

The John Fell Collection of
Hebrew Manuscripts at
Christ Church Library, Oxford

Introductory Studies and Notes

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Preface

I first came across the collection of Hebrew Manuscripts at Christ Church Library, Oxford, while trawling the catalogue of the Institute of Microfilmed Hebrew Manuscripts in Jerusalem. I was searching for primary sources on the acceptance of proselytes by the nascent seventeenth and eighteenth century Jewish communities in Holland and England, when I came across the catalogue entry for the Christ Church Ms.199. Quoting from the manuscript itself, the entry read (in translation):

“It was written in consequence of a legal question concerning a man of the seed of Israel, one of the *Anussim* [*Critianos Nuevos*, *Conversos* or *Marranos*] in Portugal, who profaned himself with a gentile woman, who bore him a son. The man subsequently died...The young man remained attached to his mother until he grew up and learned wisdom, and ‘the spirit of the Lord began to stir in him’...and he went in search of the Lord and came to Holland...and became a Jew...

The young man prospered and some years later he was proposed for the position of lay head of the Amsterdam Jewish community. But at the meeting called to confirm his appointment, one of the members present objected on the grounds that he was not eligible to occupy a communal position of coercive authority by reason of the Torah statute that “from amongst your brethren shall you set a king over you...you may not place a foreigner over you.” (*Deuteronomy* 17:15). Since Talmudic times, this ruling had also been applied to all positions of coercive authority in a Jewish community and the legal question he raised was whether this son of an *Anuss* and a gentile mother was “from amongst your brethren” in the sense required to occupy a position of authority? Unsure how to proceed, the community put the question out to the world of European rabbinical scholars and Ms.199 contains three of the replies they received.

The manuscript seemed to be just what I was looking for but the actual microfilm proved to be almost illegible and the master reel from which it had been copied could not be located. It was only after visiting Oxford and making the acquaintance of Dr. Cristina Neagu, Keeper of Special Collections at Christ

Church, who offered to personally photograph the entire 110 pages of the codex for me, that I could undertake a proper study of the manuscript.

Two of the rabbinical replies proved to be previously unknown works by the 17th century polymath Joseph Solomon Delmedigo (1591-1655), but written under assumed names. At once a rabbinical scholar, mystic and mathematical scientist who counted Karaites among his friends, a proponent of the Copernican heliocentric model and the first Jew to use logarithms, he could not be other than controversial. As such, he had had to hide his identity if his replies were to be taken seriously. First reported in an article in the Christ Church Library Newsletter (Vol. 6, Issue 3, 2010), this discovery sent me back to the Library to see what other such intriguing Hebrew manuscripts there might be in its collection.

The Library possesses just thirteen codices of medieval and early modern Hebrew manuscripts, numbered 187 to 190 and 193 to 201 in the catalogue, prepared by G.W.Kitchin in 1863 (Appendix 1). Six comprise secular texts – original works by Jewish scholars or Hebrew translations of Christian or Arabic works, many themselves versions of, or commentaries on, classical writings – and seven containing specifically Jewish works: Rabbinics, Esoteric Kabbalah and Hekhalot Texts, Torah Homilies, the Khazar Correspondence and a Morality Play. The collection is currently being digitised and made available on the Library website.*

Information regarding the codicology and palaeography of the manuscripts was readily available from the catalogue of the Institute of Microfilmed Hebrew Manuscripts at the Israel National Library, Jerusalem, and it is from there that the particulars cited below were taken. There was, however, much less at hand regarding the provenance of the manuscripts and codices. An examination of the watermarks revealed that while the actual manuscript folios were mostly of Mediterranean origin – Italian or Spanish – many of the separator sheets and endpapers had 17th century North European or even English marks, which provided an insight into when and where the codices were bound into their present covers.

The Library's Donors Book records gifts of Hebrew books and manuscripts from John Fell, Dean of Christ Church, at various times between 1660 and 1686. Fell was also the founder of the Oxford University Press and most probably

* <http://www.chch.ox.ac.uk/library-and-archives/hebrew-manuscripts>

acquired these Hebrew manuscripts from the Dutch brokers, booksellers and printers with whom he had dealings as part of his ambitious plans for the new University Press.

These Introductory Studies and Notes have been a work in progress for almost ten years. Whenever the project seemed complete, a new source or record would somehow crop up and require further examination. But the time has come to call a halt. The findings presented here are, therefore, incomplete; no more than appetizers. A thorough elucidation of this eclectic collection requires a level of specialist expertise that I do not possess and must be left to others to complete. In the meantime, I hope these introductory studies and notes will help readers to navigate the digitised manuscript texts.

