmented nature of the Dutch political system made it difficult for the authorities on all levels to maintain control of the book trade. This meant that in comparison to their colleagues abroad, Dutch publishers and booksellers could operate rather freely. [57]

Although the local government did have the possibility to act against the publication of a forbidden book, it often appears to have consciously chosen not to act, simply because a successful printer was also profitable for the city's economy. However, also Dutch publishers were not completely free to print everything they wanted. In 1749, a year after political unrest in the Dutch Republic, printer Jan Willem de Groot was banned from Leiden for twenty years, because he had printed a rebellious petition. His printing office was auctioned a few months after his banishment.[58]

The domestic market for books and other printed material was also quite big in the Dutch Republic. The cities, especially in Holland, expanded at great speed during the seventeenth century. Between 1575 and 1675, Leiden's population grew from 10.000 inhabitants to 55.000, while Amsterdam in 1675 housed well over 200.000 inhabitants. Literacy was high in the Dutch Republic in comparison to other European countries. Around 1650 circa half of the adult

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[56] P.G. Hoftijzer, 'The Dutch Republic, Centre of the European Book Trade in the 17th Century', *European History Online*, 23 November 2015 <http://ieg-ego.eu/en/threads/backgrounds/the-book-market/paul-g-hoftijzer-the-dutch-republic-centre-of-the-european-book-trade-in-the-17th-century> (16 July 2019).

[57] Hoftijzer, 'The Dutch Republic' (16 July 2019); Hoftijer, 'Veilig achter Minerva's schild', p. 174.

[58] Hoftijzer, 'The Dutch Republic' (16 July 2019).

population could write and even more could read. This percentage would keep on rising throughout the seventeenth and eighteenth centuries. By 1800 circa eighty percent of the Dutch male population could read. This high degree of literacy was caused by the accessibility of primary schools throughout the country. For the children of middle and upper-class families in every self-respecting Dutch city one or more secondary schools could be found. In addition, five universities were founded in the sixteenth and seventeenth centuries, of which the oldest was Leiden.[59]

University and book industry

The university of Leiden was founded in 1575, a year after the Spanish siege of the city. Its main purpose was to provide trained lawyers, administrators, medical doctors and protestant ministers for the rebellious Dutch provinces. The new university was a modern, humanistic institution, in which the *artes* – grammar, logic, rhetoric, dialectics, music, arithmetic, geometry and astronomy – played a big role alongside the higher faculties of Law, Medicine and Theology. As a humanistic university it was of course necessary on the one hand to acquire the latest academic publications and on the other hand to disseminate its own academic output. In other words, the university needed booksellers and printers. In 1577 Willem Silvius, an experienced printer from Antwerp, was appointed as 'Typographus bouckvercoper ende drucker generael' of the university and, not less important, of the States of Holland.[60]

In the footsteps of Silvius, a growing stream of booksellers and printers settled in Leiden, hoping to benefit from the success of the university. There is a striking connection between the number of students and the size of the Leiden book business. Until 1650, the number of students doubled every twenty-five years to 11.076 registrations between 1626 and 1650. At the same time, the book industry almost tripled between 1600-1650 from circa 35 entrepreneurs to circa 100 in 1650. Most of their shops and companies could be found in the area around the university on Rapenburg and in its adjoining streets Houtstraat and Kloksteeg. Especially the last street was for centuries the place to be when searching for a bookshop in Leiden.[61] Figure 7 gives the situation around 1700.

[59] Hoftijzer, 'The Dutch Republic' (16 July 2019); Hoftijzer, 'Veilig achter Minerva's schild', pp. 166 and 242.
[60] Hoftijzer, 'Veilig achter Minerva's schild', pp. 157 and 185; Otterspeer, *Groepsportret met Dame*, pp. 25, 62-63 and 66.
[61] P.G. Hoftijzer, *Pieter van der Aa (1659-1733). Leids drukker en boekverkoper* (Hilversum: Verloren, 1999), pp. 12-13.

Figure 7: Location of printers (red), booksellers (blue) and bookbinders (green) in Leiden around 1700 on the map of Leiden of Christiaan Hagen from 1675. Source: Hoftijzer, 'Veilig achter Minerva's schild'.[62]

The university provided the printers with work in various ways. The most important part, at least in the scholarly field, were the books and other writings of the Leiden professors and other scholars. From the founding of the university onwards, the annual academic book production kept on rising until a peak was reached between 1650 and 1675. In these 25 years, almost a thousand academic books were published. After 1675, production fell to a steady 600 titles for every period of 25 years. Book production would drop again after 1750, when the student numbers also fell. Between 1775 and 1800 slightly over 200 titles were published.[63] The influence

[62] Hoftijzer, 'Veilig achter Minerva's schild', pp. 200-201; with a list of the printers, booksellers and bookbinders that are indicated on this map.

[63] Hoftijzer, 'Veilig achter Minerva's schild', pp. 192-193, especially the graph on p. 193.

of the university is not only noticeable by the number of books published, but also by the kinds of books that were published. As can be seen in figure 8, the share of books printed in blackletter, mostly used for works in the vernacular, was small in Leiden, compared to the total Dutch production, while the share of books printed in roman type was bigger. Moreover, the share of books printed in Greek and Arabic in Leiden during the seventeenth and eighteenth centuries is relatively thrice as big as on average share in the Dutch Republic during those centuries. The Leiden book industry was indeed a big player in these languages: forty percent of all Greek books printed in the Dutch Republic came from Leiden during those centuries and nearly sixty percent of all books printed in Arabic.[64]

Type	**Total Dutch production** 202 256 titles	**Leiden production** 25 538 (12,6%)
Roman	75,3%	89,9%
Blackletter	23,5%	7,4%
Greek	0,5%	1,5%
Hebrew	0,6%	0,6%
Arabic	0,1%	0,4%
Other	0,1%	0,2%

Figure 8: Books printed in Dutch Republic and Leiden during the seventeenth and eighteenth centuries.[65]

Apart from this more passive role in the Leiden book production by functioning as a kind of assembly point for scholars, the university had also an active, stimulating role, by offering financial support to the authors and in some instances even to the publishers. It was a custom of the university to give a sum of money or gold or silver objects to an author who dedicated his work to the university, but there are also cases where professors were relieved from parts of their obligation to give lecture to work on a publication or were given the assistance of a student to help with corrections on proofs.[66]

In a few cases the university or an individual professor, invested directly in a printing office. As has been mentioned in the previous chapter, this was definitely the case of the *Typographia Erpeniana*. Not only was this establishment founded by the professor in Arabic and Oriental languages, Thomas Erpenius, he also was partly compensated by the university for the cost of making new Arabic fonts. A financially even more complex arrangement existed between

[64] Based on the STCN (13 December 2019).
[65] Ibidem.
[66] Hoftijzer, 'Veilig achter Minerva's schild', pp. 193-194.

the printer Willem Christiaensz. van der Boxe and the independent scholar Petrus Scriverius. Van der Boxe had started his printing career in the *Typographia Erpeniana* and had worked at the Elzeviers after the death of Erpenius. In 1630 he founded his own printing office. In need of capital to set up his office, he got in touch with Petrus Scriverius, who stood guarantee for a loan from 1632 onwards. In 1636 Scriverius was the guarantee of another loan together with Marcus Zuërius van Boxhorn, professor of Rhetoric and History. In exchange for the guarantee, Van der Boxe became more or less the private printer for both scholars. Of course, the arrangement between Isaac van der Mijn and Sigebert Haverkamp, also fits in this list, although in contrast to the cooperation between Van der Boxe, Scriverius and Van Boxhorn, the arrangement between Van der Mijn and Haverkamp seems to have been only financial.[67]

Apart from the scholarly book production, the university provided a good deal of occasional printing for the Leiden printers. This ephemeral printing consisted partly of the administrative documents, such as lecture programmes, forms and instructions. However, the most important and lucrative part for the printers consisted of the printed orations and other celebratory speeches of professors and the disputations and dissertations of students. Especially of the disputations, thousands of titles must have been printed.[68] The defence of these disputations was a compulsory part of the curriculum and was done a few times by every student during his studies. Before the defence, every professor received a printed copy. Generally, these disputations were paid for by the students themselves, but the university paid the printing of disputations of bursars. Around 1650 this costed the university between 1.000 and 2.000 guilders annually.[69]

As the numbers above show, printing disputations and other occasional work for the university was a lucrative business. Most of it was done by the official university printer; a position which was aspired by many printers, but could only be acquired by the bigger offices. As mentioned before, Willem Silvius was appointed as the first university printer. After his death in 1580 he was succeeded by his son Carel Silvius, but soon the university got a better candidate in sight: the famous printer Christopher Plantin. He founded a large printing office at Breestraat in 1582, which stayed in production until 1619 under the direction of his son-in-law and grandsons. Other printing dynasties who succeeded in becoming university printers were the Elzeviers

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[67] Hoftijzer, 'Leidse drukkerijen in de zeventiende eeuw', pp. 305-307; Hoftijzer, 'Veilig achter Minerva's schild, p. 186.

[68] Ahsmann compiled an inventory of the public defences in the Faculty of Law between 1575 and 1630. She founded more than 900. M.J.A.M. Ahsmann, *Collegia en colleges. Juridisch onderwijs aan de Leidse Universiteit 1575-1630 in het bijzonder het disputen* (Groningen: Wolters-Noordhoff/Egbert Forsten, 1990), pp. 376-456.

[69] Ahsmann, *Collegia en colleges*, pp. 299-301 and 303-305; Hoftijzer, 'Veilig achter Minerva's schild', p. 191; Otterspeer, *Groepsportret met Dame*, p. 236.

(1620-1712) and the Luchtmanses (1730-1848). Printers could go far in their attempt to gain the position. Pieter van der Aa compiled and published at his own expense a new catalogue of the university library in 1716. As a reward, he was appointed as university printer.[70]

The offices such as the ones of Plantin-Raphelengius and Elzevier included the whole process of the book business, from printing to selling. Most of the university printers had their offices together with their bookshop in the vicinity to the Academy building, so that potential customers only had to cross the street. This type of business was quite traditional. The first printers published, printed and sold their own books, supplemented with books they had exchanged with their colleagues. During the late sixteenth century and the seventeenth century, a process of specialization began to take place. As described in the first chapter, type founding was the first process in the book industry to become an independent profession. Publishing, printing and selling books would follow, although combinations of the different professions continue to occur throughout the seventeenth and eighteenth centuries, as can be seen in the activity of the university printers.[71]

Book printing in Leiden

The political turmoil of 1650 in the Dutch Republic had led to a production of a huge number of pamphlets. In an effort to keep a close eye on the book industry, the city magistrates of Leiden wanted to know who were active in the business and in January 1651 all booksellers and -printers had to register themselves at the town hall. The list gives a very interesting view on the situation in the Leiden book trade in 1651. Thirty-four people had appeared for the burgomaster. Among them were nine printers and twenty-five booksellers; for the majority of the booksellers it was apparently no longer necessary to own a printing press. Although most of the printers still functioned as booksellers and publishers, the profession of jobbing printer also made an appearance on the list. The heirs of Jan Claesz. van Dorp, for instance, mostly printed books on commission, such as dissertations, disputations and assignments for the city. In the following years many more printers who only worked on commission, would become active in the industry. They did not only produce the occasional printing, but also printed books commissioned by other publishers.[72]

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[70] Hoftijzer, *Pieter van der Aa*, p. 57; Hoftijzer, 'Veilig achter Minerva's schild', pp.160-162, 186 and 195.

[71] P.G. Hoftijzer, 'Ons' meesters roem en voordeel', *Jaarboek der sociale en economische geschiedenis van Leiden en omstreken* 21 (2009), pp. 62-65.

[72] Hoftijzer, 'Leidse drukkerijen in de zeventiende eeuw', pp. 295-296; Hoftijzer, 'Ons' meesters roem en voordeel', pp. 65.

This list also mentions the number of printing presses the printers had in their offices (see figure 9). There were three rather big offices, where four presses could be found, among which the office of the university printer Bonaventura Elzevier. The majority of the Leiden printers had two presses. Regarding the number of presses, this situation appears to have been more or less the same for the seventeenth and eighteenth centuries. Most printers had one or two presses in their office, with some outliers to four of five presses. In a printing office with two printing presses, ten to twelve people could be found working. For every press there was one person to ink, one to press and one or two to compose the type. In addition, there was a corrector in the printing office to proofread the printed texts and one or two apprentices or errand-boys.[73]

Name	**Number of presses**
Bonaventura Elzevier	4
Jan Maire	4
Abraham Commelin	4
Frans Hackius	2
Severyn Mathysz.	2
Philippe de Croy	2
Joris Abrahamsz. van der Marsce	2
Heirs of Jan Claesz. van Dorp	2
Willem Christiaensz. van der Boxe	1

Figure 9: Printers and the number of printing presses in Leiden in 1651.[74]

To become a printer or bookseller in Leiden, you had to be a *poorter* of the city and had to have worked for at least six years as an apprentice with one or two masters of the guild. In most cases, the apprenticeship would consist of two parts: one period of four years with one master and a second period of two years with another master. Masters were not allowed to have more than two apprentices at the same time, who had to be at least twelve years old. Although there were approximately one thousand apprentices during the seventeenth and eighteenth centuries in Leiden, only two hundred of them would become a master themselves. The majority would go working after the apprenticeship as a servant at one of the printing offices or bookshops. Although most of the people working in the book trade were men, the guild did allow widows of

[73] Hoftijzer, 'Ons' meesters roem en voordeel', pp. 67-68.
[74] Hoftijzer, 'Leidse drukkerijen in de zeventiende eeuw', pp. 295-296 n2.

printers and booksellers to continue the office of their late husbands with the help of a servant. Some of these widows managed their offices for many years after the deaths of their husbands.[75]

Conclusion

In many aspects, the book industry of Leiden did not differ much from those in other towns of Holland, due to its high literacy and its relatively low regulation of the industry. There was, however, one major factor that made a difference: the university. Not only did the university and its members provide a great deal of commerce for the Leiden printers, they also had a large direct influence by supporting authors and printers to make substantial investments in the industry of which the profitability was not always immediately present.

[75] Hoftijzer, 'Ons' meesters roem en voordeel', pp. 73-75.

Roman, italic, High German and Dutch and Other Letters[76]

An analysis of the type found in the Leiden printing offices

The 1713 catalogue for the auction of the printing office of Abraham Elzevier, who had died a year earlier, starts with a promising announcement:

> Consisting of four good printing presses, of which three with copper platens, next too different sizes of Arabic, Syriac, Samaritan, Ethiopian, Greek, Hebrew, Rabbinic Hebrew, Roman, Italic, High German and Dutch and other types.[77]

The amount and diversity of the types that were sold was indeed impressive: more than 11.000 pounds of type was sold, divided over 80 different kinds of type, capitals and special characters. Among them were three different sizes of Arabic type, five of Greek and eight of Hebrew (of which one was Rabbinical Hebrew).[78] Having the biggest printing office of his time in Leiden, it is no surprise that Abraham Elzevier could print with such a large diversity of type. But how special was his printing office in relation to other Leiden printers in the seventeenth and eighteenth centuries? In this chapter I will analyse the different kinds and amounts of type that were present in the fifteen printing offices in the database. Can any striking trends be observed, when comparing the different establishments, and to what extent did specialization occur in the Leiden book industry? The complete corpus can be found in the appendices I and II.

The corpus

Of fourteen of the fifteen printers in the corpus it can be determined exactly how much type by weight they had at the moment the inventories were made.[79] These fourteen printers had in total 82.490 pounds of type in stock. On average, the printing offices in the corpus had circa six thousand pounds of type, but this average is nearly non-existent in reality, as can be seen in figure 10. There were only a few very large printing offices amidst many smaller offices. The largest

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[76] 'Romeinsche, cursyfsche, hoog- en nederduitsche, en andere letteren', *Proeve der Drukkerye van Cornelis Heyligert,* p. 1.
[77] 'Bestaande in vier schoon druk-parssen, waar onder drie met kopere degels zijn, als mede verscheyde soorten van Arabische, Sirische, Samaritaansche, Aethiopische, Grieksche, Hebreeuwsche, Rabbijnsche, Latijnsche, Cursijfsche, Hoog- en Neerduytsche en meer andere letteren.' *Proeve der Drukkerye van Mr. Abraham Elzevier,* (s.l.: s.n, s.a. [Leiden: François Heeneman, 1713]), p. 1.
[78] The proceeds were, however, quite low: only 1.845 guilders. The lead that was sold covers almost two-thirds of this amount, 1.200 guilders; just two *stuivers* per pound on average. Some thirty years earlier, the type of the *Officina Hackiana* was sold for double the price per pound. See Appendix II.
[79] The sales contract between Johannes Cornelisz. van Woerden and notary Willem van Dobben does not specify the amount of type, but only the prices that are paid per font, ELO, ONA, inv. no. 351, deed no. 13 (21 May 1627).

were those of Cornelis Heyligert and Isaac van der Mijn, who both owned five printing presses and twice as much type than the average. They are closely followed by Abraham Elzevier and the brothers Hackius. Only the offices of Abraham Verhoef and Jan Willem de Groot are around average in size, although De Groot had only one press and, as will be discussed later, quite a substantial selection of type in comparison to his colleagues.[80]

Year	**Printer**	**No. of presses**	**Amount of type**	**Kinds of type**
1627	Johan Cornelisz. Van Woerden	2	n/a[4]	19
1632	Willem Christiaensz. van der Boxe	2	3.354 pounds	31
1646	François de Heger	1	1.964 pounds	15
1661	Nicolaas Hercules	1	2.855 pounds	23
1672	Abraham Verhoef	2	5.020 pounds	31
1675	Philippe de Croy	2	2.211 pounds	21
1677	*Officina Hackiana*	3	9.062,5 pounds	49
1687	IJsbrandt van Leeuwen	1	1.900,5 pounds	35
1713	Abraham Elzevier	4	11.443 pounds	80
1720	Jacob Huysduynen	1	184,25 pounds	4
1724	Christiaan Vermey	1	3.104,5 pounds	48
1741	Isaac van der Mijn	5	18.824,75 pounds	69
1749	Jan Willem de Groot	1	6.604 pounds	65
1760	Johannes van Abkoude	1	603 pounds	14
1792	Cornelis Heyligert	5	15.359,5 pounds	116
	Total	32	82 490 pounds	620
	Average	2	5.892 pounds	41

Figure 10: The printers, the number of their printing presses and the amount of type they owned.

[80] With an average of 5892 pounds, the offices of De Groot (112%), the Hackius brothers (154%) and Abraham Elzevier (194 percent) were larger than the average. The office of Heyligert was over twice as large (261%) as the average and the office of Van der Mijn (319%) even three times. Somewhat smaller than average was the office of Verhoef, whereas the offices of Hercules (48%), Vermey (53%) and Christiaensz (57%) were all around half the average. The offices of De Croy (38%), De Heger (33%) and van Leeuwen (32%) were around a third of the average and those of Van Abkoude (10%) and Huysduynen (3%) were even smaller.