My sincere thanks to Dr. Cristina Neagu for availing me of the opportunity to work on these manuscripts and to her stalwart assistant, Alina Nachescu, for photographing the images and watermarks. But most of all, to my very best friend over the past fifty five years, my dear wife Barbara Ann, for her love and support.

Jeremy I. Pfeffer
Rehovot, Israel.
April 2018.

Foreword

I feel immensely privileged to have met the author of this book which sheds unique light on the Hebrew collection of manuscripts at Christ Church in Oxford. Before Jeremy Pfeffer's arrival, the volumes had been sitting on the shelves, undisturbed, for perhaps centuries.

They were just listed in a general catalogue of manuscripts published in 1867: G.W. Kitchin's *Catalogus codicum mss qui in bibliotheca Aedis Christi apud Oxonienses adservantur*. It is now easy to disparage Kitchin's work as too succinct. He embarked on this project at a moment in the history of the Library when searching for records meant only realizing how few, imprecise and disorganised these were.

Access to information about the collections had never been easy. However, looking through scattered details in a variety of Library records will reveal a few interesting facts. The first gift of a manuscript to the Library, in 1565, was not a Western codex, as one would expect, but a 13th century Torah in book (rather than roll) format. Readers may be surprised not to find the so called 'MS 1' among the Hebrew manuscripts mentioned in Jeremy's book. Sadly (and mysteriously) this priceless manuscript is no longer at Christ Church. For quite a long time, it has been away from Oxford, at Westminster Abbey.

Despite its conspicuous absence from the Library collections, this manuscript tells a story about the importance of Hebrew at Christ Church. When the college was re-founded in 1546 by King Henry VIII, the Statutes stipulated from the very start the position of Regius Professors of Hebrew. This is a prestigious Chair in the University of Oxford which has continued uninterrupted to this day. More, in 1683, when Dean John Fell made his gift of thirteen codices, discussed at length and brilliantly by Mr Pfeffer, there were more Hebrew manuscripts at Christ Church than Greek.

These manuscripts have been given a voice again after Jeremy Pfeffer's series of visits at Christ Church. His indepth study has revealed how precious and exciting the collection is. In this endlessly fascinating book, the reader is gently and patiently taken by the hand and shown not only erudite descriptions of

manuscripts, but also the rich sources of imagery, metaphor and moral insight that has informed their writing.

Cristina Neagu
Keeper of Special Collections
Christ Church Library, Oxford

Overview and Provenance

An entry dated 1683 in the Christ Church Library *Donors Book* (p.194) records the gift of thirteen Hebrew manuscripts by John Fell, Dean of Christ Church and Bishop of Oxford (Fig.I).¹

Fig.I: The entries, bottom left and top right, on p.194 of the Christ Church Library Donors Book read (in translation): “The Reverend Father in Christ, John, Bishop of Oxford and Dean of this Church. Thirteen Scotist Hebrew Manuscripts on classes of Nature, Ptolemy’s *Harmonica*.”²



The items are described as *Tredecim Mss Hebraice Scotum de divisione Naturæ, Ptolemæi Harmonica* (Thirteen Scotist Hebrew Manuscripts on branches of

¹ The entry came to light thanks to the diligence of Dr. David Rundle and Mr. Brian Deutsch. It is one of a series of entries in a professional calligraphic script that starts on page 195 (1682) and runs unbroken through to page 201 (1689). It includes an entry on pages 197 & 198 dated 1686, the year in which Fell died, for a gift of books made by the executors of his estate.

² The ancient astronomer Ptolemy developed a mathematical theory of musical harmony which he applied to the zodiac and the movement of heavenly bodies in order to account for the “Music of the Spheres.” In 1619 Kepler published his *Harmonices Mundi* (*The Harmony of the World*) whose content parallels that of Ptolemy’s *Harmonica* and in which he introduced his Third Law of Planetary Motion.

Nature, Ptolemy's *Harmonica*).³ The catalogue of the Library's manuscripts prepared by G.W.Kitchin in 1863, *Catalogus codicum MSS qui in bibliotheca Aedis Christi adservatur* (Appendix 1), lists thirteen codices containing Hebrew manuscripts from the early fifteenth to the mid seventeenth century (Nos. 187 to 190 and 193 to 201) and although there is no reference to their provenance, the simplest assumption is that these are the thirteen that Fell gifted to the Library, although, as we shall see, it might not be quite that straightforward.