Although the corpus only covers a small section of all the printers that were active in Leiden in the seventeenth and eighteenth centuries, it does correlate to the image of the Leiden book industry provided by other sources. As already discussed in chapter two, the book industry in Leiden consisted during the early-modern period of three or four bigger printing offices with circa four or five printing presses among twice as many smaller printers, who had only one or two presses (see also figure 9).[81]

Roman type

As can be seen in figure 10, there was not only a big gap between the amounts of type the printers owned, but also with regard to the variety of type each printer had: from the newspaper printer Jacob Huysduynen, who owned two sizes of roman type, one size of italic and a variety of upper-case letters, to Cornelis Heyligert, whose printing office was divided in the auction catalogue into 116 lots, among which eleven sizes of roman, ten sizes of italic, next to Arabic, Greek, Hebrew, Dutch, German and Russian and even eight sizes of flowers to decorate his publications.

Although the differences between the selections of type between the printers are huge, there is also one striking similarity: judging by their type material, their main business was printing texts with roman type, as figure 12 and figure 13 show. Nearly half (forty-six percent) of the total corpus consists of roman type. Relatively speaking, the aforementioned Huysduynen had the largest portion of roman type: eighty-four percent (capitals not included). As a specialized printer of the *Leydse courant*, which was exclusively printed with roman and a little bit of italic type, as can be seen in figure 11, he was an evident exception. Still, in relative terms four more printers had more type than the average, while nobody had more than sixty percent roman.[82] Four printers had less than forty percent roman type: Johannes Cornelisz. van Woerden, IJsbrandt van Leeuwen, Christiaan Vermey and Johannes van Abkoude.[83] As will be shown later in this chapter, these three printers had, not surprisingly, (relatively) much blackletter.[84] For the other printers, nearly half (forty to forty-five percent) of their type was roman.

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[81] Hoftijzer, 'Leidse Drukkerijen in de Zeventiende Eeuw', pp. 295-296.

[82] I.e. Willem Christiaensz. van der Boxe (63-55%), Nicolaas Hercules (55%), *Officina Hackiana* (56%), Jacob Huysduynen (84%), Cornelis Heyligert (54%). The percentages of Van der Boxe are uncertain, because his roman type was partially sold together with his italic type.

[83] Van Woerden (26-38 percent), Abkoude (33%), Van Leeuwen (35%) and Vermey (39%). The percentages of Van Woerden are uncertain. Not only was his roman type partially sold together with his italic type, it is also likely that not all his type was sold for the same price per pound, so although 38% of the money he got for his type was paid for roman and italic type, this does not necessarily mean that 38% of the amount was roman and italic.

[84] Of three printers it is quite difficult to establish if they had much roman type, because their roman type was partly combined with their italic type.

NEDERLANDEN.

BRUSSEL den 16 January. Van de Grenzen heeftmen, dat de Vyanden hunne nieuwe Linie van Charleroy tót Maubeuge toe voltooid en met Stormpalen voorzien hebben, het geene vermoeden doet, dat hen niet te zéér op hunne groote magt, waar op zéér gepogt hebben, durven verlaaten. De éérste Kamerling van den Hartog van Beijeren is te Namen gekomen, alwaar overmórgen zelfs in Perſoon werd verwagt. De Graave van Bergeyk is nóg niet gekomen. Wanneér de Heeren Gedeputeerden van de Conferentie van hier na Mons gegaan tót het reguleren van eenige zaaken, zullen wederkééren, weetmen niet. Alles word van wederkanten tót de aanſtaande Veldtógt vervéérdigd. Een Party uyt Doornik omtrent Douay geweeſt, is met de Buyt gelukkig in Doornik te rug gekomen.

AMSTERDAM den 18 January. Uyt Smirna heeftmen met Brieven van den 3 December, dat in de Archipelle 6 Franſſe Oorlógſcheepen hadden geweeſt, en met 50 Koornſcheepen na Provence vertrokken, dog volgens ſchryven uyt Livorno, door Stórm van den anderen verſtrooid, en van dezelve zo tót Livorno als andere Plaatſen, eenige door Engelſe en Hollanders opgebragt waaren. De Commiſſievaarder de Prins van Vriesland, Kapt. Daniel Sanders, die het Frans Schip St. Joſef Kapt. Brazio Sicaro met 100 Laſten Granen na Marſeillien gaande had opgebregt, was den 25 voorleden weder in Zée geloopen.

Willem Doem,

'sGRAVENHAGE den 18 January. Haar Ed. Gr. Mog. de Heeren Staaten van Hólland en Weſt Vriesland, heden vergaderd geweeſt, hebben hunne Vergadering tót aanſtaande Dingsdag gecontinueert, en zyn de Leden van de naaſte Steden na Huys vertrokken. Gifteren heeft den Hr. van Boxel, voor den Raad van Staate in Perſoon den Eéd afgelegt als Kapiteyn van een Compagnie Hand Granadiers onder de Blaauwe Gardes te Voet, en ter zelver tyd is de Vicomte van Townſend met den Hr. Raad Penſionaris in geſpiek geweeſt. De Gedeputeerde Heeren van de Admiraliteyten, houden alhier dagelyks beſoignes, over het uytruſten der Vlooten tegens het Voorjaar. Deze Voormiddag is alhier een Perſoon opgehangen, dewelke eene Vrouw zéér had mishandeld, en daar na in het Water geſmeten, dog twée Medepligtige zyn ontkomen.

'sGRAVENHAGE den 19 January. Dezen avond werden de Heeren Gedeputeerden uyt het Collegie der Heeren Gecommitteerde Raaden van het Noorderquartier, alhier in huune Logementen verwagt, om met de Heeren Gecommitteerde Raaden van het Zuyderquartier, over verſcheyde zaaken eenige Dagen in beſoignes te treden. Eenige Leden van haar Ho. Mog. de Heeren Staaten Generaal, zyn heden na de Predikatie boven geweeſt. Haar Ed. Gro. Mog. ſtaan toekomende Vrydag van de vacante Militaire Charges te diſponeren.

Men is van meninge in't openbaar op Woensdag den 22 January 1710, des namiddags ten 4 uuren, in't Regthuys tot Bodegrave te veylen en te verkoopen, een zéér wel gelegen HOFSTEEDE, met 2 Bargen en Schuur, en omtrent 44 Mergen zéér goed en wel toegemaakt Wey-Hoy en Teel-Land, ſlaande en gelegen by den Dorpe van Bodegrave als Swammerdam, agter elkanderen gelegen, daar van Bruyker is Jan Maartenſe Bos. De Conditien zyn te zien ter Secretarye, en nader onderrigtinge is te bekomen by den Schout ofte Floris Dame in't Regthuys voorſz.

Te NOORTWYK binnen is te huur, een groot *Heeren-Huys*, verzien met veele en ruyme Saletten, Kamers en Vertrekken, groote Kelders en alderley gemakken; ook ruym Koetshuys en Stallinge, mitsgaders een groote en wel-beplante Hof of Tuyn daar agter, gelegen in de *Voorſtraat*, in't midden van het Dórp, by de Herberg van de Swan. Nóg een ander zéér fraay en gemakkelyk *Heeren-Huys*, met een goed Erf en Moes-Tuyn agter het zelve, mede gelegen in de zelfde Straat, ſchuyn over het voorſz. Huys, en uytkomende onder de Linde, vecle Jaaren bewoont geweeſt by wylen de Hr. Willekes aldaar overleden.

NICOLAAS LEMMERS, Makelaar tot AMSTERDAM, zal op Donderdag den 30 January des morgens ten 9 uuren in de Kolveniers Doelen in de Doele Straat verkoopen een party gemaakte JUWEELEN, daar onder verſcheyde groote Diamant-Ringen en Oor-Ringen, als mede diverſe partyen loſſe Diamanten en Peerlen. Alles dags te vooren 'smorgens ten 8 uuren in de voorſz. Doelen te zien.

t'AMSTERDAM by JAN TEN HOORN, Boekverkoper over't Oude Heeren Logement, is gedrukt en werd uytgegeven, *Dictionarium Geographicum Univerſale*, ófte Algemeen Woorden-Boek des gantſen Aardsryks, waar in alle deszelvs voornaamſte Konigryken, Hartogdommen, Prinsdommen, Graafſchappen, Bisdommen, Heerlykheden, Landſchapgen, Eylanden, Steden, Academien, Kaſteélen, Bergen, Moeraſſen, Rivieren, Havens, Zéeboeſems, Zéén, Banken, Zanden. Uythoeken, enz. beknoptelyk beſchreven in ordre, door JOH. de RAAY de Jonge, in groot 4.

Tot UYTREGT by *Willem Broedelet*, is gedrukt en alom by de Boekverkoopers te bekomen, *Enchiridian Studioſi* arabice conſcriptum a Borhanedino, cum duplici verſione Roſtgaardi & Echtelenſis, & Prefatione & Notis *Hadriani Relandi*, 8. Item, Brief aan den Hr. *Had Reland*, van den Schryver der *Linguæ Belgicæ Idea*, tót Rekenſchap van de aanmerkingen van den Hr. A. Moonen, op dezelve *Idea*, en van het rigtig Nederduyts der Staaten nieuwe overzettinge des Bybels, 8.

Schoon geen beloſte van 1000 Dukatons als anders werden uytgelooſt, zal egter het woord en de beloſte van *Hamilton* en *Blank* pligtelyk werden agtervolgt, met de Lotery van WYK compleet, in de Plaats Royaal deze Maand January te trekken. Die nóg Loten begeert, kan (wyl men bezig is met alles ordentelyk te vergaderen) dog NB voor't ſlaan tot Dingsdag dezer geholpen werden, als wanneér na die Dag de Loten door de Directeurs met Opgeld zullen werden gedebiteert.

In de na de kunſt verdeelde en door voornaame Lief hebbers geprobeerde Lotery van SYBEKARSPEL van Hoorn, van 6 gl. 't Lot, zal maar tot 20 January 1710 zonder Opgeld Loten te bekomen zyn, om op 30 dito op zekere penaliteyten te trekken, zynde voorzien met 179 Pryſen van 100 tot 6000 gl. en andere na gerade, een yder wagte zig voor Opgeld.

De Regenten van SCHERMERHORN, verzekeren yder voor het laaſt, dat hunne Lotery zal werden getrokken den 23 January 1710, op pene van aan de Amſterdamſe Geref. Diaconie Armen te verbeuren 1000 Dukatons, 100 Rykſd. aan yder Collecteur. Die 25 Loten op een Biljet inleggen, korten 1 per Cento, en van 100 Loten 1 en een half per Cento. Aan een Complete trekking behoeft niemant te twyffelen.

Van *Damme* en *Ratelband*, zyn van meening voor de eerſtemaal onder haar opzigt (niet anders als compleet) te doen trekken, de deftige uytgekozene Honingraat der Loterye van OUDKARSPEL en KOEDYK, beſtaande maar in 15000 Loten, a 6 gl. 12, in welke te winnen zyn Pryſen die in andere Loteryen niet te vinden zyn: werdende de Lief hebbers verzógt dezelve op 't ſpoedigſte te completeren, alzo zal getrokken werden den 31 January 1710, den inleg tot den 26 dito, als mede de korting van 1 per eent op 10 Loten of daar boven.

Overmits nóg eenige Loten in de Lotery der Heerlykheyt van MARQUETTE manqueren, werden de Lief hebbers verzogt, zig met den Inleg te haaſten, alzo dezelve binnen korte dagen zekerlyk zal geſlooten en getrokken werden.

By het inkomen der Collectens in het Loterytje tot ZWAAG, a 22 St., werd bevonden dat'er maar weynige Looten ontbreeken, zo dat de trekking onfeylbaar compleet zal voortgaan op den 14 February 1710, den inleg tot den 4, en werden de Collecteurs gelaſt, als dan te ſluyten. De hoogſte Inlegger op een Biljet, geniet een Premie van 100 Gl.

KERKMEESTEREN van WARMONT, blyven vaſt gereſolveerd haar Lotery, a 30 ſtuyv. 't Lot, te trekken den 24 February 1710, beſtaande in de volgende Pryzen, als een a 4000, een a 3000, een a 2000, een a 1500, 5 a 1000, 5 a 400, 5 a 200, 10 a 100, 20 a 50, 40 a 25, 100 a 10, 200 a 5, en 2911 a 3 Gl., die alle zonder de minſte korting in contant Geld zullen betaald werden, en maar 3 Nietjes tegens eene Fryſsals mede haar over heerlyke Lotery a 12 Gl. 't Lot, en voorzien met zo veel treffelyke Pryzen, als tot nog tóe niet is in't ligt gekomen, op den 15 Maart, of als de Lotery van Wyk zal uytgetrokken zyn, als zynde de éérſte van de groote Loteryen die nu aan de beurt leyt om te trekken. NB. Die 25 of meer Loten op een Biljet inleyt, kort aanſtonds een per Cento.

Men preſenteert uyt de hand te vethuuren een neringryke Scheepmakery, met een Werkhuys, al het Gereetſchap daar toe behoorende en een Jangoen dwarſe Helling, ſtaande op de Haven binnen de Zyle-Poort te Leyden. Te bevragen aan de Wed: Kuylenburg op de voorn. Scheepmakery.

Gedrukt tot Leyden by JACOB HUYSDUYNEN, op den Ryn over de Brouwery van de Roskam. Den 20 January 1710. Met Privilegie.

Figure 11: *Opregte Leydse Maandagse Courant*, f.1v (lower half), 20 January 1710, printed by Jacob Huysduynen. Source: Delpher.[85]

[85] *Delpher*, 'Opregte Leydse courant. 20-02-1702' <https://resolver.kb.nl/resolve?urn=ddd:011110991> (20 April 2020).

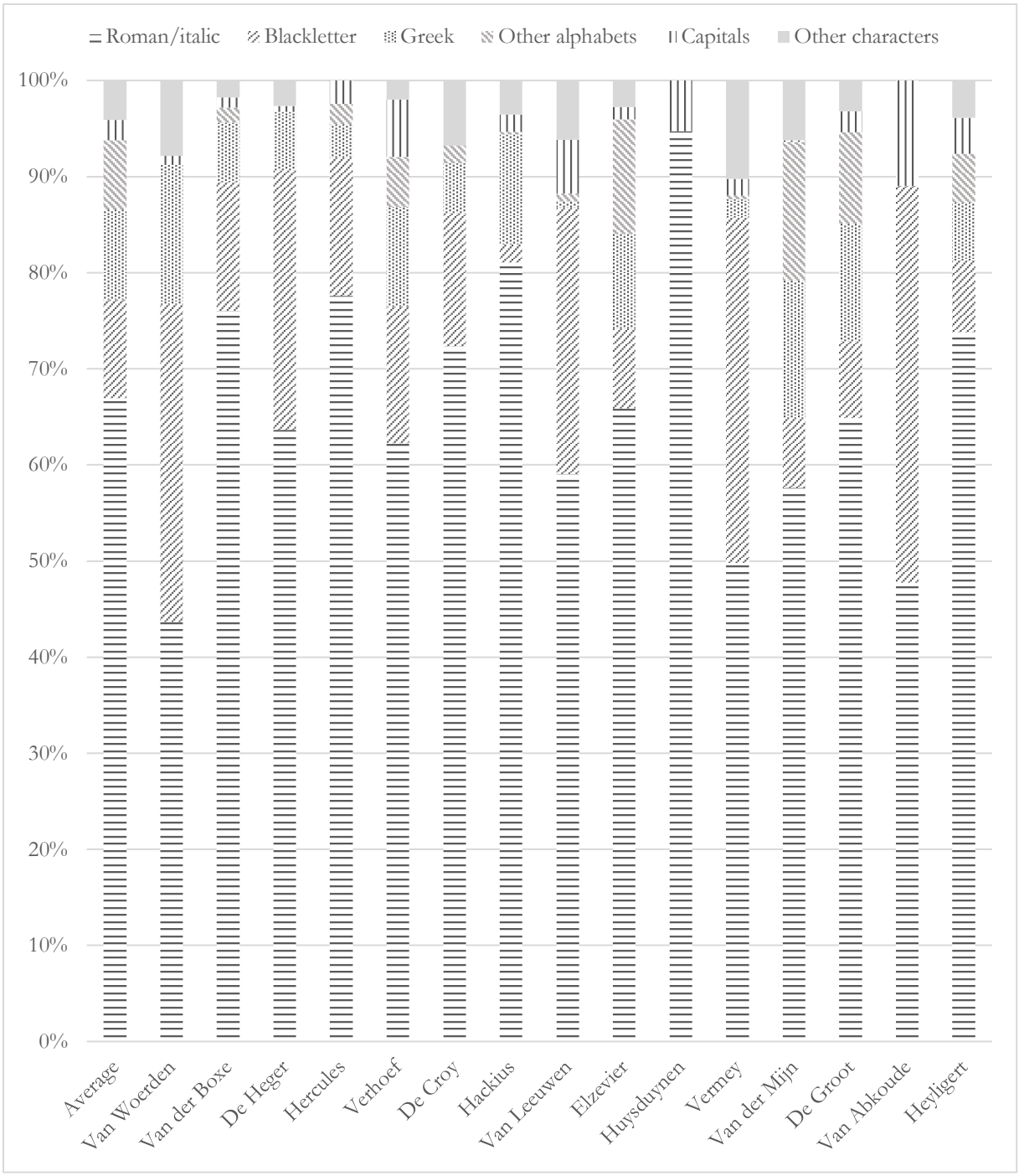

Figure 13: The relative amount of type per category per printer

Roman/italic		55.216,5 pounds (67%)
Of which:	Roman	38.191,5 pounds (46%)
	Italic	15.084 pounds (18%)
	Combination roman/italic	1.941 pounds (2%)
Blackletter		8.848 pounds (10%)
Of which:	Dutch blackletter	6.725 pounds (8%)
	German blackletter	1723 pounds (2%)
Greek		7.759 pounds (9%)
Hebrew		2.430 pounds (3%)
Arabic		1.989 pounds (2%)
Syriac		902 pounds (1%)
Upper-case		1.727,5 pounds (2%)
Other alphabets		613 pounds (1%)
Other signs		2.735 pounds (3%)
Type material		670 pounds (1%)
Total		82.490 pounds (100%)

Figure 13: The amount of type per category.