As befits Hebrew texts, the codices all open from right to left and the folios are numbered accordingly. Several are composites and contain more than one manuscript, the works of different authors and scribes, not necessarily on related subjects. Some bindings may be as old as the manuscripts they contain, others are from a later date; some are simple, others ornate. Unfortunately, the collation was not always carried out with due regard for the integrity and logical sequence of the folios; in a number of codices pages were mindlessly cropped and from others even lost. Nevertheless, most are in a satisfactory state and quite readable.

The oldest manuscript in the collection is the copy of *Mordekhai HaKatan* (*The Little Mordekhai*) in Codex 196; it dates from 1410 and its folios are wholly parchment. The only other manuscript with parchment folios is the second of the three texts in the composite Codex 190, whose quires are of an early type in which the paper leaves are protected by parchment outer sheets or "guards". The remaining manuscripts are wholly paper, much of it watermarked.

Although the manuscripts were all written by Jews, their content is not exclusively Jewish. Six of the codices contain secular texts, some the original work of Jewish scholars, others Hebrew translations of Christian or Arabic works, many themselves versions of, or commentaries on, classical writings.⁴

The Six Secular Texts:

Codex 187 Hebrew translations by Eli ben Joseph Ḥabillo⁵ of the queries posed by John Versor (Versorius), Thomist philosopher and Rector of the

³ Scotism is the philosophical system derived from Arab Aristotelianism named after John Duns Scotus (1266-1308), whose *Opus Oxoniense* set the agenda for much of medieval Christian and secular thought.

⁴ Three are in a Provencal Hebrew script (187, 189 and 190), two in a Sephardic script (200, 201) and one in an Italian-Ashkenazi script (194).

⁵ עלי בן יוסף חביליו, second half of the fifteenth century.

University of Paris (d. 1485), on works by Aristotle and Thomas Aquinas.⁶

- Codex 189 Moses ibn Tibbon's Hebrew translation of Abu Bakr al-Hassar's seminal 12th century Arabic treatise on arithmetic, *Kitāb al Bayān*.
- Codex 190 (i) An exposition of Averroes' commentary on Aristotle's *de Anima* by R. Levy ben Gershon.
(ii) A commentary on Aristotle's *de Anima* by Thomas Aquinas.
(iii) A supercommentary on Averroes' *Commentary on Aristotle's de Meteoris* by R. Levi ben Gershon.
- Codex 194 Notes on Avicenna's *Canon of Medicine*.⁷
- Codex 200 A supercommentary on Averroes' *Middle Commentary* on Porphyry's *Isagoge* and Aristotle's *Categories*, *De Interpretatione* and *Prior Analytics*.
- Codex 201 A supercommentary by Judah HaCohen on Averroes' *Middle Commentary on Aristotle's Prior Analytics*.⁸

The remaining seven codices contain specifically Jewish texts and can be grouped under four headings.⁹

1. Rabbinics:

- Codex 196 The Halakhic compendium *Mordekhai HaKatan* (מרדכי הקטן).
- Codex 199 A Controversy in the Amsterdam Jewish Community in 1650 (including two *responsa* by Joseph Solomon Delmedigo).

2. Esoterics:

- Codex 195 *Taamei Mitzvot* (טעמי מצות): the intrinsic reasons, beyond obedience to God, for the Divine Ordinances incumbent upon Jews.
- Codex 198 R. Jacob Lagarto's personal collection of Kabbalah and Hekhalot Texts.

⁶ The translations of the queries on Aristotle's *De Anima* and the four treatises from the *Parva Naturalia* are found uniquely in this codex.

⁷ There is no colophon but the script, Italian and 16th century, corresponds with the partial watermark in fol.48: Briquet 749 (Lucca 1548) or one similar.

⁸ The author's full name is given on fol.1r: יהודה בן יצחק בן אדני משה בן יהודה בן מורנו הרב ר' שמואל הכהן (Judah son of Isaac, son of my master Moses, son of Judah, son of our Teacher R. Samuel HaCohen).

⁹ The two Rabbinics codices are Ashkenazi; the five others are of Sephardi origin.

3. Homiletics:

Codex 197 “A Forthright Speaker.” Torah Homilies by R. Israel: “Bereaved since the Castilian Exile and forlorn by reason of the Portuguese Captivity”.

4. Composites of Unrelated Texts:

Codex 188 A Mélange of Kabbalistic and Maimonidean texts, interspersed and annotated by arcane daubings, scrawls and doodles.¹⁰

(i) A 16th century exposition on *Sefer Yetzirah* by Shlomo Turiel ben Shimon;

(ii) A description of the form of the Kabbalistic Tree of *Sefirot*;

(iii) The 613 *Mitzvot* (Divine ordinances incumbent on Jews) enumerated by Maimonides, listed by the order they appear in the weekly Torah readings;

(iv) An alphabetic subject index to Maimonides’ *Mishne Torah* or *Sefer Yad HaHazakah*;

(v) Maimonides’ purported last testament to his son (partial);

(vi) The queries put to Maimonides by the “wise men of Lunel” and his replies to them.

(vii) A letter sent by Maimonides to R. Pinchas of Alexandria in reply to his criticisms and queries (partial).

Codex 193 (i) “Speech is Dumb.” A Renaissance style morality tale by Joshua di Viana on the culpability of Speech for the iniquities it uniquely facilitates.¹¹

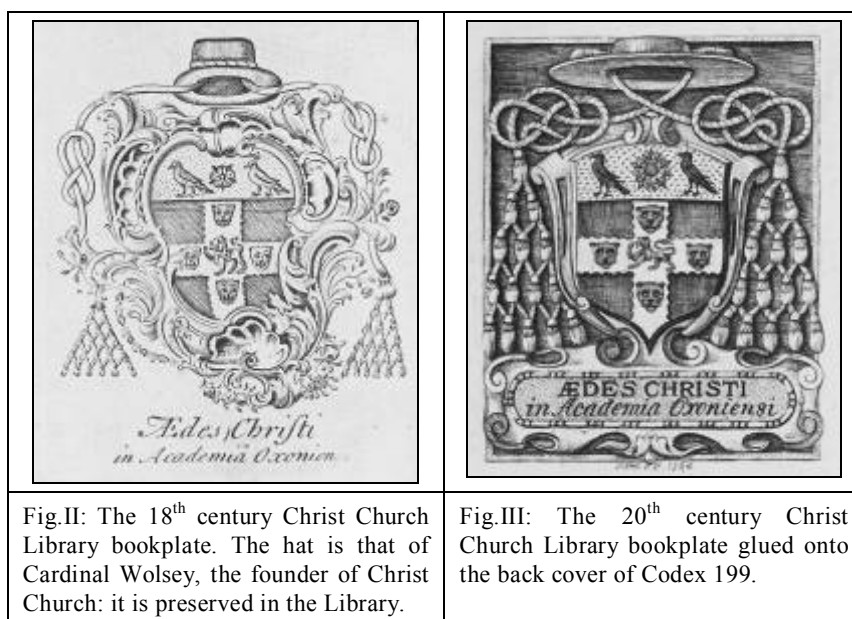
(ii) The “Khazar Correspondence.” The letters purportedly exchanged by Ḥasdai ibn Shaprut and Joseph, King of the Khazars.

With just one exception, the codices all have a handwritten Latin inscription giving the title(s) and/or a brief description of the work(s) they contain, the name(s) of the author(s) and an 18th century Christ Church Library bookplate, affixed to a flyleaf or endpaper (Fig.II). In all but five codices – 187, 188, 190, 193 and 200 – the inscriptions also include some Hebrew. The entries in Kitchen’s catalogue are generally little more than copies of these inscriptions.

¹⁰ Some with a possible 17th century Christian Kabbalah connection.

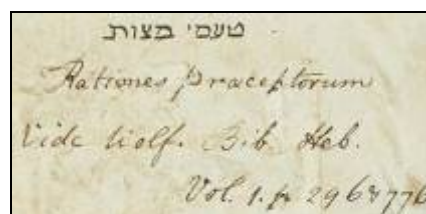
¹¹ Swearing falsely (taking God’s name in vain), calumny, gossip and slander, as well as lying, flattery, scorn, profanity, perjury and cursing.

The exception is Codex 199, which has a full page nineteenth century handwritten explanatory note in English attached to the inside front cover and no Latin inscription. The codex is also exceptional in having modern covers and a second Christ Church Library bookplate dated 1904 affixed to the inside of the back cover (Fig.III); it was seemingly rebound early in the twentieth century.