Italic type

Closely connected to roman type was italic type. Originally this typeface was developed around the 1490s by the Venetian punch cutter Francesco Griffo to print compact but legible texts. The font was based on the Italian cursive hand used in the chancelleries and it was commissioned by Aldus Manutius who wanted to print small format books with classical texts.[86] Next to printing in small fonts, the italic typeface was soon also used to indicate that there was a language shift in the text or to highlight certain parts of the text (which was set in roman), which is still common today. The reverse occurred as well: in texts that were primarily set in italic, things could (and nowadays still can) be highlighted by the usage of roman type.[87]

There was a close connection between italic and roman typefaces, partially because it could be used interchangeably in a text. For instance, when the printing office of the Hackius brothers

[86] D.C. Greetham, *Textual Scholarship. An Introduction* (New York/Londen: Garland Publishing, 1994), pp. 239-240.
[87] S. Kaislaniemi, 'Code-Switching, Script-Switching, and Typeface-Switching in Early Modern English Manuscript Letters and Printed Tracts', in M. Peikola, A. Mäkilähde, H. Salmi, M. Varila and J. Skaffari (eds.), *Verbal and Visual Communication in Early English Texts* (Turnhout: Brepols, 2017) [Utrecht Studies in Medieval Literacy, 37], pp. 165-200, here 165 and 170-172.

was auctioned in 1677, 1.517 pounds of roman *brevier* was sold together with 765 pounds of italic *brevier*. The Hackius brothers had printed quite popular octavo editions in their *brevier* types,[88] which explains why they had so much of it: more than four of their colleagues had type in total. The type was therefore sold in twelve lots: six lots of roman *brevier* and six of italic *brevier*. The amount of type will not have been the main reason why the type was split up in twelve lots, as the type was quite disproportionately distributed (the smallest lot of roman *brevier* weighed 157 pounds, the biggest 338 pounds). More plausible is that the different lots had been bought by the Hackius brothers on different occasions, some maybe even founded by different type founders. Judging from the prices that were paid, there must have been quite some difference in quality between the lots. The cheapest roman *brevier* was sold for less than three *stuivers* per pound, the most expensive for more than twice as much. The cheaper type must have been more worn out or poorer made.[89]

While there is a big difference between the lots of roman type (or italic type) in the Hackius printing office in amount and price, the relation between the successive lots of roman and italic is quite strong. Four out of six times the italic lot is sold for the same price per pound as the roman one and in the other two cases the difference is very small. Not surprisingly, the combinations were in all cases bought by the same persons: the Amsterdam printers De Jonge and Bakkamude both bought one combination of roman/italic, Van Velsen and the two remaining Hackius brothers two combinations. The ratio between roman and italic type differs between the sets: in two cases it is 3:1, in two cases 2:1 and in two cases 3:2. This connection between roman and italic type is even more explicit in the inventories of Van Woerden and De Croy: in all cases where these printers had the same sizes of roman and italic type, they were listed together. One explanation of this close connection might be that the combined roman and italic types were bought at the same time or that they had been founded by the same type founder.

The ratio's that can be seen in the auction of the roman and italic type of the Hackius brothers are quite telling for the overall ratio between roman and italic type (see figure 14). The average ratio of the corpus is 2:1 and this is also the case for eight printers, while the other ratios vary between 3:1 and 3:2. The differences are quite small. Jacob Huysduynen was an exception. He had little italic type and used it only to highlight certain words in his newspapers, as can be seen in figure 11.

[88] Hoftijzer, 'Sic transit', p. 268.
[89] See appendix II.

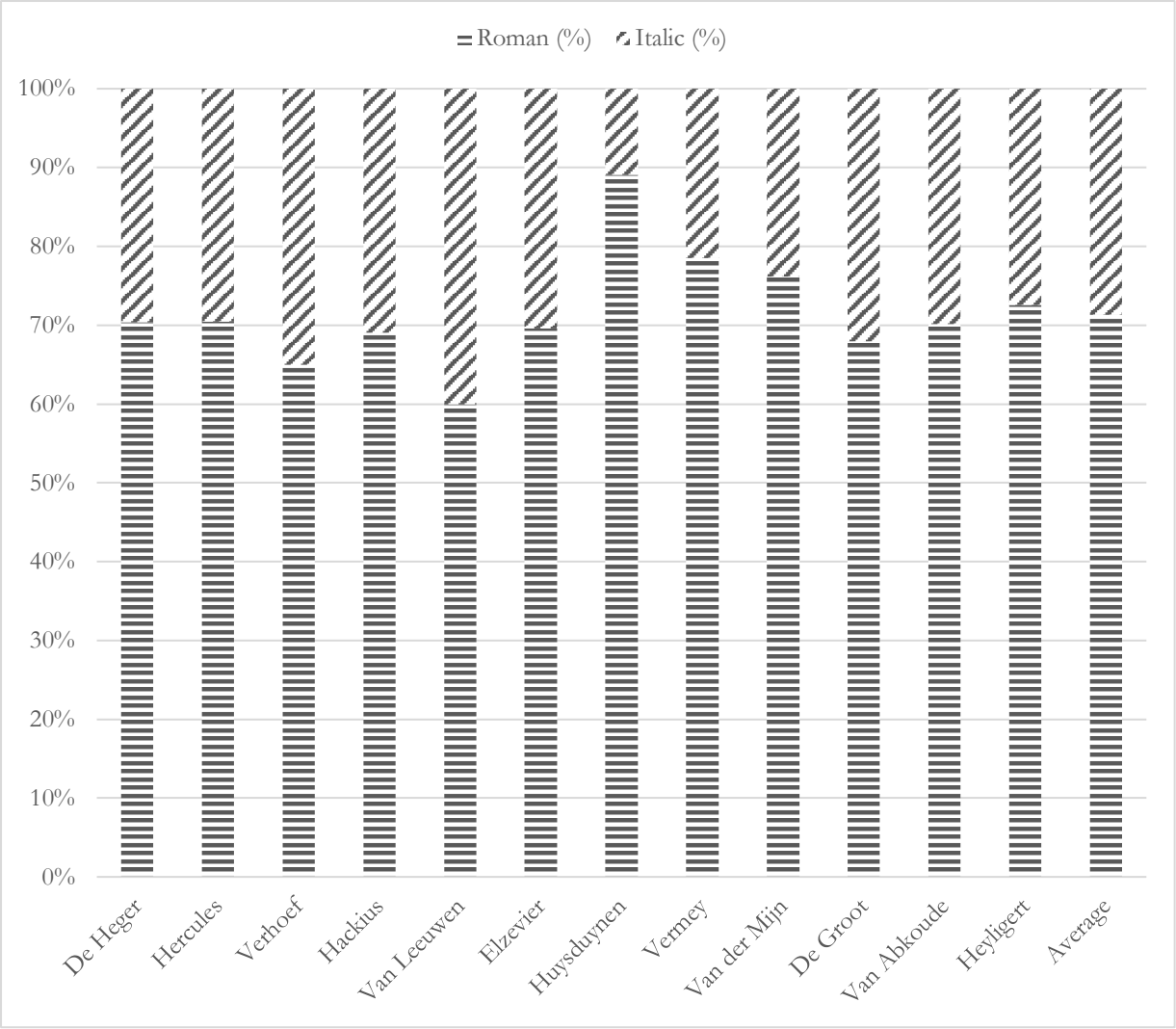

Figure 14: The ratio between roman and italic type.[90]

Because Leiden printers used so much roman and italic type, it is found in a wide variety of sizes: between the massive *dubbele Parijse canon* (circa 72 pt.) and the small *parel* (5 pt.) there are twenty-three different sizes of roman and/or italic type in the corpus. However, Leiden printers had definitely their favourite sizes. Almost a quarter of the roman and italic type was in *mediaan*-size (see also figure 15) and the three consecutive sizes *dessendiaan*, *mediaan* and *augustijn* (10-12 pt.) make up over fifty percent.

[90] Because exact figures are lacking, the data of Van Woerden, De Croy and Van der Boxe are not given.

>7,5 pt.	852 pounds	1,5%
Brevier	6.811 pounds	12,3%
Garamond	6.440 pounds	11,7%
Dessendiaan	7.190 pounds	13,0%
Mediaan	12.694 pounds	23,0%
Augustijn	9.575 pounds	17,3%
Text	5.051 pounds	9,1%
Paragon	1.873 pounds	3,4%
Others 7,5-18 pt.	1.276,5 pounds	2,4%
>18 pt.	3.454 pounds	6,3%

Figure 15: Sizes of roman and italic types.

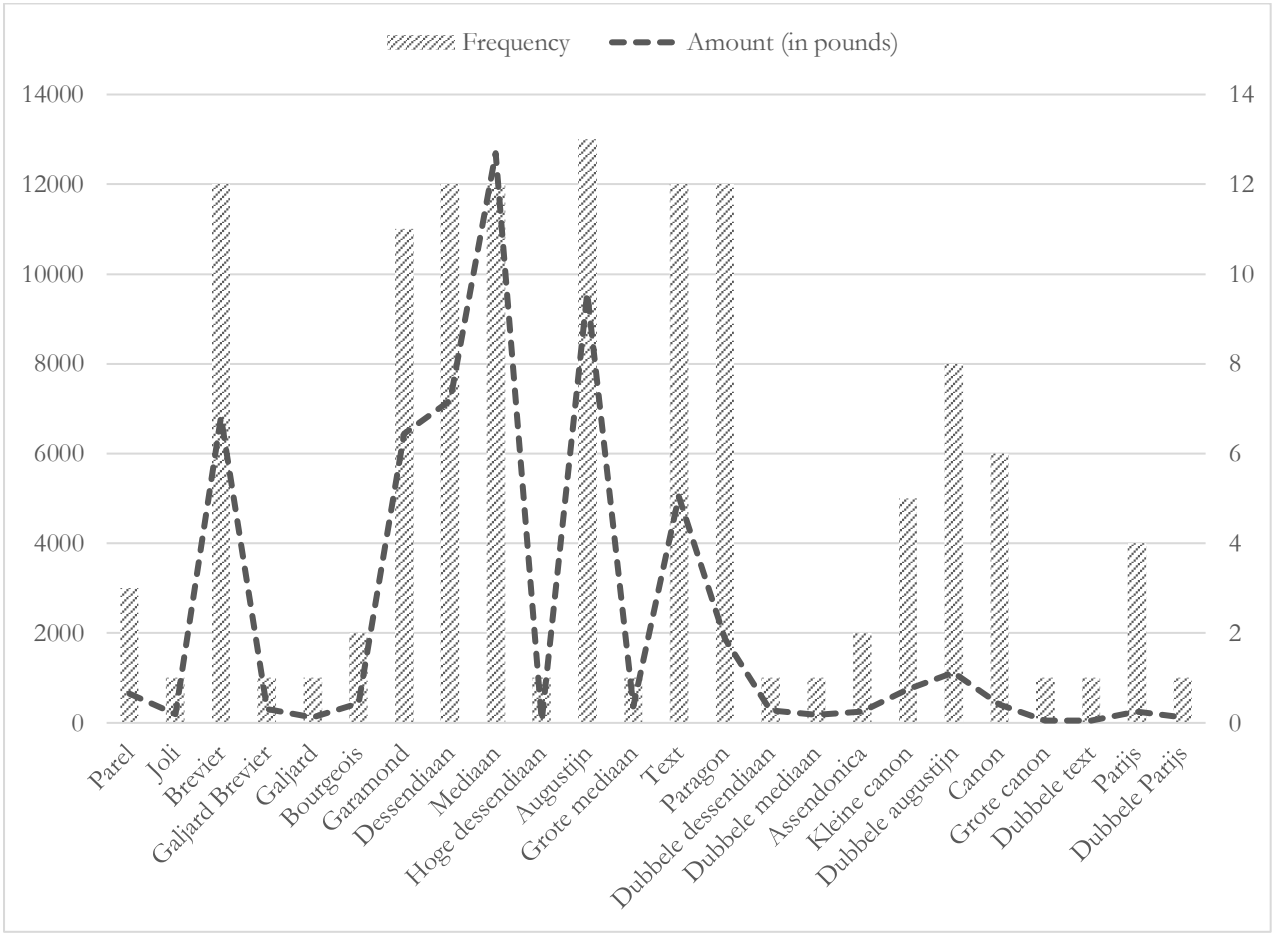

Figure 16: Frequency and amount of roman and/or italic type per size.[91]

[91] The data for roman and italic type are combined. For example: if a printer had both a roman and italic *dessendiaan*, the amounts are added and the frequency counts as one. The data of Van Woerden is not included.

However, this does not mean that all printers had these regular sizes. Again, Huysduynen is an exception. As can be seen in figure 11, he printed his newspapers mostly in one size, *galjard* (8 pt.), which was far less used in Leiden than the somewhat smaller *brevier*. On average the Leiden printers in the database had eight to nine different sizes of roman and/or italic type, but again there were some major differences between the printers. Abraham Elzevier could offer the largest variety with fifteen sizes, while Van der Boxe and De Heger had just four sizes. These four sizes seem to have been more or less the minimum printers needed to be competitive: a small *brevier*, two medium sizes letters (*garamond/dessendiaan* and *mediaan/augustijn*) and a bigger letter (*text* or *paragon*). These seven sizes do not only constitute a large majority (in weight nearly ninety percent of the total corpus of roman and italic type), they were also present in most of the printing offices: thirteen of the fifteen printers in the corpus owned at least four of these seven sizes and seven of the fifteen printers were able to print in all seven sizes.[92] The most common addition to these seven sizes was a big letter: a *dubbele augustijn* (22 pt.) or *canon* (24 pt.). At least one of these two sizes could be found in twelve printing offices (see also figure 16).

Blackletter

As we have seen in the second chapter, printers in Leiden still produced many books in blackletter, although the output of books printed with blackletter was lower compared to the total production of books in this letter in the country (see also figure 8). Dutch printers could choose between two flavours of blackletter: the Dutch blackletter (*Duitse letter*), a *textura*, which looked very much like the written form, and the German blackletter (*Hoogduitse letter*), a *swabacher*, which was gradually replaced during the seventeenth and eighteenth centuries by the *fraktur*.[93]

Blackletter was mainly used for printing in the vernacular, although there are examples (mainly from the sixteenth century) of Latin texts printed in blackletter. This phenomenon can be explained by the relative scarcity of roman and italic in the Northern Netherlands in this period. The STCN lists 2461 titles (partly) printed in blackletter in Leiden during the seventeenth and eighteenth centuries.[94] Most of them, 2194, are (partly at least) written in Dutch. Although Leiden printers also printed for foreign markets, the portion of German books printed in blackletter is far smaller: less than a hundred titles can be found in the STCN. Books in other languages are even scarcer. The modest share of Leiden books printed in German is also clear when looking at the type. Twenty percent of the total amount of blackletter types is German blackletter.

[92] I.e. Hercules, Verhoef, Van Leeuwen, Elzevier, Van der Mijn, De Groot and Heyligert.
[93] Hoftijzer, 'Leidse drukkerijen', p. 310.
[94] STCN (13 December 2019).

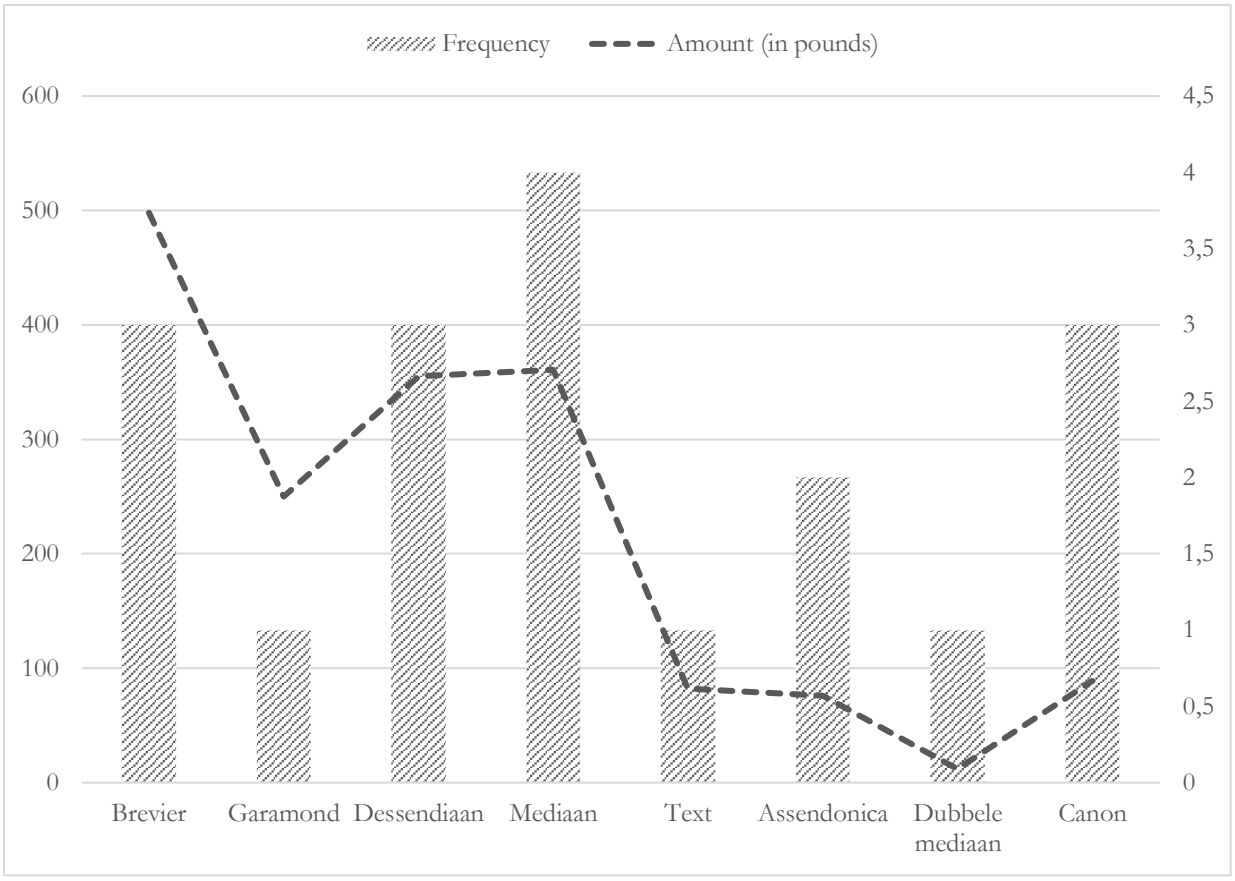

Figure 17: Frequency and amount of German blackletter per size.

Printing in German blackletter seems to have been quite a specialism. Just six printers in the database did own some German blackletter. Moreover, among these six we find the five largest printers: Heyligert, Van der Mijn, Elzevier, the brothers Hackius and De Groot. The only small printing office with German blackletter was that of De Heger, who had 280 pounds *brevier* and 250 pounds *garamond* of German blackletter in stock, when his printing office and bookshop were auctioned in 1646. One year earlier, he had also bought 203 pounds of *nonparel* German blackletters, which he had used to print a German bible.[95] On 18 February, 1645, his colleague Jacob Marcus had transported the rights to print a German Bible 'met de letteren non parel ende brevier' to De Heger.[96] In fact, Marcus and De Heger produced numerous books for export to Germany.[97] For the other, bigger printers, printing with German type seems to have been a side

[95] Research archive P.G. Hoftijzer, LEIDENH (Heger, Frans jr. de), for the bond see: ELO, ONA, inv. no. 544, deed nr. 10 (18-2-1645).
[96] Research archive P.G. Hoftijzer, LEIDENH (Heger, Frans jr. de), for the statement of transfer see: ELO, ONA, inv. no 554, deed nr. 9 (18-2-1645).
[97] On Jacob Marcus, see P.G. Hoftijzer, 'Leiden-German Book-Trade Relations in the Seventeenth Century: The Case of Jacob Marcus', in S. Rosenberg and S. Simon (eds.), *Material Moments in Book Culture. Essays in Honour of Gabriele Müller-Oberhäuser* (Essen: Hans Lang, 2014), pp. 163-176.

business. Only Elzevier had some real choice to offer with six different sizes from *brevier* up to *canon*. However, his German type weighs only 459 pounds in total, less than De Heger had and just four percent of Elzevier's total type in stock. The others had considerably less, on the whole only *dessendiaan* and/or *mediaan* and one or two bigger sizes, from *text* to *canon* (see also figure 17), making up no more than one or two percent of their total amount of type. The Hackius brothers only had 172 pounds of *brevier* and it seems likely that they had acquired this type for a special production.[98]

Compared to German blackletter, printing with Dutch blackletter was not only more common, but also done by more printers. Twelve of the fifteen printers in the corpus had at least some Dutch type in their cases. Interestingly, apart from the newspaper printer Huysduynen, only the Hackius brothers and De Heger did not own any Dutch blackletter. The twelve remaining printers can be divided in three distinct groups: 1. Printers for whom printing in Dutch blackletter was just one of many possible side businesses and far from their core business; 2. Printers for whom printing in Dutch blackletter was certainly not their main business, but was still important enough; 3. Printers for whom printing in Dutch blackletter was nearly as important as printing in roman.