From the diversity of their Latin and Hebrew scripts, as well as their different formats, it is clear that the inscriptions were not all entered at the same time nor by the same person. There are, nevertheless, pointers as to when and by whom some could or could not have been written. Thus, those in codices 187 and 195 could not have been added before 1733 since both cite Johann Christoph Wolf's *Bibliothecae Hebraicae* which was first printed in Hamburg in that year. Then again, the very different scripts in these two inscriptions suggests that they were almost certainly written by different persons (Fig.IV & V).

Fig.IV: The inscription in Codex 195: טעמי מצות – *Rationes Præceptorum* [Reasons for the Precepts]. Vide Wolf. Bib. Heb. Vol 1. 296 & 776.



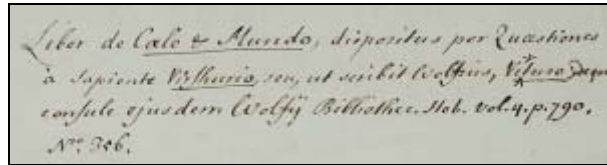


Fig.V: The inscription in Codex 187: *Liber de Caelo & Mundo, dispositus per Questiones à Sapiente Virshurio, seu, ut scribit Wolfius, Virturo dequo consule ejusdem Wolfii Bibliothec. Heb. vol. 4. p.790, No.396.* (The Book of the Sky and of the World, elucidated by Questions posed by the Wise Virshurio...Wolf's Bibliothec. Heb. vol 4, p.790, No.396.)¹²

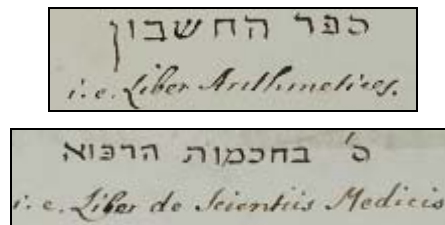


Fig.VI: The almost identical scripts of the inscriptions in codices 189 and 194, ספר חשבון i.e. *Liber Arithmetices* and ס' בחכמות הרפוא i.e. *Liber de Scientiis Medicis*, suggest they were written by the same person.

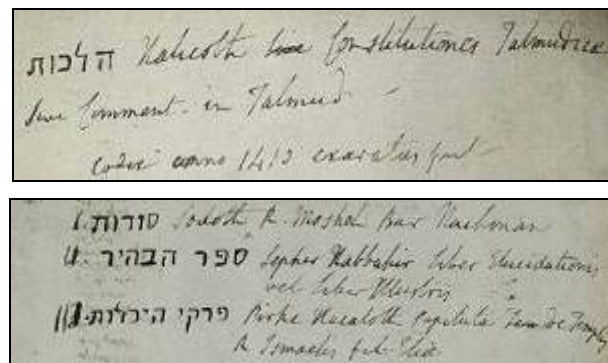


Fig.VII: Partials of the long inscriptions in codices 196 (above) and 198 (below), showing the similarity of their respective scripts.

¹² The entry in Wolf's compendium cited in the inscription, refers to a Hebrew codex that had once belonged to Cornelius Schulting (1540-1604), a minister of the Reformed Church in Amsterdam. That codex is, however, now thought to be one held by the Staats und Universitätsbibliothek Hamburg, Codex Hebr 266 (IMHM Film No. F 1065) and not this Christ Church codex. The Hamburg codex has just one of the texts in the Christ Church Codex 187, that on the queries posed on Aristotle's *De Generatione et Corruptione*

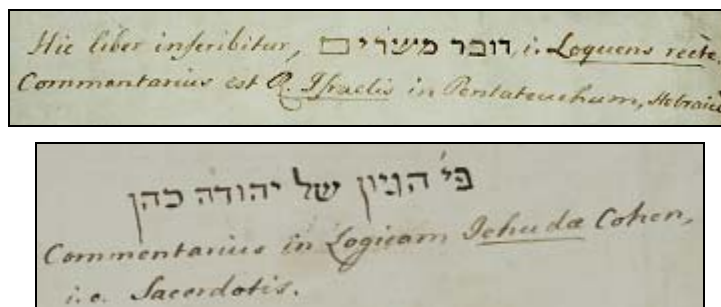


Fig.VIII: The similar scripts of the inscriptions in codices 197 and 201 respectively: *Hic liber inscribitur, דובר משרים, i. Loquens recte. Commentarius est R. Israelis in Pentateuchum Hebraice.* (This Book is Entitled “A Fortright Speaker.” A Commentary by R. Israel on the Hebrew Pentateuch); *פי הגיון של יהודה כהן – Commentarius in Logiam, Jehuda Cohen i.e. Sacerdotis.* (A Commentary on Logic by Yehudah Cohen, i.e., Priest).

Who actually researched and entered any of these inscriptions is not known; they left no remembrance.

The simple assumption that the thirteen codices referred to in the entry for Fell’s gift on p.194 of the Donors Book (Fig.I) are the thirteen Hebrew manuscripts dated prior to 1683 in Kitchin’s catalogue, is moot. Only if a codex was actually bound prior to 1683 could it have been one of the thirteen that Fell gifted.¹³

Seven codices, 187, 189, 194, 195, 196, 197, and 200, contain a 15th or 16th century work or works, the product(s) of a single author or copyist, bound in contemporary generic calf, sheep or goat skin covered boards (Fig.IX). A further two codices, 188 and 201, have 16th or early 17th century tooled leather bindings (Fig.X); a fly leaf in the former also has a Basilisk watermark dated 1602 (Fig.XI). As such, there is no obvious reason to suppose that these nine items were not part of Fell’s gift. The works in the remaining four codices, 190, 193, 198 and 199, are all by different authors, not necessarily on the same subject or scripted by the same copyist, which makes determining when they were produced more problematic.

¹³ The pre-1683 dating of the manuscripts is based on the data in the Catalogue of the Institute of Microfilmed Hebrew Manuscripts in the National Library of Israel, Jerusalem.

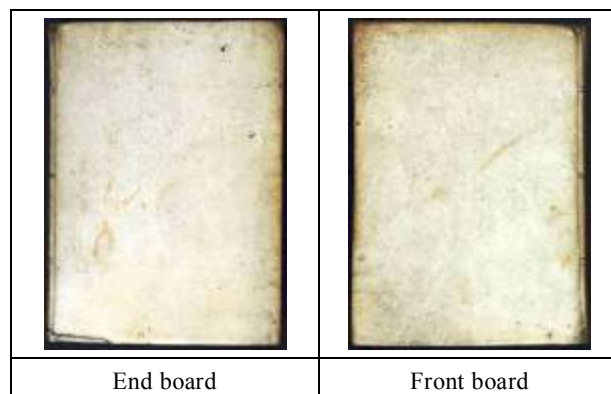


Fig.IX: The plain (generic) skin covers of Codex 195.

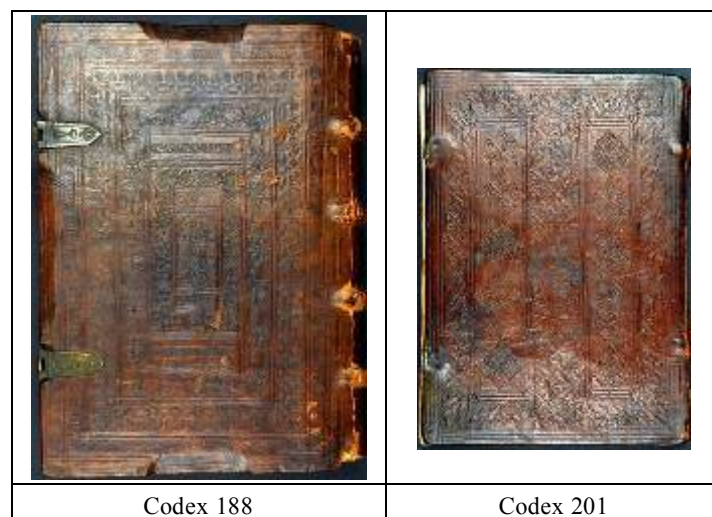


Fig.X: The clasped tooled leather boards of codices 188 and 201.

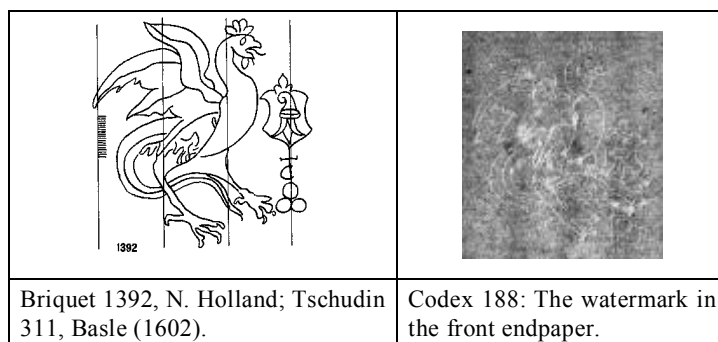


Fig.XI: The watermark in the front endpaper of Codex 188.