The type assortment of Heyligert, Van der Mijn, Elzevier and even De Groot consisted for a very small part, no more than seven percent, of Dutch blackletter. Van der Mijn, Elzevier and De Groot even had more Greek type than Dutch. Relatively speaking the share of Dutch blackletter within these companies was small, but the offices of Van der Mijn and Heyligert on the other hand in absolute terms still had the largest amount of Dutch blackletter. The four companies combined owned nearly fifty percent of the total Dutch blackletter in the corpus. However, it appears that over time the differences between the printing offices gradually became smaller. The relatively small printing office of Vermey, who had a clear focus on printing in Dutch blackletter as we will see, had nearly as much Dutch blackletter as the printing office of Heyligert, which was five times as big.

The second group is formed by the printers Van der Boxe, Hercules, Verhoef and De Croy. Just as was the case with the first group, they have relatively little Dutch blackletters: thirteen to fourteen percent (see also figure 12). However, they owned far less of the more exotic languages. Although most of them could print Greek and Hebrew, they had in most cases just a

[98] One possible production is a series of pamphlets printed with the false impressum of C. vander Gracht, which is attributed by De Kempenaar to the *Officina Hackiana*; A. de Kempenaar, *Vermomde Nederlandsche en Vlaamsche Schrijvers* (Amsterdam: B.M. Israël, 1970 (reprint)), p. 572. However, this attribution is contested by Hoftijzer, who states 'It is highly unlikely that the Hackii were the publishers of Pieter de la Court's best known work, *Interest van Holland*, published in 1662 with a false address: "t'Amsterdam, by Joan. Cyprianus vander Gracht".' Hoftijzer, 'Sic Transit Gloria…', p. 261 n. 14.

few pounds of it. The exception was Verhoef, whose type assortment consisted of fourteen percent Dutch blackletter and ten percent Greek.

For the remaining first group of four printers printing in Dutch blackletter must have been far more important: twenty-eight percent of Van Leeuwen's type was Dutch blackletter, thirty-three percent of Van Woerden's, thirty-six percent of Vermey's and forty-one percent of Van Abkoude's. The last printer owned nearly as much Dutch blackletters as his roman and italic type combined.

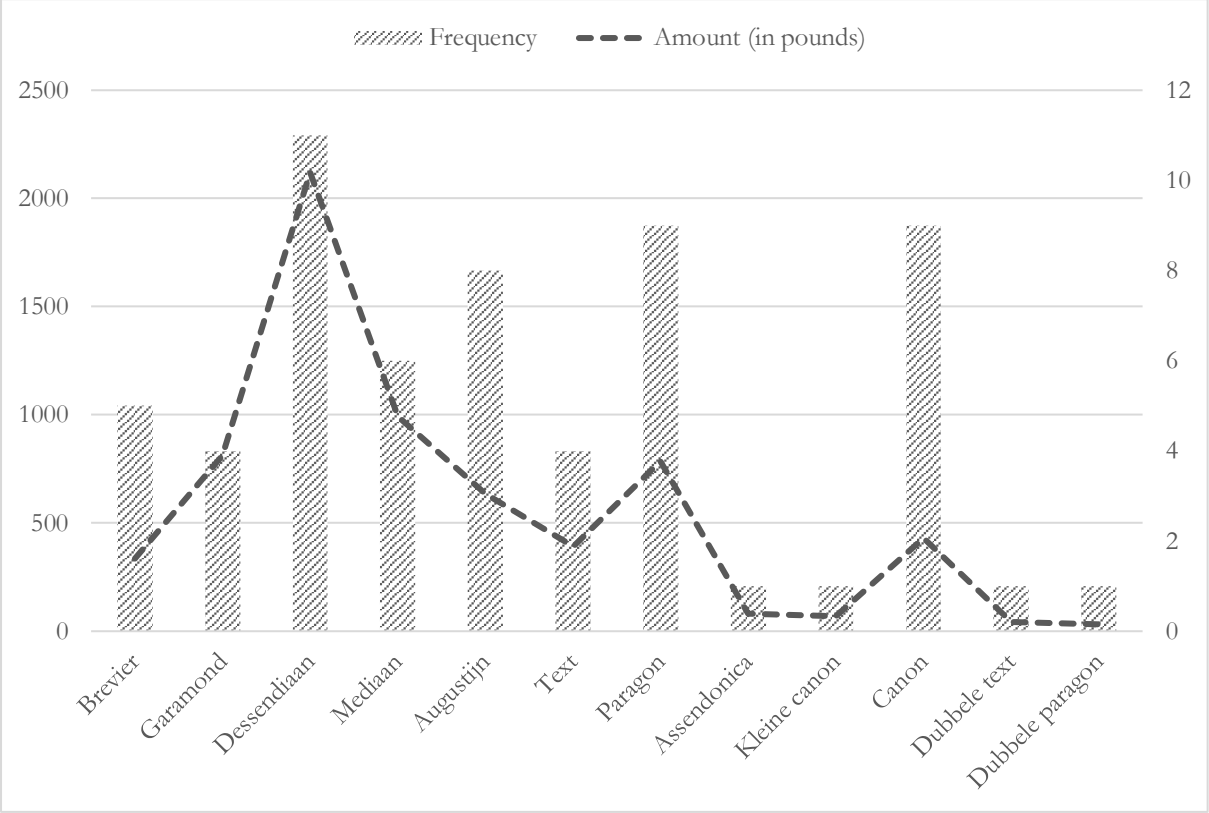

Figure 18: Frequency and amount of Dutch blackletter per size.[99]

As was the case with the roman and italic types, printers also had a clear favourite when printing in Dutch blackletter: over thirty percent of the total Dutch blackletter in the corpus is *dessendiaan*, which was owned by eleven of the twelve printers who had Dutch blackletter (see figure 17).[100] In addition to the *dessendiaan* size most printers owned a type size just a bit smaller or larger: a *garamond* and *mediaan*. Of these three sizes printers had on average the largest amount: 203 pounds of *garamond*, 193 pounds of *dessendiaan* and 166 pounds of *mediaan*. In addition, some

[99] The data of Van Woerden is not included.
[100] The only exception is Hercules, but he owned quite some *garamond*, which was just a bit smaller.

printers had a few larger type sizes: most popular were *paragon* (nine printers), *canon* (also nine printers) and *augustijn* (eight printers). However, the amount of these sizes on average was far less than the smaller ones: 87 pounds of *paragon*, 79 pounds of *augustijn* and 48 pounds of *canon*. The small *brevier* was rarer in Dutch blackletter: five printers had it, but for four of them *brevier* was one of seven or six sizes they could choose from.

Greek

Looking at the data from the STCN, one could conclude that roman, italic and blackletter were by far the most important typefaces for the Leiden printers: ninety-seven percent of all books were printed in (mostly) these three typefaces.[101] When looking at the data of the corpus, however, a totally different picture emerges. Leiden printers had nearly as much Greek type as blackletter and even more Greek type than Dutch blackletter. How can we match these percentages with the data of the STCN? There seems to have been both an internal factor in the Leiden book industry and an external factor caused by the nature of Greek type which determined its availability. Before again focusing on the Leiden printers, more has to be said on this external factor.

One of the most influential punchcutters of Greek type is the Frenchman Claude Garamont (circa 1480-1561). Between 1541 and 1544 he cut three sizes of Greek for the French king François I. These typefaces were regarded as the most beautiful Greek typefaces of the sixteenth century, both at the time by contemporary printers, as today by many modern typographers and scholars. However, Garamont made his punches for the *Imprimirie Royale* in Paris and for a very long time that was the only place where texts were printed with his Greek type. It did not take long before other typecutters started to copy the design of Garamont. The most important copiers, especially for Greek texts printed in the Low Countries, were Pierre Haultin (ca. 1510-1587) and Robert Granjon (1513-1589). Until the end of the seventeenth century nearly all Greek type that was used in the Dutch Republic was designed by one of these two punchcutters.[102]

Just like his predecessors, Garamont based his type on Greek handwriting that was popular among the Italian humanists. This hand was partly based on the Byzantine monastic handwriting which was formed during the twelfth to fourteenth century. The other part consisted of various forms of abbreviations and accented letters that were used by contemporary (Byzantine) Greek

[101] STCN (13 December 2019).
[102] H. Zapf, 'The Development of Greek Typefaces', in M.S. Macrakis, *Greek Letters. From Tablets to Pixels* (New Castle: Oak Knoll Press, 1996), pp. 3-20, here 11; J.A. Lane, 'From the Grecs du Roi to the Homer Greek: Two Centuries of Greek Printing Types in the Wake of Garamond', in Macrakis, *Greek Letters. From Tablets to Pixels*, pp. 109-128, here 110-111.

scribes. To follow this manuscript model, Garamont had to cut many punches, not only for the abbreviations and accents, but also to give his Greek the same smooth style as the handwriting. Christopher Plantin in Antwerp owned nearly five hundred punches to cast a set of Greek *brevier*, cut by Haultin after Garamont's model. Although these many letter forms gave the printed texts a certain aesthetic aspect, there were also clear disadvantages. For type founders, it was much more complicated to cast Greek letters and for compositors it was much more laborious to set Greek texts, especially when using all the abbreviations. Readers had to have a trained eye and sound knowledge of Greek to recognize the complex letterforms.[103]

A complete set of Greek type was much larger, and therefore heavier, than complete sets of other alphabets. Although normally the use of ligatures ensures that a printer needed fewer single letters in his set, the large number of letterforms in Greek sets nullified this advantage. Wardenaar writes in his 1801 printer's manual that the Greek letter cases 'used to be much larger than those used for other alphabets, because people used to use more ligatures.'[104] The French printer's manual of M.D. Fertel, published in 1723, has an illustration of a Greek letter 'case', which consisted of 795 characters, stored in six cases.

Around the 1690s the use of complex ligatures and other letterforms in Greek began to recede. The Amsterdam the printer Hendrik Wetstein published a few Greek books without using the ligatures in his set. In 1698 a bilingual edition of the New Testament came out, which was specifically intended for readers who could read just a little bit of Greek. In the introduction of this edition it is stated that the ligatures were left out to help the inexperienced readers. This edition was printed with a new set of Greek, cut without the ligatures. Although there is a clear drop in the number of ligatures in newly cut Greek typefaces from the 1700 onwards, ligatures remained a common feature until the end of the eighteenth century.[105]

As mentioned before, there is also an internal factor for the reason why Leiden printers had so much Greek type. As has been discussed earlier, printing in Greek was not as easy as printing in other languages. Compositors needed to know at least the basics of the Greek alphabet and how to find their way in the jungle of abbreviations and other ligatures. One would therefore expect that printing in Greek would be something quite specialized which was done only by the academic printers, like the Hackius brothers and De Heger, and the really large printing establishments, which would have the means to hire specially trained compositors of

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[103] Lane, 'Grecs du Roi', pp. 117 and 119; Zapf, 'Greek Typefaces', p. 11; A. Tselikas, 'From Manuscript to Print', in Macrakis, *Greek Letters. From Tablets to Pixels*, pp. 83-92, here 84.
[104] '[Ze waren] voorheên (…) veel grooter dan die, welke men tot het zetten, van allerhande talen gebruikt, door dien men eertijds de gewoonte hadden, meerdere stukletteren te gebruiken.' Janssen, *Zetten en Drukken*, p. 238.
[105] M. Carter, 'Which Came First, the Greeks or the Romans?' in Macrakis, *Greek Letters. From Tablets to Pixels*, pp. 175-186, here 181 and 183; Lane, 'From the Grecs du Roi', pp. 119-121.

Greek. However, this does not appear to have been the case. Nearly all printers in the corpus had at least one size of Greek in stock, so we can assume that they also had the know-how to typeset and print in Greek. There are only two printers in the corpus who did not own Greek type: Huysduynen and Van Abkoude.

The fact that so many Leiden printers had Greek type has largely to do with the act that Leiden was the centre of Greek printing in the Dutch Republic, certainly in the seventeenth century. Although it seems unlikely that all printers printed editions of ancient Greek authors or large pieces of Greek texts on a regularly basis, there will have been many instances where they had to print short Greek quotations within academic and/or religious texts in Latin or other languages. In other words, to be a competitive Leiden printer you had to own at least some Greek type.

However, the fact that most printers owned Greek type, does not mean that they all owned much of it. Of the four printers for whom printing in Dutch blackletter appears to have been an important part of their revenue, one, the already mentioned Van Abkoude, had no Greek at all, and two, Van Leeuwen and Vermey, had very little: Vermey had 60 pounds of *augustijn*, 1,9 percent of his total amount of type, and Van Leeuwen just 12 pounds of *augustijn*, a mere 0,6 percent of his type assortment. The fourth, Van Woerden, seems to have been the exception: the value of his Greek type (in two sizes) amounted to fifteen percent of the total investment. However, this may also be due to the higher prices of Greek type.

The middle group consist of Hercules, who owned one size, which was four percent of his stock, Van der Boxe and De Croy, who both had two sizes (ca. six percent). All three were also part of the middle group for the Dutch blackletter. This group is supplemented by De Heger (six percent in one size) and Heyligert (six percent, although in seven sizes), who had relatively little Dutch blackletter. On the other hand, Verhoef, who had relatively much Dutch blackletter in stock, owned far more Greek (ten percent in three sizes) and forms the top group together with the large offices of Elzevier (ten percent in five sizes), the Hackius brothers (eleven percent in four sizes), De Groot (twelve percent in five sizes) and Van der Mijn (fourteen percent in seven sizes) (see also figure 12).

There is a clear division in the assortment of sizes of Greek type. Seven printers had one or two sizes, Verhoef had three, the Hackius brothers four, and the other four printers had at least five sizes. The total range of sizes goes from *joli* to *paragon*, although only the Hackius brothers owned some *joli*. Most popular sizes are *augustijn* and *garamond*: all printers with Greek type had at least one of these sizes, sometimes a smaller or bigger size is added (see also figure 19). The Hackius brothers clearly focused on the smaller sizes, having besides an *augustijn* and *garamond* the

smaller *joli* and *brevier* in their stock. Elzevier, Van der Mijn, De Groot and Heyligert clearly tried to have an assortment of Greek type that was as complete as possible.

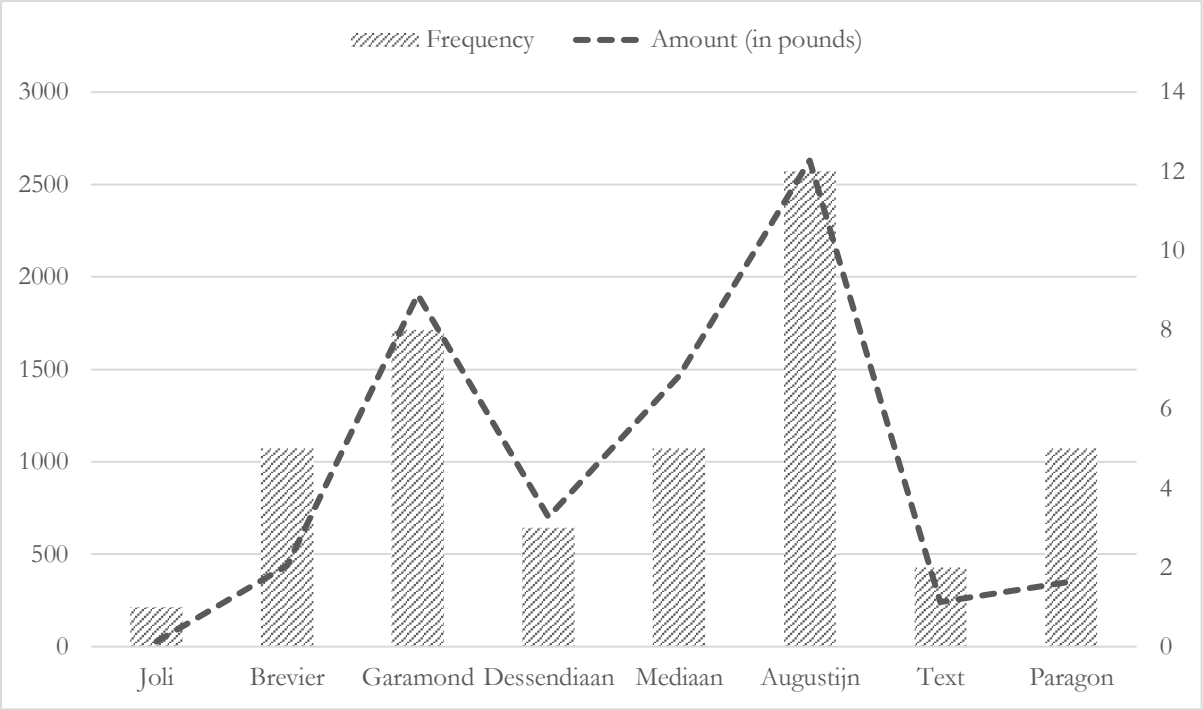

Figure 19: Frequency and amount of Greek type per size.[106]

Hebrew

Just as Greek and, as we will see, Arabic, owning Hebrew type in Leiden was strongly connected to the university. When Christopher Plantin came to Leiden to open his second printing office, among his type fonts were very likely the first Hebrew types in Leiden. The matrices for this type originated from Venice, where it was cut by Gauillaume le Bé and bought by Cornelis van Bomberghen. Van Bomberghen took the matrices in 1563 with him to Antwerp, where he came to work for Plantin. This type eventually became very popular in Leiden; when Van Hogenacker cut new Hebrew type fonts, he used the Plantin-type as his model and until well into the eighteenth century most Hebrew books printed in Leiden were printed with (an adaption of) the Hebrew type of Plantin.[107]

Although the university ensured a regular supply of Hebrew texts and books to be printed, such as Hebrew grammars, lexicographical works and editions of (parts of) the Old

[106] The data of Van Woerden is not included.
[107] L. Fuks and R. Fuks-Mansfeld, 'Hebrew Typography in Leiden, 1585-1759', *Quaerendo*, 9:1 (1979), pp. 3-42, here 3, 11 and 14; J.A. Lane, 'Arent Corsz. Hogenacker (ca. 1579-1636): An Account of His Typefoundry and a Note on His Types. Part Two: The Types', *Quaerendo*, 25:3 (1995), pp. 163-191, here 177-178.