Codex 190 contains three such manuscripts: two 15th century texts in Sephardi scripts and one 16th century text in an Italian script.¹⁴ Their only common feature is that each contains a medieval exposition on a work by Aristotle. The watermarks in the codex's endpapers are variants of a group of late 17th century London marks, the earliest dated 1677 and the latest 1698, all of which comprise a stylised bunch of grapes and a monogram that contains *inter alia* some permutation of the letters I, A, N and D (Fig. XII). These endpapers are not an original part of the manuscripts but were presumably added when they were bound into the present codex some time between 1677 and 1698. Whether this was before or after 1683 remains an open question at this stage.

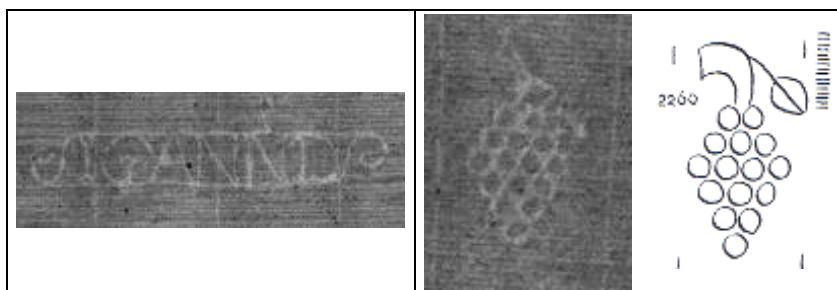


Fig. XII: The London watermarks (1677 to 1698) in the endpapers of Codex 190. Nos. 2247 to 2260, in *Watermarks* by Edward Heawood MA, The Paper Publication Society, Hilversum (1950).

The two manuscripts in Codex 193 are actually little more than fragments. The first is just the last 11 folios of what, by reference to its Hebrew foliation and content, was once a 94 page text of moral or ethical instruction. The even shorter second item, just 7 folios in all, contains the correspondence purportedly exchanged by Hasdai ibn Shaprut (915–970) and the King of the Khazars. These two manuscripts, neither of which is dated and which have almost nothing in common, were probably bound into a single codex purely for convenience. There are, however, no watermarks in the endpapers and thus no indication of when this might have been done.

The uncertainties arising from the composite nature of codices 190 and 193 are compounded by the serious inconsistencies between their actual contents and their respective entries in Kitchin's 1863 catalogue.

¹⁴ The datings are based on their respective colophons and the watermarks in their paper.

There are two handwritten inscriptions in Codex 190, one on the inside of the front cover and the other stuck onto the inside of the back cover: *Expositio Rabbi Levy Ben Gershon super Commentarium Avenois in Librum Aristotelis de Anima* (An exposition by R. Levy ben Gershon of Averroes' supercommentary on Aristotle's *de Anima*) and *Expositio in librum (Aristotelis) de Meteoris*, respectively (Fig.XIII), respectively.

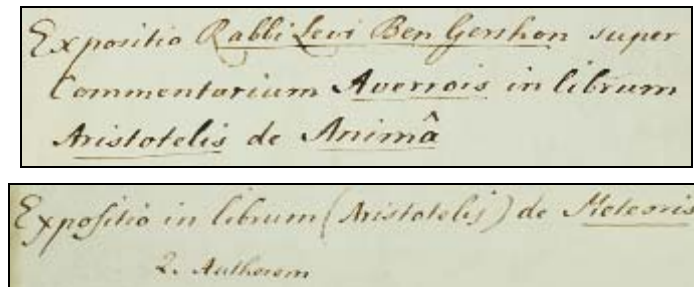


Fig.XIII: The two inscriptions in Codex 190.¹⁵

The original entry in Kitchin's 1863 catalogue for Codex 190 lists just these two works (Fig.XIV) But, as noted above, the codex actually comprises three separate and physically very different manuscripts.

CXC.	
Codex chartaceus (partim membranaceus), in folio, ff. 161, sæc. xv. (?)	
(1) R. LEVI BEN GERSHON super Commentarium Averrois in librum Aristotelis de Anima	fol. 1.
(2) Expositio in librum Aristotelis de Meteoris	114.

Fig.XIV: The original entry for Codex 190 in Kitchin's catalogue with just two listed items. The third manuscript in the codex, does not appear.