Testament, the production of Hebrew texts and books in Leiden never became as big as the production of books and texts in Greek, both in relative as in absolute terms, as can be seen in figure 8. In Amsterdam, with its flourishing Jewish book trade, much more books and texts in Hebrew were printed.[108] Nevertheless, the majority of the printers in the corpus, eleven out of fifteen, had Hebrew type in stock.[109] In most cases the amount of Hebrew type was very low: Vermey had for instance just 6 pounds of *mediaan* (0,2 percent of his total stock), and five other printers had less than a hundred pounds of Hebrew type (see also figure 12).[110] Most of them had just one or two sizes (only Van Leeuwen had three). For De Groot and Heyligert printing in Hebrew also was probably a marginal affair: just 1,0 percent of Heyligert's type was Hebrew (147 pounds in five sizes) against 2,5 percent of De Groot's (167 pounds in five sizes). It is possible that most printers will have used their Hebrew type only to print small quotations in Hebrew, as we have seen with the Greek type.

Some of these printers, however, did print entire or partial books in Hebrew. The influence of the university is notable in many cases. Abraham Elzevier, who owned 417 pounds of Hebrew type (6,4 percent) printed at least seventeen titles, among which theses from Theological students.[111] These theses would not have been written in Hebrew in entirety, but most contained probably many Hebrew quotations. The Hackius brothers published a small treatise of the Jewish fourteenth-century philosopher Jedaiah ben Abraham Bedersi with a Latin translation in 1668.[112] De Groot printed in 1748 a philological commentary on parts of the Old Testament, commissioned by the Leiden publisher Bernhardus Jongelijn.[113]

Apart from the publication related to the university, Leiden printers were also hired by publishers from Amsterdam. Van der Boxe, for instance printed a Hebrew commentary on the Bible book of Daniel in 1633, commissioned by the Amsterdam publisher Johannes Janssonius.[114] Verhoef, who in relative terms owned more Hebrew type than his colleagues, printed a lexicon and commentary on the Old Testaments, commissioned by the Amsterdam publisher Joannes

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[108] Fuks and Fuks-Mansfeld, 'Hebrew typography in Leiden', p. 11.
[109] The four who did not have any Hebrew were Van Woerden, De Heger, Huysduynen and Van Abkoude.
[110] They were Van Leeuwen with 16 pounds in three sizes (0,8%), the Hackius brothers with 22 pounds in two sizes (0,2%), De Croy with 32 pounds in two sizes (1,4%), Van der Boxe with 52 pounds in two sizes and Hercules with 60 pounds in one size (2,1%).
[111] STCN (5 February 2020).
[112] 'De vanitate mundi dissertatio', *STCN*, <http://picarta.nl/xslt/DB=3.11/XMLPRS=Y/PPN?PPN=09772534X> (5 February 2020).
[113] 'Observationes philologico-criticæ in augustissima Deboræ et Mosis cantica Judic. V. et Exod. XV', *STCN* <http://picarta.nl/xslt/DB=3.11/XMLPRS=Y/PPN?PPN=237397110> (5 February 2020).
[114] 'Paraphrasis dn. Iosephi Iachiadæ in Danielem', *STCN* <http://picarta.nl/xslt/DB=3.11/XMLPRS=Y/PPN?PPN=060158492> (5 February 2020).

van Someren in 1669.[115] Van der Mijn, who worked much as a jobbing printer, must also have printed quite some works for other publishers, because he owned 1.214 pounds of Hebrew type (6,4 percent), although there are no books attributed to him in the STCN.[116]

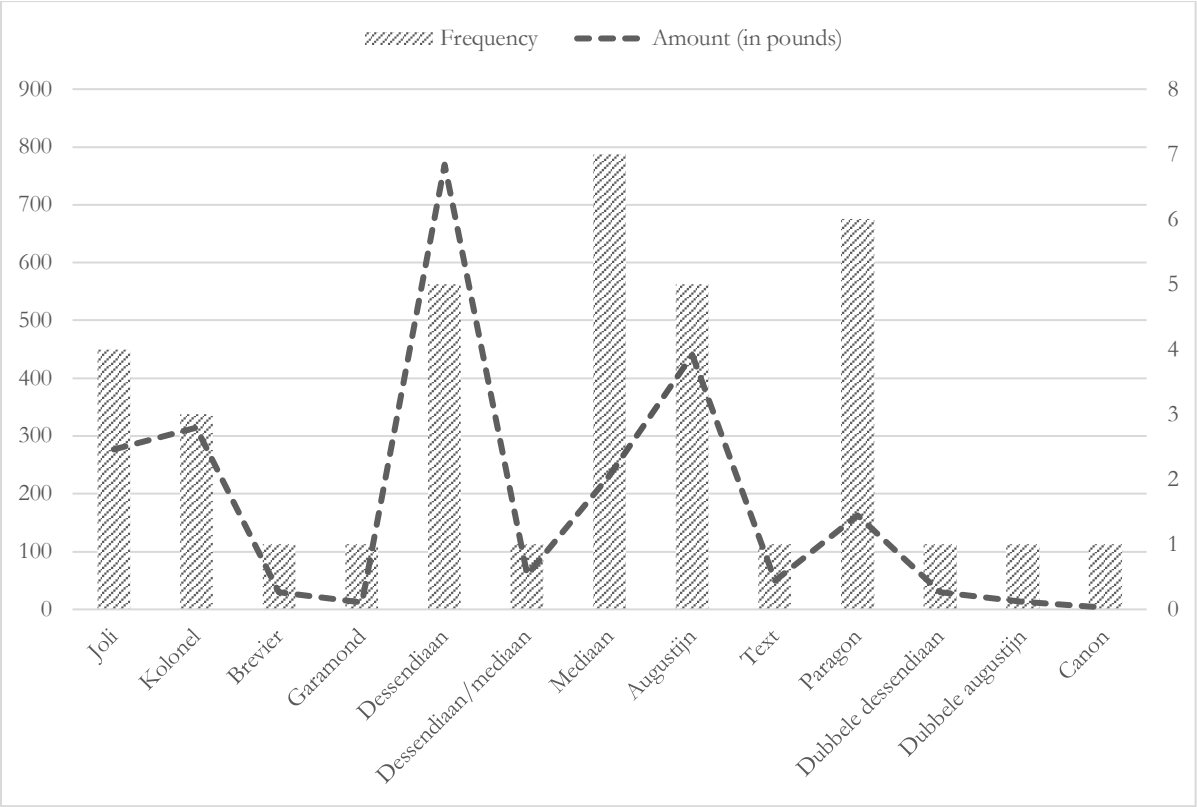

Figure 20: Frequency and amount of Hebrew type per size.

Other alphabets

Whereas Leiden's role in printing Hebrew is historically not that big, this is definitely the case for printing in two other Semitic alphabets: Arabic and Syriac. According to the STCN, sixty percent of all the books printed (partially) in Arabic during the seventeenth and eighteenth centuries came from Leiden.[117] This is not surprising, because among the pioneers of printing in Arabic two Leiden printers are very prominent: Franciscus Raphelengius (and his sons) and Thomas Erpenius. Raphelengius was educated as a Hebraist, but had also studied Arabic. Shortly after he took over the Plantin's printing office in Leiden in 1586, he was appointed as professor of Hebrew by the university, in which capacity he also taught Arabic. As has been discussed above,

[115] 'Lexicon et commentarius sermonis Hebraici et Chaldaici Veteris Testamenti', *STCN* <http://picarta.nl/xslt/DB=3.11/XMLPRS=Y/PPN?PPN=840801440> (5 February 2020); Verhoef owned 260 pounds (5,2%) of Hebrew type in three sizes.
[116] STCN (5 February 2020).
[117] STCN (7 February 2020).

the Leiden *Officina Plantiniana* did have Hebrew type, but it lacked Arabic. To fill this gap, Raphelengius himself designed a new Arabic type, based on the typefaces that were used in the Vatican printing office in Rome: he was the first one outside Rome who could print in Arabic.[118]

For a long time, the printing office of Raphelengius, who was later succeeded by his sons, was the only place in Leiden where one could print in Arabic. In 1614, however, the printing office's typesetter of Arabic died, after which the Raphelengius brothers stopped printing with Arabic type. This was to the great sorrow of Thomas Erpenius, one of their main copy suppliers. In 1613 Erpenius had been appointed in Leiden as professor in Arabic, the first chair in the Netherlands for this language. Already during his first year in office he published an Arabic grammar and a collection of Arabic proverbs at the Raphelengius office. No longer having the opportunity to print other works in Arabic, Erpenius started his own oriental printing office, with financial help of the university, as has been discussed in chapter one.[119]

In comparison with Arabic, Syriac type was a bit more common, mostly because it was used more in theological works. Raphelengius had inherited the Syriac punches and matrices from his father-in-law Plantin. Just like Plantin's Greek typefaces, these Syriac typefaces had been designed by Robert Granjon. They were used by Plantin for printing volume five of his great polyglot bible, published in 1571. Erpenius seems to have acquired Raphelengius' Syriac type in 1619,[120] which he expanded with some newly cut type. In his fully equipped oriental printing office on Breestraat, Erpenius could print Arabic, Hebrew, Syriac and Aramaic texts, the languages in which he would also be appointed as professor at the university of Leiden in 1620.[121]

After his death in 1624, his widow Jaecquemina Buyes sold Erpenius' oriental printing office for 8.000 guilders to Isaac Elzevier. With their oriental type, the Elzeviers were for a long time the most important players in Leiden for printing in oriental type.[122] There are only two other printing offices in the corpus where some oriental type could be found before the death of Abraham Elzevier: De Croy had 9 pounds of Syriac *augustijn*, the Hackius brothers 3 pounds of Arabic *augustijn*. This was virtually nothing compared to the assortment of Abraham Elzevier, who owned 599 pounds Arabic in three sizes, 225 pounds of Syriac *text* and 39 pounds of Samaritan *paragon*. After the sale of the Elzevier office in 1713, the market opened up a bit more, although printing in Arabic and Syriac continued to be quite a specialist enterprise, which only

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118 A. Vrolijk and R. van Leeuwen, *Voortreffelijk en Waardig. 400 jaar Arabische Studies in Nederland* (Leiden: Rijksmuseum van Oudheden, 2013), pp. 18-19.
119 Vrolijk and Leeuwen, *Voortreffelijk en Waardig*, pp. 32-33 and 35.
120 The punches and matrices were sent back to the Plantin-Moretus printing office in Antwerp.
121 Vrolijk and Van Leeuwen, *Voortreffelijk en Waardig*, pp. 32-33 and 35; J.F. Coakley, *The Typography of Syriac. A Historical Catalogue of Printing Types, 1537-1958* (New Castle: Oak Knoll Press, 2006), pp. 34-37.
122 Hoftijzer, 'Veilig achter Minerva's Schild', p. 187.

the largest firms could afford to invest in. Apart from the major offices of De Groot, Heyligert and Van der Mijn, only Vermey owned a bit of Syriac: 5 pounds *mediaan*.[123]

Whereas Arabic and Syriac were not very common in the Leiden printing offices, type in other alphabets was far scarcer. With regard to Ethiopian, only Elzevier and De Groot owned some type in addition to the aforementioned oriental alphabets.[124] Van der Mijn had 39 pounds Ethiopian *augustijn* and also some Palmarene made of copper. Only Heyligert had a bigger assortment: he was able to print in Ethiopian, but also had Russian and runic types. Most probably, this type had already been bought by his father-in-law Willem Boot, whose printing office Heyligert had taken over in 1789. Boot in his turn had bought the printing office of Isaac van der Mijn in 1744 and had expanded it to the largest printing office of Leiden.[125]

Conclusion

Although no other Leiden printers during the seventeenth and eighteenth centuries had a type assortment as diverse as Heyligert's, generally speaking the printers in the corpus could offer quite a broad range of types: eleven of the fifteen printers in the corpus had Hebrew, Greek, two varieties of blackletter and several kinds of roman and italic types. Real specialization did not seem to have taken place in the Leiden book industry, apart from some exceptions, such as the newspaper printer Huysduynen and the oriental printing office of Erpenius. Printers seem to have needed a wide range of types to be prepared for the different kinds of printing jobs which could be offered to them in this university town.

However, upon further investigation, the Leiden printers were not all uniform. Although the basis for all printers was printing with roman and italic type, there were in addition different fields of expertise printers could focus on. As I have shown there were at least three printers who specialized on the Dutch domestic market. The type assortment of Van Abkoude, Van Leeuwen and Vermey existed for twenty-five percent to forty percent of Dutch blackletter and they had little or no Greek and Hebrew type. Van Woerden might be added to his group, although he seems to have had relatively more Greek type than the other three.

On the other side of the spectrum we find the printing offices of the Hackius brothers and De Heger, who did not own any Dutch blackletter and for whom apparently the Dutch

[123] De Groot owned 170 pounds of Arabic *augustijn*, 238 pounds of Syriac in three sizes, 18 pounds of Samaritan *mediaan* and 18 pounds of Aramaic *text*, the only Aramaic type in my corpus; Heyligert 164 pounds of Arabic *augustijn*, 104 pounds of Syriac in three sizes and 19 pounds of Samaritan *mediaan*; and Van der Mijn 1.053 pounds Arabic in four sizes, of which 854 pounds Arabic *augustijn*, 321 pounds Syriac in two sizes and 78 pounds of Samaritan in two sizes.

[124] Elzevier owned 42 pounds *text* and De Groot 18 pounds *augustijn*.

[125] Hoftijzer, 'Veilig achter Minerva's Schild', p. 216.

market was of no great importance. Interestingly enough, these two offices hardly (if any) owned Hebrew type and in the case of the De Heger also a bit of Greek. Both offices, however, did have a clear specialisation. Just like their father, the Hackius brothers printed many editions of classical texts and scholarly works, which were aimed at the international market, a focus which is reflected by their type assortment.[126] Just like the Hackius brothers, De Heger also had an international orientation, as he produced many books for the German market, while also reprinting the works of prominent Leiden scholars, such as Erpenius, Lipsius and Heinsius.[127]

Partially depending on the production of scholarly works, the *Officina Hackiana* and De Heger were definitely competing with the Elzeviers, who were the official university printers for nearly a century. Like his predecessors in the family, Abraham Elzevier had the possibility to accept a wider range of copy. The Elzevier printing office was not only larger than that of Hackius and De Heger, it also had a much more diverse assortment of type: apart from roman, italic and Greek type, they could print in Dutch and German blackletter and thanks to the acquisition of the oriental types of Erpenius, were also able to produce books in Hebrew, Arabic, Syriac and Ethiopian. While in the seventeenth century, this large variety of type could only be found in the offices of the university printers, such as Plantin, Raphelengius and the Elzeviers, who had the guarantee of a steady supply of copy, in the eighteenth century several non-university printers apparently also saw an opportunity for making such major investments. While Van der Mijn and Heyligert never became university printers, their printing offices were certainly not inferior to those of the Elzeviers and their successors as university printers.

Their smaller counterparts are the offices of Van der Boxe, Hercules, Verhoef, De Croy and De Groot. Although they were small to medium sized printing establishments, they still could offer quite a broad variety of type: from roman to Hebrew, although the quantities of the type material for printing the less common languages were altogether quite small.

[126] Hoftijzer, 'Sic Transit Gloria…', pp. 258-261.
[127] Lunsingh Scheurleer, Willemijn Fock and Van Dissel, *Het Rapenburg. Deel Vb*, pp. 650-651; S. Kiedroń, 'Andreas Gryphius und die Niederlande. Niederländische Einflüsse auf sein Leben und Schaffen', *Neerlandica Wratislaviensia*, 6 (1993), pp. 33-34.

Conclusion

This thesis began with the question to what extent an analysis of the different type faces and sizes of fourteen Leiden printing offices can inform us about the Leiden book industry in the seventeenth and eighteenth centuries. The answer to this question is twofold. On the one hand I would like to connect the analysis of chapter three to the historical context, as I have set out in chapters one and two. The second answer has a more theoretical approach: I will discuss the (potential) value of the quantitative research, as was partly done for this thesis, for the general view of the Leiden book industry in the seventeenth and eighteenth century.

As I have shown in chapter three, generally speaking the printers in the corpus could offer quite a broad range of types: apart from the standard roman, italic and blackletter type, most printers also had the possibility to print in Greek and Hebrew. They had of course good reason to offer that possibility: the university of Leiden had a big influence on the Leiden book industry, as has been discussed in chapter two. Professors and students did produce a lot of press-work, such as academic treatises, orations, disputations and dissertations. In addition, they were also important customers for academic publications. If a Leiden printer wanted to be a part of this lucrative business, he needed to be prepared for the different kinds of printing jobs he was offered.

Due to the university, many printers could make a living in Leiden. The fact that there were so many printers in Leiden had a few side-effects on the Leiden book industry. In the context of my thesis I want to highlight three. First of all, due to the big market, printers had the opportunity to focus on an expertise. As I have argued in chapter three, there can be four 'fields of expertise' distinguished in the corpus: a group that had a focus on the domestic, vernacular, market; a group that had a focus on the international market; a group of big offices, among which the academy printers, that had a more academic focus; and finally, a group of smaller offices that did not really focus on any expertise. It is however important to notice that the boundaries between these groups are not fixed and that there are just a very few instances of real specialization.

Second, the fact that the Leiden market for book production was relatively big, made it possible that not every printer had to be a bookseller and publisher at the same time. During the seventeenth and eighteenth centuries the jobbing printer made a steady rise. These printers mostly printed books on commission for colleagues, both in as outside Leiden. This gave room for some offices to rise rapidly, such as the printing office of Isaac van der Mijn, who worked much as a jobbing printer.

Third, the number of printers triggered quite a thriving trade in second-hand type. At the moment the offices of Elzevier, Van der Mijn and Heiligert were auctioned, the market must have been flooded with type. Although it falls outside the scope of this thesis, one would expect that auctions of printing offices were the perfect place for small offices to buy a bit of Greek, Hebrew or even Syriac, just in case they might needed it in the future. A research into the buyers on these auctions might be very fruitful.

This brings me to the second way of interpreting the main question: how fruitful is this partly quantitative approach for the general view on the Leiden book industry? As has been discussed in the introduction, the historiography of the Leiden book industry focusses for a big part on two topics: the production of books and other printed material, and studies into individual printers. The fact that especially these two topics have been focused on has largely to do with the availability of certain sources. Whereas the STCN give much information on the published books, sources about the book industry at large and even about most printers are rare.

Due to the quantitative approach of this thesis it is possible to gain more insight in these few sources. This does not necessarily change the general view: the role of the university for the Leiden book industry still seems as big as it did before this research. However, it does give some more insight in the ways Leiden printers could accommodate themselves to the specifics of the Leiden book industry.

Finally, I would like to give a short remark on the project *Durable access to book historical data/Duurzame toegang tot boekhistorische data*. For a period of time in the orientating phase of this thesis, it looked like I would write a more theoretical thesis about the ways in which the research archive of Paul Hoftijzer could be transformed into an organized dataset: which problems would arise when transforming and/or which (new) questions could be asked based on the dataset. Even though at the end these questions did not play any role in my research, I want to share some of my own experiences. In a certain way, most databases on a historical subject are never really finished: new documents can be found, closer examination reveals a different reading of text, new information changes the interpretation of older information et cetera. Certainly in the case of such an elaborate database that has been built up over a very long period, such is the case with the research archive of Paul Hoftijzer, there are loose ends. When reusing the data of this archive, it therefore sometimes felt difficult to find the limits of the database.

Nevertheless, it was a wonderful opportunity to work with an extensive research archive, one I never could have formed myself in preparation of this thesis. And in the end, no other topic fitted such a thesis better than type: I took Paul Hoftijzer's data, recomposed and created

my own research, just as the type itself, that shifted from hands and was recomposed over and over, resulting every time in a new text.

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p. 34 *Opregte Leydse Maandagse Courant*, f.1v, 20 January 1710, printed by Jacob Huysduynen. *Delpher*, 'Opregte Leydse Courant. 20-02-1702' <https://resolver.kb.nl/resolve?urn=ddd:011110991> (20 April 2020).

Appendices

printer, date of inventory (kind of document).

A = Johannes Cornelisz. van Woerden, 21 May 1627 (sales contract).[128]

B = Willem Christiaensz. van der Boxe, 12 June 1632 (transport of goods).[129]

C = Willem Christiaensz. van der Boxe, 3 August 1632 (lease agreement).[130]

D = François de Heger, 13 March 1646 (estate inventory).[131]

E = Nicolaas Hercules, 1 April 1661 (transport of goods).[132]

F = Abraham Verhoef, 8 April 1672 (estate inventory).[133]

G = Philippe de Croy, 18 November 1675 (estate inventory).[134]

H = *Officina Hackiana*, 19 July 1677 (auction).[135]

I = IJsbrandt van Leeuwen, 1 November 1687 (auction).[136]

J = Abraham Elzevier, 20 February 1713 (auction).[137]

K = Jacob Huysduynen, 25 February 1720 (estate inventory).[138]

L = Christiaan Vermey, 9 October 1724 (auction).[139]

M = Isaac van der Mijn, 26 December 1741 (transport of goods).[140]

N = Jan Willem de Groot, 22 July 1749 (auction).[141]

O = Johannes van Abkoude, 19 August 1760 (auction).[142]

P = Cornelis Heyligert, 28 February 1792 (auction).[143]

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[128] ELO, ONA, inv. no. 351, deed no. 13 (21 May 1627).

[129] ELO, ONA, inv. no. 192, deed no. 172 (12 June 1632).

[130] ELO, ONA, inv. no. 366, deed no. 62 (3 August 1632) and inv. no. 265, deed no. 69 (22 September 1636).

[131] ELO, ONA, inv. no. 704, deed no. 53 (13 March 1646).

[132] ELO, ONA, inv. no. 454, deed no. 83 (1 April 1661).

[133] ELO, ONA, inv. no. 1040, deed no. 113 (8 April 1672).

[134] ELO, ONA, inv. no. 1258, deed no. 132 (18 November 1675).

[135] ELO, ONA, inv. no. 1260, deed no. 95 (19 July 1677).

[136] ELO, ONA, inv. no. 1085, deed no. 251 (1 November 1687).

[137] ELO, ONA, inv. no. 1735, ff. 315-342 (20 February 1713); *Proeve der Drukkerye van Mr. Abraham Elzevier, In sijn Leven Drukker van de Universiteyt tot Leiden* (s.l, s.a. [Leiden: François Heeneman, 1713]).

[138] ELO, ONA, inv. no. 1473, deed no. 29 (25 February 1720).

[139] *Proeve der drukkerye, van Christiaan Vermey* (s.l., s.a. [Leiden: Johan Arnold Langerak, 1724]).

[140] ELO, ONA, inv. no. 1931, ff. 686-693 (26 December 1741).

[141] ELO, ONA, inv. no. 2092, deed no. 105 (22 July 1749); *Proeve der drukkerye gebruikt by Jan Willem de Groot* (s.l., s.a. [Leiden: Willem Boot, 1749]).

[142] ELO, ONA, inv. no. 2294, deed no. 123 (19 August 1760).

[143] ELO, ONA, inv. no. 2437, deed no. 19 (28 February 1792); *Proeve der drukkerye, nu laatst gebruikt bij Cornelis Heyligert* (Leiden: D. de Mortier & Son, J.J. Thyssens, 1792).

Appendix 1: Amount of types in pounds

Type/printer	B/C	D	E	F	G	H	I	J	K	L	M	N	O	P	Total
Roman/italic	2551	1250	2215	3125	1600	7345	1123	7541	174,5	1546	10843	4284	288	11331	**55216,5**
Blackletter	449	530	410	715	305	172	526	939		1115	1357	526	249	1155	**8448**
Greek	207	120	100	520	115	1035	12	1140		60	2713	810		927	**7759**
Other alphabets	52		60	260	41	25	16	1359		11	2705	629		776	**5934**
Capitals	36	12	70	300		163,5	106,75	150	9,75	55	39	143	66	576,5	**1727,5**
Other characters	59	52		100	150	322	116,75	314		317,5	1167,75	212		594	**3405**
Total	**3354**	**1964**	**2855**	**5020**	**2211**	**9062,5**	**1900,5**	**11443**	**184,25**	**3104,5**	**18824,75**	**6604**	**603**	**15359,5**	**82490**

Figure 21: Amount of types in pounds

Type/printer	B/C	D	E	F	G	H	I	J	K	L	M	N	O	P	Total
Dubbele Parijse canon								119							**119**
Parijse canon roman					40			56			130			31	**257**
Dubbele text roman							52								**52**
Grote canon roman			50												**50**
Canon roman				80				94		36		70			**280**
Canon italic							51								**51**
Canon roman/italic					70										**70**
Kleine canon roman		90	130								155		60	100	**535**
Kleine canon italic											87		50	78	**215**
Assendonica roman						145									**145**
Assendonica roman/italic					100										**100**
Dubbele augustijn roman			100	100	80			203		36				172	**691**
Dubbele augustijn italic			30	80		45		128		30		33		87	**433**
Dubbele mediaan roman								75							**75**
Dubbele mediaan italic								98							**98**

Dubbele dessendiaan roman								164							**164**
Dubbele dessendiaan italic								119							**119**
Paragon roman	146		100	100		174		60		40	86	154	17	255	**1132**
Paragon italic	4		30	80		95	96	48		34		72		137	**596**
Paragon roman/italic	145														**145**
Text roman	11	140	130	150		312	120	570			900	176		496	**3005**
Text italic	96	100	100	125		144	48	288			660	106		147	**1814**
Text roman/italic	112				120										**232**
Augustijn roman	725		200	300		611		786		216	1060	430	62	1726	**6116**
Augustijn roman on text body											900				**900**
Augustijn italic	146		125	150		243	90	351		54	400	108		672	**2339**
Augustijn italic on text body											70				**70**
Augustijn roman/italic					150										**150**
Big mediaan roman						241									**241**
Big mediaan italic						129									**129**
Mediaan roman	184		100	500		1421	205	742		400	2095	1150	63	2255	**9115**
Mediaan roman on dubbele augustijn body								110							**110**
Mediaan italic	84		65	150		660	85	284		96	470	694	36	645	**3269**
Mediaan roman/italic					200										**200**
Dessendiaan roman	728		300	200			106	179	56	214	1270	476		1665	**5194**
Hoge dessendiaan roman										48					**48**
Dessendiaan italic	110			60			38			36	580	224		728	**1776**
Dessendiaan roman/italic					220										**220**
Garamond roman		200	200	300		288	50	543		60	1600	386		811	**4438**
Garamond roman on dessendiaan body														211	**211**
Garamond italic		100	125	250		53		323			270	100		306	**1527**

Garamond italic on dessendiaan body														64	**64**
Garamond roman/italic					200										**200**
Bourgeois roman								246		50					**296**
Bourgeois italic								105		34					**139**
Galjard roman									99,5						**99,5**
Galjard italic									19						**19**
Galjard brevier roman						222									**222**
Galjard brevier italic						83									**83**
Brevier roman	60	450	250	300		1517	140	832		114	60	69		499	**4291**
Brevier italic		170	180	200		765	42	409		18	50	36		246	**2116**
Brevier roman/italic					200			204							**404**
Joli roman						140									**140**
Joli italic						57									**57**
Parel roman								265							**265**
Parel italic								140		30					**170**
Parel roman/italic					220										**220**
Total	**2551**	**1250**	**2215**	**3125**	**1600**	**7345**	**1086**	**7541**	**174,5**	**1546**	**10843**	**4284**	**288**	**11331**	**55216,5**

Figure 22: Roman and italic types

Type/printer	**B/C**	**D**	**E**	**F**	**G**	**H**	**I**	**J**	**L**	**M**	**N**	**O**	**P**	**Total**
Dubbele paragon Dutch blackletter							32							**32**
Dubbele text Dutch blackletter							43							**43**
Canon Dutch blackletter	8		60	80				31	56	70	45	81		**431**
Canon German blackletter								28		28			33	**89**
Kleine canon Dutch blackletter													63	**63**
Assendonica Dutch blackletter					80									**80**
Assendonica German blackletter								47		29				**76**
Dubbele augustijn Dutch blackletter written old													5	**5**

Dubbele mediaan German blackletter													12	**12**
Paragon Dutch blackletter			100	125			88	72	90	95	78	64	74	**786**
Text Dutch blackletter	64			80			41						161	**346**
Text Dutch blackletter written old													45	**45**
Text German blackletter								82						**82**
Augustijn Dutch blackletter	85			100	75			75	180			60	58	**633**
Mediaan Dutch blackletter							113	113	378	230			159	**993**
Mediaan German blackletter								153		102	31		75	**361**
Dessendiaan Dutch blackletter	292			250	150		126	189	216	300	265	44	288	**2120**
Dessendiaan German blackletter								103			107		145	**355**
Garamond Dutch blackletter			250				83		100	378				**811**
Garamond German blackletter		250												**250**
Brevier Dutch blackletter				80					95	125			37	**337**
Brevier German blackletter		280				172		46						**498**
Total	**449**	**530**	**410**	**715**	**305**	**172**	**526**	**939**	**1115**	**1357**	**526**	**249**	**1155**	**8448**

Figure 23: Blackletter

Type/printer	**B/C**	**D**	**E**	**F**	**G**	**H**	**I**	**J**	**L**	**M**	**N**	**P**	**Total**
Paragon Greek	60							170		56	18	48	**352**
Text Greek										96		144	**240**
Augustijn Greek	147		100	250	70	463	12	197	60	1144	73	114	**2630**
Mediaan Greek				70				182		449	502	261	**1464**
Dessendiaan Greek										490	100	112	**702**
Garamond Greek		120		200	45	293		526		415	117	188	**1904**
Brevier Greek						252		65		63		60	**440**
Joli Greek						27							**27**
Total	**207**	**120**	**100**	**520**	**115**	**1035**	**12**	**1140**	**60**	**2713**	**810**	**927**	**7759**

Figure 24: Greek types

Type/printer	B/C	E	F	G	H	I	J	L	M	N	P	Total
Arabic												***1989***
Dubbele augustijn Arabic with vowels							401					**401**
Text Arabic							169		161			**330**
Grote augustijn Arabic									19			**19**
Augustijn Arabic					3		29		24	170	164	**390**
Augustijn Arabic with vowels									830			**830**
Mediaan Arabic with vowels									19			**19**
Aramaic												***18***
Text Armenian										18		**18**
Ethiopian												***130***
Text Ethiopian							42				12	**54**
Augustijn Ethiopian									39	18	19	**76**
Hebrew												***2430***
Canon Hebrew											3	**3**
Dubbele augustijn Hebrew										13		**13**
Dubbele dessendiaan Hebrew							30					**30**
Paragon Hebrew	12	60		20		5,5						**97,5**
Paragon Hebrew with vowels							18		47			**65**
Text Hebrew			50									**50**
Augustijn Hebrew			150			4	16		16			**186**
Augustijn Hebrew with vowels							218				36	**254**
Augustijn Rabbinic Hebrew							37					**37**
Mediaan Hebrew					18		4	6	127	26		**181**
Mediaan Hebrew with vowels				12							39	**51**
Dessendiaan/mediaan Hebrew			60									**60**
Dessendiaan Hebrew	40					6,5			70		38	**154,5**
Dessendiaan Hebrew with vowels									561	54		**615**
Garamond Hebrew							12					**12**
Brevier Hebrew									30			**30**

Kolonel Hebrew											31	**31**
Kolonel Hebrew with vowels									250	33		**283**
Joli Hebrew					4		119			41		**164**
Joli Hebrew with vowels									113			**113**
Palmyrene												***<1***
Copper letters									<1			**<1**
Runic												***<1***
Mediaan Runic											<1	**<1**
Russian												***140***
Text Russian											26	**26**
Mediaan Russian											114	**114**
Samaritan												***154***
Paragon							39		32			**71**
Mediaan									46	18	19	**83**
Script												***171***
Assendonica script											97	**97**
Dubbele mediaan script											74	**74**
Syriac												***902***
Paragon Syriac with vowels							225			100	80	**405**
Text Syriac with vowels									297		15	**312**
Augustijn Syriac											9	**9**
Augustijn Syriac with vowels				9						62		**71**
Mediaan Syriac with vowels								5	24			**29**
Dessendiaan Syriac										76		**76**
Total	**52**	**60**	**260**	**41**	**25**	**16**	**1359**	**11**	**2705**	**629**	**776**	**5934**

Figure 25: Other alphabets

Type/printer	B/C	D	E	F	H	I	J	K	L	M	N	O	P	Total
Large capitals				300	16									**316**
Large lead capitals									29					**29**
Dubbele Parijse canon roman capitals							33				18			**51**
Dubbele canon roman capitals						52							35	**87**
Dubbele paragon roman capitals					12,5	10	12		12		11	15	48	**120,5**
Parijse canon roman capitals						17	5					17	34	**73**
Parijse canon Greek capitals													21	**21**
Kleine Parijse canon Greek capitals													21	**21**
Dubbele text roman capitals		6			13		22				12			**53**
Dubbele text Greek capitals					2		3			10			2	**17**
Canon Greek capitals							2							**2**
Dubbele augustijn roman capitals					27	12	8		10		9	23	44	**133**
Dubbele augustijn roman shadowed capitals													18	**18**
Dubbele augustijn Greek capitals							8				10		18	**36**
Dubbele augustijn Greek shadowed capitals										8			5	**13**
Dubbele mediaan roman capitals		6			27	11,5					11	11	60	**126,5**
Dubbele mediaan roman figured capitals													21	**21**
Dubbele mediaan roman shadowed capitals													15	**15**
Dubbele mediaan italic capitals							25						15	**40**
Dubbele mediaan Greek capitals					1						6			**7**
Dubbele dessendiaan roman capitals											13		69	**82**
Dubbele dessendiaan roman figured capitals													13	**13**
Dubbele dessendiaan roman shadowed capitals													11	**11**

Dubbele dessendiaan italic capitals													11,5	**11,5**
Dubbele dessendiaan italic figured capitals													13	**13**
Dubbele dessendiaan Greek capitals													10	**10**
Dubbele garamond roman capitals					10		14				4		19	**47**
Dubbele garamond on augustijn body roman capitals					8									**8**
Dubbele garamond italic capitals													4	**4**
Dubbele garamond Greek capitals					1					8			6	**15**
Text roman capitals					6		6		4					**16**
Bold text roman capitals							12							**12**
Dubbele brevier roman capitals					7	4,25					5		24	**40,25**
Augustijn shadowed capitals													3	**3**
Augustijn italic figured capitals													13	**13**
Mediaan roman capitals					12						41			**53**
Garamond					21									**11**
Dubbele script capitals													23	**23**
Roman capitals in various sizes	36		70					9,75						**115,75**
German blackletter capitals in various sizes											3			**3**
Inscription letters													>1	**>1**
Various capitals in various sizes										13				**13**
Total	**36**	**12**	**70**	**300**	**163,5**	**106,75**	**150**	**9,75**	**55**	**39**	**143**	**66**	**576,5**	**1727,5**

Figure 26: Capitals

Type/printer	**B/C**	**D**	**F**	**G**	**H**	**I**	**J**	**L**	**M**	**N**	**P**	**Total**
Almanac characters	6						47	20	215	82	85,5	**455,5**
Casting material					220			250	200			**670**
Characters with diacritics							22		2,75	4	1,5	**30,25**
Flowers and other decorations	16	11			6	23	24	18,5		25	174	**297,5**
Fractions								3	9	5	20	**37**
Lines and bows	25	6	100		36	10	57	11	30	57,5	118,5	**451**
Musical notes		35		90		70	108				159	**462**
Numbers					11						12	**23**
Squares					44	11			600			**655**
Striked characters					5				31	11,5	8,5	**56**
Superscript characters						2,75	56	15		27	15	**115,75**
Unspecified characters and defects	12			60					80			**152**
Total	**59**	**52**	**100**	**150**	**322**	**116,75**	**314**	**317,5**	**1167,75**	**212**	**594**	**3405**

Figure 27: Other characters

Appendix 2: Prizes of type

Printer	**Weight of (sold) type**	**Average price per pound**	**Total price**
Johannes Cornelisz. van Woerden	N/A	N/A	fl. 620,50
Willem Christiaensz. van der Boxe	1354 lb.	fl. 0,45	fl. 611,10
Philippe de Croy	2211 lb.	fl. 0,11	fl. 252,79
Officina Hackiana	8690,5 lb.	fl. 0,23	fl. 2008,01
IJsbrandt van Leeuwen	1900,5 lb.	fl. 0,19	fl. 356,57
Abraham Elzevier	11443 lb.	fl. 0,10	fl. 1200,09
Christiaan Vermey	2756 lb.	fl. 0,21	fl. 578,45
Isaac van der Mijn	18824,75 lb.	fl. 0,38	fl. 7118, -
Jan Willem de Groot	6604 lb.	fl. 0,28	fl. 1826,29
Abraham van Abkoude	603 lb.	fl. 0,14	fl. 86,97
Cornelis Heyligert	15358 lb.	fl. 0,27	fl. 4204,38
Total	**70466,75 lb.**	**fl. 0,25**	**fl. 18503,91**

Figure 28: Prizes of type of Leiden printers.

Type	**Weight**	**Prize per pound**	**Total price**
Paragon roman/italic	N/A	N/A	fl. 45, -
Augustijn roman/italic	N/A	N/A	fl. 30, -
Mediaan roman	N/A	N/A	fl. 33, -
Mediaan italic	N/A	N/A	fl. 23, -
Dessendiaan roman	N/A	N/A	fl. 75, -
Dessendiaan italic	N/A	N/A	fl. 12, -
Brevier roman	N/A	N/A	fl. 53, -
Canon Dutch Blackletter	N/A	N/A	fl. 3, -
Augustijn Dutch Blackletter	N/A	N/A	fl. 20, -
Mediaan Dutch Blackletter	N/A	N/A	fl. 50, -
Dessendiaan Dutch Blackletter	N/A	N/A	fl. 50, -
Brevier Dutch Blackletter	N/A	N/A	fl. 82, -
Augustijn Greek	N/A	N/A	fl. 40, -
Brevier Greek	N/A	N/A	fl. 50, -
Capitals in various sizes	N/A	N/A	fl. 6, -
Lines and bows	N/A	N/A	fl. 14, -
Unknown characters	N/A	N/A	fl. 14,50
Defects	N/A	N/A	fl. 20, -
Total			**fl. 620,50**

Figure 29: Johannes Cornelisz. van Woerden (A)

Type	Weight	Prize per pound	Total prize
Paragon roman/italic	145 lb.	fl. 0,30	fl. 43,50
Text roman/italic	112 lb.	fl. 0,40	fl. 44,80
Augustijn roman	351 lb.	fl. 0,45	fl. 157,50
Augustijn italic	70 lb.	fl. 0,50	fl. 35
Dessendiaan roman	359 lb.	fl. 0,45	fl. 161,75
Dessendiaan italic	50 lb.	fl. 0,50	fl. 25, -
Dessendiaan Dutch Blackletter	120 lb.	fl. 0,40	fl. 48, -
Augustijn Greek	147 lb.	fl. 0,65	fl. 95,55
Total	**1354 lb.**	**fl. 0,45**	**fl. 611,10**

Figure 29: Willem Christiaensz. van der Boxe (B)

Type	Weight	Prize per pound	Total prize
Parijse roman	40 lb.	fl. 0,10	fl. 4, -
Canon roman/italic	70 lb.	fl. 0,07	fl. 4,81
Dubbele augustijn roman	80 lb.	fl. 0,06	fl. 5, -
Assendonica roman/italic	100 lb.	fl. 0,06	fl. 6,25
Text roman/italic	120 lb.	fl. 0,08	fl. 9, -
Augustijn roman/italic	150 lb.	fl. 0,08	fl. 12,19
Mediaan roman/italic	200 lb.	fl. 0,10	fl. 20, -
Dessendiaan roman/italic	220 lb.	fl. 0,09	fl. 6,56
Garamond roman/italic	200 lb.	fl. 0,10	fl. 20, -
Brevier roman/italic	200 lb.	fl. 0,15	fl. 30, -
Parel roman italic	220 lb.	fl. 0,15	fl. 33, -
Assendonica Dutch Blackletter	80 lb.	fl. 0,15	fl. 12, -
Augustijn Dutch Blackletter	75 lb.	fl. 0,09	fl. 6,56
Dessendiaan Dutch Blackletter	150 lb.	fl. 0,09	fl. 13,13
Augustijn Greek	70 lb.	fl. 0,10	fl. 7, -
Garamond Greek	45 lb.	fl. 0,25	fl. 11,25
Paragon Hebrew	20 lb.	fl. 0,10	fl. 2, -
Mediaan Hebrew	12 lb.	fl. 0,06	fl. 0,68
Augustijn Syriac with vowels	9 lb.	fl. 0,08	fl. 0,68
Capitals	60 lb.	fl. 0,15	fl. 9, -
Dessendiaan musical notes	90 lb.	fl. 0,30	fl. 27, -
Total	**2211 lb.**	**fl. 0,11**	**fl. 252,79**

Figure 30: Philippe de Croy (G)

Type	Weight	Prize per pound	Total prize
Assendonica roman	145 lb.	fl. 0,23	fl. 33,98
Dubbele augustijn italic	45 lb.	fl. 0,13	fl. 5,90
Paragon roman	174 lb.	fl. 0,13	fl. 21,75
Paragon italic	95 lb.	fl. 0,11	fl. 10,69
Text roman	312 lb.	fl. 0,21	fl. 66,85
Text italic	144 lb.	fl. 0,37	fl. 53,33
Augustijn roman	611 lb.	fl. 0,22	fl. 135,03
Augustijn italic	243 lb.	fl. 0,16	fl. 38,77
Mediaan roman	1421 lb.	fl. 0,26	fl. 366,24
Mediaan italic	660 lb.	fl. 0,17	fl. 112,23
Garamond roman	288 lb.	fl. 0,29	fl. 84,08

Garamond italic	53 lb.	fl. 0,16	fl. 8,61
Galjard brevier roman	222 lb.	fl. 0,14	fl. 31,91
Galjard brevier italic	83 lb.	fl. 0,14	fl. 11,93
Brevier roman	1517 lb.	fl. 0,20	fl. 304,93
Brevier italic	765 lb.	fl. 0,21	fl. 160,22
Joli roman	140 lb.	fl. 0,17	fl. 23,63
Joli italic	57 lb.	fl. 0,18	fl. 9,98
Brevier German Blackletter	172 lb.	fl. 0,18	fl. 30,10
Augustijn Greek	463 lb.	fl. 0,35	fl. 161,44
Garamond Greek	293 lb.	fl. 0,23	fl. 67,04
Brevier Greek	252 lb.	fl. 0,32	fl. 81,53
Joli Greek	27 lb.	fl. 2,95	fl. 79,65
Augustijn Arabic	3 lb.	fl. 1, -	fl. 3, -
Mediaan Hebrew	18 lb.	fl. 0,71	fl. 12,71
Joli Hebrew	4 lb.	fl. 1,05	fl. 4,20
Large roman capitals	16 lb.	fl. 0,28	fl. 4,50
Dubbele paragon roman capitals	12,5 lb.	fl. 0,31	fl. 3,91
Dubbele text roman capitals	13 lb.	fl. 0,51	fl. 6,66
Dubbele augustijn roman capitals	27 lb.	fl. 0,29	fl. 7,91
Dubbele mediaan roman capitals	27 lb.	fl. 0,23	fl. 6,21
Dubbele mediaan Greek capitals	1 lb.	fl. 0,37	fl. 0,37
Dubbele garamond roman capitals	10 lb.	fl. 0,29	fl. 2,88
Dubbele garamond on augustijn body roman capitals	8 lb.	fl. 0,38	fl. 3, -
Dubbele garamond Greek capitals	1 lb.	fl. 0,43	fl. 0,43
Text roman capitals	6 lb.	fl. 0,13	fl. 0,79
Dubbele brevier roman capitals	7 lb.	fl. 0,16	fl. 1,09
Mediaan roman capitals	12 lb.	fl. 0,13	fl. 1,50
Garamond roman capitals	21 lb.	fl. 0,14	fl. 3,02
Various decorations	6 lb.	fl. 0,15	fl. 0,90
Mediaan/Garamond lines	36 lb.	fl. 0,19	fl. 6,98
Mediaan numbers	11 lb.	fl. 0,13	fl. 1,44
Mediaan striked numbers	5 lb.	fl. 0,52	fl. 2,59
Garamond squares	6 lb.	fl. 0,09	fl. 0,56
Various squares	38 lb.	fl. 0,09	fl. 3,33
Casting material	220 lb.	fl. 0,14	fl. 30,25
Total	**8690,5 lb.**	**fl. 0,23**	**fl. 2008,01**

Figure 31: *Officina Hackiana* (H)

Type	**Weight**	**Prize per pound**	**Total prize**
Dubbele text roman	52 lb.	fl. 0,23	fl. 11,70
Canon italic	51 lb.	fl. 0,20	fl. 10,20
Paragon italic	96 lb.	fl. 0,23	fl. 21,60
Text roman	120 lb.	fl. 0,14	fl. 17,25
Text italic	48 lb.	fl. 0,15	fl. 7,20
Augustijn italic	90 lb.	fl. 0,15	fl. 13,50
Mediaan roman	205 lb.	fl. 0,13	fl. 26,91
Mediaan italic	85 lb.	fl. 0,20	fl. 17,27
Dessendiaan roman	106 lb.	fl. 0,21	fl. 22,53
Dessendiaan italic	38 lb.	fl. 0,20	fl. 7,60

Garamond roman	50 lb.	fl. 0,16	fl. 8, -
Brevier roman	140 lb.	fl. 0,20	fl. 28, -
Brevier italic	42 lb.	fl. 0,19	fl. 8,14
Dubbele paragon Dutch Blackletter	32 lb.	fl. 0,19	fl. 6, -
Dubbele text Dutch Blackletter	43 lb.	fl. 0,23	fl. 9,68
Paragon Dutch Blackletter	88 lb.	fl. 0,23	fl. 19,80
Text Dutch Blackletter	41 lb.	fl. 0,14	fl. 5,64
Mediaan Dutch Blackletter	113 lb.	fl. 0,13	fl. 14,13
Dessendiaan Dutch Blackletter	126 lb.	fl. 0,19	fl. 23,63
Garamond Dutch Blackletter	83 lb.	fl. 0,11	fl. 9,34
Augustijn Greek	12 lb.	fl. 0,45	fl. 5,40
Augustijn Hebrew	4 lb.	fl. 0,50	fl. 2, -
Paragon Hebrew	5,5 lb.	fl. 0,50	fl. 2,75
Dessendiaan Hebrew	6,5 lb.	fl. 0,55	fl. 3,58
Dubbele canon roman capitals	52 lb.	fl. 0,25	fl. 13,16
Dubbele paragon roman capitals	10 lb.	fl. 0,24	fl. 2,35
Parijse roman capitals	17 lb.	fl. 0,23	fl. 3,83
Dubbele augustijn capitals	12 lb.	fl. 0,22	fl. 2,63
Dubbele mediaan capitals	11,5 lb.	fl. 0,18	fl. 2,09
Dubbele brevier capitals	4,25 lb.	fl. 0,26	fl. 1,09
Various flowers	23 lb.	fl. 0,11	fl. 2,59
Lead lines	10 lb.	fl. 0,12	fl. 1,19
Copper lines	N/A	N/A	fl. 4,25
Dessendiaan musical notes	70 lb.	fl. 0,28	fl. 19,25
Squares	11 lb.	fl. 0,13	fl. 1,44
Superscript numbers	2,75 lb.	fl. 0,33	fl. 0,90
Total	**1900,5 lb.**	**fl. 0,19**	**fl. 356,57**

Figure 32: IJsbrandt van Leeuwen (I)

Type	**Weight**	**Prize per pound**	**Total prize**
Dubbele Parijse roman	119 lb.	fl. 0,16	fl. 18,59
Parijse roman	56 lb.	fl. 0,08	fl. 4,20
Canon roman	94 lb.	fl. 0,08	fl. 7,64
Dubbele augustijn roman	203 lb.	fl. 0,16	fl. 31,72
Dubbele augustijn italic	128 lb.	fl. 0,16	fl. 20, -
Dubbele mediaan roman	75 lb.	fl. 0,08	fl. 6,09
Dubbele mediaan italic	98 lb.	fl. 0,08	fl. 7,35
Dubbele dessendiaan roman	164 lb.	fl. 0,08	fl. 13,33
Dubbele dessendiaan italic	119 lb.	fl. 0,08	fl. 8,93
Paragon roman	60 lb.	fl. 0,13	fl. 7,50
Paragon italic	48 lb.	fl. 0,11	fl. 5,10
Text roman	570 lb.	fl. 0,11	fl. 61,19
Text italic	288 lb.	fl. 0,07	fl. 21,23
Augustijn roman	786 lb.	fl. 0,09	fl. 68,78
Augustijn italic	351 lb.	fl. 0,08	fl. 28,52
Mediaan roman	742 lb.	fl. 0,09	fl. 64,93
Mediaan on Dubbele augustijn corpus roman	110 lb.	fl. 0,08	fl. 8,94
Mediaan italic	284 lb.	fl. 0,09	fl. 24,85

Dessendiaan roman	179 lb.	fl. 0,09	fl. 16,78
Garamond roman	543 lb.	fl. 0,06	fl. 33,94
Garamond italic	323 lb.	fl. 0,10	fl. 32,30
Bourgeois roman	246 lb.	fl. 0,14	fl. 35,66
Bourgeois italic	105 lb.	fl. 0,16	fl. 16,41
Brevier roman	832 lb.	fl. 0,14	fl. 120,22
Brevier italic	409 lb.	fl. 0,13	fl. 53,48
Brevier roman/italic	204 lb	fl. 0,08	fl. 16,58
Parel roman	265 lb.	fl. 0,16	fl. 41,41
Parel italic	140 lb.	fl. 0,11	fl. 14,88
Canon Dutch Blackletter	31 lb.	fl. 0,30	fl. 9,30
Canon German Blackletter	28 lb.	fl. 0,12	fl. 3,33
Assendonica German Blackletter	47 lb.	fl. 0,08	fl. 3,53
Paragon Dutch Blackletter	72 lb.	fl. 0,17	fl. 12,15
Text German Blackletter	82 lb.	fl. 0,08	fl. 6,15
Augustijn Dutch Blackletter	75 lb.	fl. 0,10	fl. 7,47
Mediaan Dutch Blackletter	113 lb.	fl. 0,18	fl. 19,78
Mediaan German Blackletter	153 lb.	fl. 0,08	fl. 11,48
Dessendiaan Dutch Blackletter	189 lb.	fl. 0,18	fl. 33,08
Dessendiaan German Blackletter	103 lb.	fl. 0,08	fl. 7,73
Brevier German Blackletter	46 lb.	fl. 0,09	fl. 4,03
Paragon Greek	170 lb.	fl. 0,16	fl. 26,56
Augustijn Greek	197 lb.	fl. 0,08	fl. 14,78
Mediaan Greek	182 lb.	fl. 0,07	fl. 12,51
Garamond Greek	526 lb.	fl. 0,09	fl. 49,31
Brevier Greek	65 lb.	fl. 0,10	fl. 6,50
Dubbele augustijn Arabic with vowels	401 lb.	fl. 0,08	fl. 32,58
Augustijn Arabic	29 lb.	fl. 0,16	fl. 4,53
Text Arabic	169 lb.	fl. 0,08	fl. 12,68
Text Ethiopian	42 lb.	fl. 0,21	fl. 8,66
Dubbele dessendiaan Hebrew	30 lb.	fl. 0,06	fl. 1,69
Paragon Hebrew with vowels	18 lb.	fl. 0,25	fl. 4,50
Augustijn Hebrew	16 lb.	fl. 0,28	fl. 4,50
Augustijn Hebrew with vowels	218 lb.	fl. 0,08	fl. 16,35
Augustijn Rabbinic Hebrew	37 lb.	fl. 0,06	fl. 2,31
Mediaan Hebrew	4 lb.	fl. 0,18	fl. 0,70
Garamond Hebrew	12 lb.	fl. 0,10	fl. 1,20
Joli Hebrew	119 lb.	fl. 0,07	fl. 8,18
Paragon Samaritan	39 lb.	fl. 0,18	fl. 6,83
Paragon Syriac with vowels	225 lb.	fl. 0,08	fl. 16,88
Dubbele Parijse roman capitals	33 lb.	fl. 0,11	fl. 3,51
Dubbele paragon roman capitals	12 lb.	fl. 0,16	fl. 1,88
Parijse roman capitals	5 lb.	fl. 0,08	fl. 0,38
Dubbele text roman capitals	22 lb.	fl. 0,08	fl. 1,65
Dubbele text Greek capitals	3 lb.	fl. 0,21	fl. 0,64
Canon Greek capitals	2 lb.	fl. 0,20	fl. 0,40
Dubbele augustijn roman capitals	8 lb.	fl. 0,15	fl. 1,20
Dubbele augustijn Greek capitals	8 lb.	fl. 0,36	fl. 2,85
Dubbele mediaan italic capitals	25 lb.	fl. 0,06	fl. 1,56
Dubbele garamond roman capitals	14 lb.	fl. 0,14	fl. 1,94
Text roman capitals	6 lb.	fl. 0,09	fl. 0,56

Bold text roman capitals	12 lb.	fl. 0,31	fl. 3,73
Augustijn almanac characters	47 lb.	fl. 0,07	fl. 3,51
Bourgeois/brevier characters with diacritics	22 lb.	fl. 0,09	fl. 20,09
Various flowers	24 lb.	fl. 0,28	fl. 6,75
Augustijn/brevier lines, bows and fractions	57 lb.	fl. 0,23	fl. 12,83
Mediaan musical notes	108 lb.	fl. 0,08	fl. 8,78
Augustijn/dessendiaan/brevier superscript characters	56 lb.	fl. 0,11	fl. 6,11
Total	**11443 lb.**	**fl. 0,10**	**fl. 1200,09**

Figure 33: Abraham Elzevier (J)

Type	**Weight**	**Prize per pound**	**Total prize**
Canon roman	36 lb.	fl. 0,21	fl. 7,65
Dubbele augustijn roman	36 lb.	fl. 0,18	fl. 6,53
Dubbele augustijn italic	30 lb.	fl. 0,33	fl. 9,75
Paragon roman	40 lb.	fl. 0,18	fl. 7, -
Paragon italic	34 lb.	fl. 0,26	fl. 8,71
Augustijn roman	216 lb.	fl. 0,14	fl. 29,70
Augustijn italic	54 lb.	fl. 0,14	fl. 7,43
Mediaan roman	400 lb.	fl. 0,14	fl. 55, -
Mediaan italic	96 lb.	fl. 0,14	fl. 13,80
Hoge dessendiaan roman	48 lb.	fl. 0,14	fl. 6,60
Dessendiaan roman	214 lb.	fl. 0,21	fl. 44,14
Dessendiaan italic	36 lb.	fl. 0,14	fl. 4,95
Garamond roman	60 lb.	fl. 0,31	fl. 18,75
Bourgeois roman	50 lb.	fl. 0,13	fl. 6,56
Bourgeois italic	34 lb.	fl. 0,13	fl. 4,25
Brevier roman	114 lb.	fl. 0,14	fl. 15,68
Brevier roman	18 lb.	fl. 0,14	fl. 2,48
Parel italic	30 lb.	fl. 0,13	fl. 3,94
Canon Dutch Blackletter	59 lb.	fl. 0,18	fl. 10,15
Paragon Dutch Blackletter	90 lb.	fl. 0,19	fl. 17,44
Augustijn Dutch Blackletter	180 lb.	fl. 0,28	fl. 50,63
Mediaan Dutch Blackletter	378 lb.	fl. 0,26	fl. 96,86
Dessendiaan Dutch Blackletter	216 lb.	fl. 0,15	fl. 32,40
Garamond Dutch Blackletter	100 lb.	fl. 0,41	fl. 41,25
Brevier Dutch Blackletter	95 lb.	fl. 0,45	fl. 42,75
Augustijn Greek	60 lb.	fl. 0,38	fl. 22,50
Mediaan Hebrew	6 lb.	fl. 0,70	fl. 4,23
Mediaan Syriac with vowels	5 lb.	fl. 0,72	fl. 3,58
Augustijn/mediaan almanac characters	14 lb.	fl. 0,16	fl. 2,21
Augustijn/mediaan superscript characters	10	fl. 0,16	fl. 1,57
Total	**2756 lb.**	**fl. 0,21**	**fl. 578,45**

Figure 34: Christiaan Vermey (L)

Type	Weight	Prize per pound	Total prize
Parijse roman	130 lb.	fl. 0,50	fl. 65, -
Kleine canon roman	155 lb.	fl. 0,35	fl. 54,25
Kleine canon italic	87 lb	fl. 0,32	fl. 27,73
Paragon roman	86 lb.	fl. 0,50	fl. 43, -
Text roman	900 lb.	fl. 0,34	fl. 310, -
Text italic	660 lb.	fl. 0,33	fl. 219, -
Augustijn roman	1060 lb.	fl. 0,33	fl. 351,25
Augustijn on text body roman	900 lb.	fl. 0,50	fl. 450, -
Augustijn italic	400 lb.	fl. 0,45	fl. 180, -
Augustijn on text body italic	70 lb.	fl. 0,45	fl. 31,50
Mediaan roman	2095 lb.	fl. 0,25	fl. 519,75
Mediaan italic	470 lb.	fl. 0,28	fl. 130,50
Dessendiaan roman	1270 lb.	fl. 0,21	fl. 273, -
Dessendiaan italic	580 lb.	fl. 0,21	fl. 122,50
Garamond roman	1600 lb.	fl. 0,29	fl. 460, -
Garamond italic	270 lb.	fl. 0,30	fl. 81, -
Brevier roman	60 lb.	fl. 0,15	fl. 9, -
Brevier italic	50 lb.	fl. 0,15	fl. 7,50
Canon Dutch Blackletter	70 lb.	fl. 0,20	fl. 4,55
Canon German Blackletter	28 lb.	fl. 0,16	fl. 14, -
Assendonica German Blackletter	29 lb.	fl. 0,15	fl. 4,35
Paragon Dutch Blackletter	95 lb.	fl. 0,30	fl. 28,50
Mediaan Dutch Blackletter	230 lb.	fl. 0,20	fl. 46, -
Mediaan German Blackletter	102 lb.	fl. 0,16	fl. 16,58
Dessendiaan Dutch Blackletter	300 lb.	fl. 0,15	fl. 45, -
Garamond Dutch Blackletter	378 lb.	fl. 0,25	fl. 93,70
Brevier Dutch Blackletter	125 lb.	fl. 0,30	fl. 37,50
Paragon Greek	56 lb.	fl. 0,30	fl. 16,80
Text Greek	96 lb.	fl. 0,27	fl. 25,50
Augustijn Greek	1144 lb.	fl. 0,42	fl. 478,12
Mediaan Greek	449 lb.	fl. 0,32	fl. 143,60
Dessendiaan Greek	490 lb.	fl. 0,18	fl. 85,75
Garamond Greek	415 lb.	fl. 0,60	fl. 247, -
Brevier Greek	63 lb.	fl. 0,18	fl. 11,03
Big augustijn Arabic	19 lb.	fl. 0,30	fl. 5,70
Augustijn Arabic	24 lb.	fl. 0,15	fl. 3,60
Augustijn Arabic with vowels	830 lb.	fl. 0,90	fl. 747, -
Text Arabic	161 lb.	fl. 0,23	fl. 36,23
Mediaan Arabic with vowels	19 lb.	fl. 0,66	fl. 12,60
Augustijn Ethiopian	39 lb.	fl. 0,30	fl. 11,70
Paragon Hebrew with vowels	47 lb.	fl. 0,23	fl. 10,58
Augustijn Hebrew	16 lb.	fl. 0,18	fl. 2,80
Mediaan Hebrew	127 lb.	fl. 0,35	fl. 43,85
Dessendiaan Hebrew	70 lb.	fl. 0,30	fl. 21, -
Dessendiaan Hebrew with vowels	561 lb.	fl. 0,69	fl. 385, -
Brevier Hebrew	30 lb.	fl. 0,30	fl. 9, -
Kolonel Hebrew with vowels	250 lb.	fl. 1, -	fl. 250, -
Joli Hebrew with vowels	113 lb.	fl. 0,43	fl. 48,38
Copper Palmyrene	N/A	N/A	fl. 5,50
Paragon Samaritan	32 lb.	fl. 0,23	fl. 7,20
Mediaan Samaritan	46 lb.	fl. 1,30	fl. 59,80

Paragon Syriac with vowels	N/A	N/A	fl. 4, -
Text Syriac with vowels	297 lb.	fl. 0,53	fl. 158,55
Augustijn Syriac	N/A	N/A	fl. 12, -
Mediaan Syriac with vowels	24 lb.	fl. 0,53	fl. 158,55
Dubbele text Greek capitals	10 lb.	fl. 0,40	fl. 4, -
Dubbele augustijn Greek shadowed capitals	8 lb.	fl. 0,18	fl. 1,40
Dubbele garamond Greek capitals	8 lb.	fl. 0,30	fl. 2,40
Various capitals in various sizes	13 lb.	fl. 0,14	fl. 1,79
Almanac characters in various sizes	215 lb.	fl. 0,42	fl. 90,40
Characters with diacritics	2,75 lb.	fl. 0,21	fl. 0,58
Flowers	N/A	N/A	fl. 118, -
Fractions and lines	9 lb.	fl. 0,29	fl. 2,60
Copper lines	30 lb.	fl. 0,80	fl. 24, -
Squares	600 lb.	fl. 0,50	fl. 300
Mediaan striked characters	31 lb.	fl. 0,79	fl. 24,50
Unknown characters	80 lb.	fl. 0,30	fl. 24, -
Casting material	200 lb.	fl. 0,15	fl. 30, -
Total	**18824,75 lb.**	**fl. 0,38**	**fl. 7118, -**

Figure 35: Isaac van der Mijn (M)

Type	**Weight**	**Prize per pound**	**Total prize**
Canon roman	70 lb.	fl. 0,39	fl. 27,56
Dubbele augustijn italic	33 lb.	fl. 0,48	fl. 15,88
Paragon roman	154 lb.	fl. 0,23	fl. 35,61
Paragon italic	72 lb.	fl. 0,40	fl. 28,80
Text roman	176 lb.	fl. 0,29	fl. 50,60
Text italic	106 lb.	fl. 0,31	fl. 33,10
Augustijn roman	430 lb.	fl. 0,21	fl. 91,35
Augustijn italic	108 lb.	fl. 0,33	fl. 35,10
Mediaan roman	1150 lb.	fl. 0,27	fl. 313,93
Mediaan italic	694 lb.	fl. 0,22	fl. 150,96
Dessendiaan roman	476 lb.	fl. 0,27	fl. 127,93
Dessendiaan italic	224 lb.	fl. 0,42	fl. 94,20
Garamond roman	386 lb.	fl. 0,14	fl. 53,06
Garamond italic	100 lb.	fl. 0,14	fl. 14,35
Brevier roman	69 lb.	fl. 0,21	fl. 14,20
Brevier italic	36 lb.	fl. 0,20	fl. 7,20
Canon Dutch Blackletter	45 lb.	fl. 0,40	fl. 18, -
Paragon Dutch Blackletter	78 lb.	fl. 0,36	fl. 28,28
Mediaan German Blackletter	31 lb.	fl. 0,45	fl. 13,95
Dessendiaan Dutch Blackletter	265 lb.	fl. 0,24	fl. 64,59
Dessendiaan German Blackletter	107 lb.	fl. 0,56	fl. 60,19
Paragon Greek	18 lb.	fl. 0,71	fl. 12,70
Augustijn Greek	73 lb.	fl. 0,23	fl. 16,85
Mediaan Greek	502 lb.	fl. 0,20	fl. 100,85
Dessendiaan Greek	100 lb.	fl. 0,33	fl. 32,50
Garamond Greek	117 lb.	fl. 0,24	fl. 27,79
Augustijn Arabic with vowels	170 lb.	fl. 0,30	fl. 51, -
Text Armenian	18 lb.	fl. 1,06	fl. 19,13

Augustijn Ethiopian	18 lb.	fl. 1,06	fl. 19,13
Dubbele augustijn Hebrew	13 lb.	fl. 0,50	fl. 6,50
Mediaan Hebrew	26 lb.	fl. 0,65	fl. 16,90
Dessendiaan Hebrew with vowels	54 lb.	fl. 0,63	fl. 33,75
Kolonel Hebrew with vowels	33 lb.	fl. 0,51	fl. 16,70
Joli Hebrew	41 lb.	fl. 0,17	fl. 7,15
Mediaan Samaritan	18 lb.	fl. 0,90	fl. 16,20
Paragon Syriac with vowels	100 lb.	fl. 0,15	fl. 15, -
Augustijn Syriac with vowels	62 lb.	fl. 0,18	fl. 10,85
Dessendiaan Syriac	76 lb.	fl. 0,17	fl. 12,83
Dubbele Parijse roman capitals	18 lb.	fl. 0,35	fl. 6,30
Dubbele paragon roman capitals	11 lb.	fl. 0,36	fl. 3,95
Dubbele text roman capitals	12 lb.	fl. 0,40	fl. 4,80
Dubbele augustijn roman capitals	9 lb.	fl. 0,13	fl. 1,13
Dubbele augustijn Greek capitals	10 lb.	fl. 0,70	fl. 7, -
Dubbele mediaan roman capitals	11 lb.	fl. 0,24	fl. 2,60
Dubbele mediaan Greek capitals	6 lb.	fl. 0,63	fl. 3,75
Dubbele dessendiaan roman capitals	13 lb.	fl. 0,29	fl. 3,75
Dubbele garamond roman capitals	4 lb.	fl. 0,13	fl. 0,50
Dubbele brevier roman capitals	5 lb.	fl. 0,12	fl. 0,59
Mediaan roman capitals	41 lb.	fl. 0,13	fl. 5,13
German Blackletter Capitals in various sizes	3 lb.	fl. 0,75	fl. 2,25
Almanac characters in various sizes	82 lb.	fl. 0,50	fl. 40,80
Mediaan/garamond characters with diacritics	4 lb.	fl. 0,18	fl. 0,70
Flowers in various sizes	25 lb.	fl. 0,36	fl. 8,91
Augustijn/mediaan fractions	5 lb.	fl. 0,66	fl. 3,28
Lines and bows in various sizes	57,5 lb.	fl. 0,25	fl. 14,46
Striked characters	11,5 lb.	fl. 0,94	fl. 10,78
Superscript characters	27 lb.	fl. 0,41	fl. 10,98
Total	**6604 lb.**	**fl. 0,28**	**fl. 1826,29**

Figure 36: Jan Willem de Groot (N)

Type	Weight	Prize per pound	Total prize
Kleine canon roman	60 lb.	fl. 0,23	fl. 13,50
Kleine canon italic	50 lb.	fl. 0,15	fl. 7,50
Paragon roman	17 lb.	fl. 0,44	fl. 7,50
Augustijn roman	62 lb.	fl. 0,10	fl. 6,20
Mediaan roman	63 lb.	fl. 0,21	fl. 13,35
Mediaan italic	36 lb.	fl. 0,10	fl. 3,60
Canon Dutch Blackletter	81 lb.	fl. 0,10	fl. 8,10
Paragon Dutch Blackletter	64 lb.	fl. 0,10	fl. 6,40
Augustijn Dutch Blackletter	60 lb.	fl. 0,14	fl. 8,25
Dessendiaan Dutch Blackletter	44 lb.	fl. 0,10	fl. 4,40
Dubbele paragon roman capitals	17 lb.	fl. 0,18	fl. 2,98
Parijse roman capitals	15 lb.	fl. 0,11	fl. 1,69
Dubbele augustijn capitals	23 lb.	fl. 0,11	fl. 2,45
Dubbele mediaan capitals	11 lb.	fl. 0,10	fl. 1,05
Total	**603 lb.**	**fl. 0,14**	**fl. 86,97**

Figure 37: Abraham van Abkoude (O)

Type	Weight	Prize per pound	Total prize
Parijse roman	31 lb.	fl. 0,14	fl. 4,46
Kleine canon roman	100 lb.	fl. 0,25	fl. 25, -
Kleine canon italic	78 lb.	fl. 0,25	fl. 19,50
Dubbele augustijn roman	172 lb.	fl. 0,17	fl. 29,03
Dubbele augustijn italic	87 lb.	fl. 0,17	fl. 14,68
Paragon roman	255 lb.	fl. 0,28	fl. 70,13
Paragon italic	137 lb.	fl. 0,28	fl. 37,68
Text roman	496 lb.	fl. 0,14	fl. 71,30
Text italic	147 lb.	fl. 0,14	fl. 21,13
Augustijn roman	1726 lb.	fl. 0,41	fl. 709,71
Augustijn italic	672 lb.	fl. 0,17	fl. 115,08
Mediaan roman	2255 lb.	fl. 0,20	fl. 458,06
Mediaan italic	645 lb.	fl. 0,21	fl. 135,29
Dessendiaan roman	1665 lb.	fl. 0,24	fl. 392,09
Dessendiaan italic	728 lb.	fl. 0,24	fl. 172,45
Garamond roman	811 lb.	fl. 0,14	fl. 117,20
Garamond on dessendiaan body roman	211 lb.	fl. 0,14	fl. 29,01
Garamond italic	306 lb.	fl. 0,15	fl. 44,40
Garamond on dessendiaan body italic	62 lb.	fl. 0,14	fl. 8,80
Brevier roman	499 lb.	fl. 0,24	fl. 121,68
Brevier italic	246 lb.	fl. 0,24	fl. 59,96
Canon German Blackletter	33 lb.	fl. 0,31	fl. 19,69
Kleine canon Dutch Blackletter	63 lb.	fl. 0,20	fl. 6,60
Dubbele augustijn written Dutch Blackletter	5 lb.	fl. 0,21	fl. 1,06
Dubbele mediaan German Blackletter	12 lb.	fl. 0,70	fl. 8,40
Paragon Dutch Blackletter	74 lb.	fl. 0,20	fl. 14,80
Text Dutch Blackletter	161 lb.	fl. 0,39	fl. 63,89
Text written Dutch Blackletter	45 lb.	fl. 0,36	fl. 16,31

Augustijn Dutch Blackletter	58 lb.	fl. 0,26	fl. 14,86
Mediaan Dutch Blackletter	159 lb.	fl. 0,25	fl. 39,75
Mediaan German Blackletter	75 lb.	fl. 0,55	fl. 41,25
Dessendiaan Dutch Blackletter	288 lb.	fl. 0,26	fl. 75,60
Dessendiaan German Blackletter	145 lb.	fl. 0,52	fl. 75,22
Brevier Dutch Blackletter	37 lb.	fl. 0,14	fl. 5,32
Paragon Greek	48 lb.	fl. 0,20	fl. 9,60
Text Greek	144 lb.	fl. 0,21	fl. 30,50
Augustijn Greek	114 lb.	fl. 0,14	fl. 15,68
Mediaan Greek	261 lb.	fl. 0,15	fl. 39,15
Dessendiaan Greek	112 lb.	fl. 0,50	fl. 56,29
Garamond Greek	188 lb.	fl. 0,15	fl. 28,20
Brevier Greek	60 lb.	fl. 0,15	fl. 9, -
Augustijn Arabic	164 lb.	fl. 0,86	fl. 141,45
Text Ethiopian	12 lb.	fl. 1,10	fl. 13,20
Augustijn Ethiopian	19 lb.	fl. 1,18	fl. 22,33
Canon Hebrew	3 lb.	fl. 0,75	fl. 2,25
Augustijn Hebrew with vowels	36 lb.	fl. 0,30	fl. 10,80
Mediaan Hebrew with vowels	39 lb.	fl. 0,46	fl. 18, -
Dessendiaan Hebrew	38 lb.	fl. 0,36	fl. 13,54
Kolonel Hebrew	31 lb.	fl. 1,38	fl. 42,63
Text Russian	26 lb.	fl. 0,59	fl. 15,28
Mediaan Russian	114 lb.	fl. 0,31	fl. 35,63
Mediaan Samaritan	19 lb.	fl. 1,03	fl. 19,48
Paragon Syriac with vowels	80 lb.	fl. 0,45	fl. 36, -
Text Syriac with vowels	15 lb.	fl. 1,81	fl. 27,19
Augustijn Syriac	9 lb.	fl. 0,61	fl. 5,51
Assendonica written	97 lb.	fl. 0,66	fl. 64,26
Dubbele mediaan written	74 lb.	fl. 0,23	fl. 16,65
Dubbele written capitals	23 lb.	fl. 0,81	fl. 18,63
Dubbele canon roman capitals	35 lb.	fl. 0,18	fl. 6,34
Dubbele paragon roman capitals	48 lb.	fl. 0,23	fl. 10,99
Parijse roman capitals	34 lb.	fl. 0,14	fl. 4,68
Parijse Greek capitals	21 lb.	fl. 0,14	fl. 3,02
Kleine Parijse Greek capitals	21 lb.	fl. 0,14	fl. 3,02
Dubbele text Greek capitals	2 lb.	fl. 0,16	fl. 0,33
Dubbele augustijn roman capitals	44 lb.	fl. 0,26	fl. 11,28
Dubbele augustijn roman shadowed capitals	18 lb.	fl. 0,24	fl. 4,28
Dubbele augustijn Greek capitals	18 lb.	fl. 0,14	fl. 2,48
Dubbele augustijn Greek shadowed capitals	5 lb.	fl. 0,39	fl. 1,94
Dubbele mediaan roman capitals	60 lb.	fl. 0,25	fl. 15,13
Dubbele mediaan roman shadowed capitals	15 lb.	fl. 0,70	fl. 10,50
Dubbele mediaan roman figured capitals	21 lb.	fl. 0,91	fl. 19,16
Dubbele mediaan italic capitals	16 lb.	fl. 0,74	fl. 11,06
Dubbele dessendiaan roman capitals	69 lb.	fl. 0,18	fl. 12,38
Dubbele dessendiaan roman shadowed capitals	11 lb.	fl. 0,75	fl. 8,25

Dubbele dessendiaan roman figured capitals	13 lb.	fl. 0,95	fl. 12,35
Dubbele dessendiaan italic capitals	11,5 lb.	fl. 0,62	fl. 7,09
Dubbele dessendiaan italic figured capitals	13 lb.	fl. 0,75	fl. 9,75
Dubbele dessendiaan Greek capitals	10 lb.	fl. 0,14	fl. 1,38
Dubbele garamond roman capitals	19 lb.	fl. 0,23	fl. 4,34
Dubbele garamond italic capitals	4 lb.	fl. 0,88	fl. 3,50
Dubbele garamond Greek capitals	6 lb.	fl. 0,14	fl. 0,83
Dubbele brevier Greek capitals	24 lb.	fl. 0,29	fl. 6,95
Augustijn roman shadowed capitals	3 lb.	fl. 1,05	fl. 3,15
Augustijn italic figured capitals	13 lb.	fl. 0,98	fl. 12,74
Almanac characters in various sizes	85,5 lb.	fl. 0,74	fl. 63,69
Mediaan/dessendiaan characters with diacritics	7 lb.	fl. 0,30	fl. 1,84
Flowers in various sizes	174 lb.	fl. 0,68	fl. 118,31
Fractions in various sizes	20 lb.	fl. 0,32	fl. 15,06
Lines and bows in various sizes	118,5 lb.	fl. 0,40	fl. 47,13
Text/augustijn musical notes	159 lb.	fl. 0,16	fl. 26,06
Dubbele augustijn numbers	6,5 lb.	fl. 0,55	fl. 3,59
Mediaan striked characters	8,5 lb.	fl. 0,23	fl. 1,91
Superscript characters in various sizes	15 lb.	fl. 9,81	fl. 0,14
Total	**15358 lb.**	**fl. 0,27**	**fl. 4204,38**

Figure 38: Cornelis Heyligert (P)