The manuscript missing from the original catalogue entry is a Hebrew translation of a commentary by Thomas Aquinas on Aristotle's *De Anima*; it is in

¹⁵ The similarity between the handwriting and format of these two inscriptions and those of the inscription in Codex 187, whose subject matter is also medieval philosophy, suggests that they were most probably entered by the same person and, likewise, after 1733.

fact the second work in the codex. It has a colophon, but the name Thomas Aquinas has been erased from it (Fig.XV). The colophon in a copy of this same text in the Vatican Library reads (in translation): “Completed, the interpretation and commentary on the book *De Anima* which Thomas Aquinas expounded...”¹⁶ For whatever reason, the reference to Aquinas was deleted from the colophon in Codex 190. The translator is not named in either manuscript.

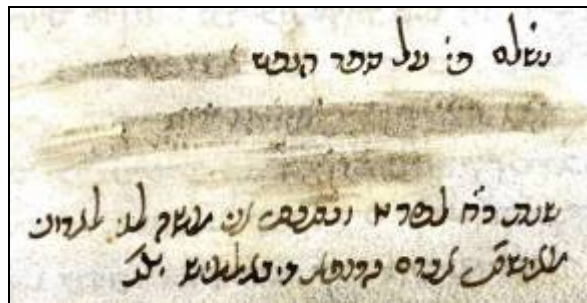


Fig.XV: The colophon on fol.116v of Codex 190 with the deleted reference to Thomas Aquinas. It reads (in translation): “Completed, a commentary on the book *De Anima*...[deletion]...year 208 (1447/8) and I, Moshe Levi, wrote it for my master, Maestro Abraham, the physician Di Balmes (Fig.190.5).”¹⁷

The omission from the original catalogue entry has been corrected by a pencilled note in the Library’s present copy: “*T. Aq[ui]nas]. Comm. on de Anima, transd. from Latin into Hebrew*” (Fig.XVI).

Kitchin would not have known about the Vatican manuscript and the simplest explanation for his error is that the subject of the commentary by Thomas Aquinas, is the same as that of the first work by R. Levi ben Gershon (Gersonides), i.e., Aristotle’s *de Anima*. Placing too much reliance on the headline inscriptions, Kitchin had perhaps overlooked the physical differences between the two manuscripts as well as the somewhat cryptic entry in the second inscription, “2. *Authorem* (2 Authors)”, and credited both works to R. Levi ben Gershon.

¹⁶ Biblioteca Apostolica Vaticana, Citta del Vaticano (2008). Neof 18. See *Hebrew Manuscripts in the Vatican Library*, Compiled by the Staff of the Institute of Microfilmed Hebrew Manuscripts and edited by Benjamin Richler, Jewish National and University Library, Jerusalem, p.544.

¹⁷ R. Abraham de Balmes of Lecce (d. 1489), court physician to King Ferdinand I of Naples. Not to be confused with his grandson, Abraham de Balmes ben Meir (d. Venice 1523), the Italian physician and translator.

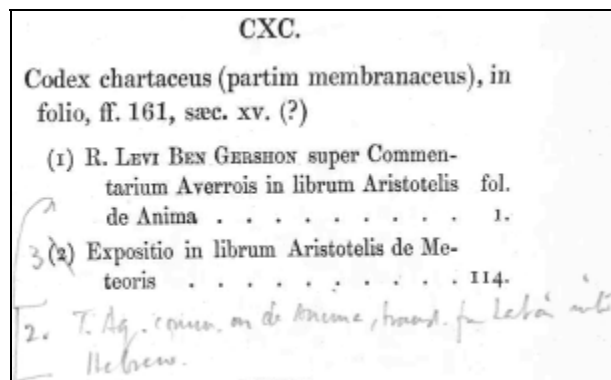


Fig. XVI: The pencilled addition in the corrected entry for Codex 190 in the Library's master copy of Kitchin's catalogue. The supercommentary by R. Levi Gershon (Gersonides) occupies ff.1 to 34; the Hebrew translation of the commentary by Thomas Aquinas on *De Anima* ff. 36 to 116; folios 117 to 121 are blank and the commentary on Aristotle's *Meteoris* now begins on f.122.¹⁸

Turning to Codex 193, according to the original entry in Kitchin's catalogue, this codex should comprise 42 folios and not just the 18 it presently contains (Fig.XVII). It thus appears that some 24 folios that have gone astray since Kitchin's time.

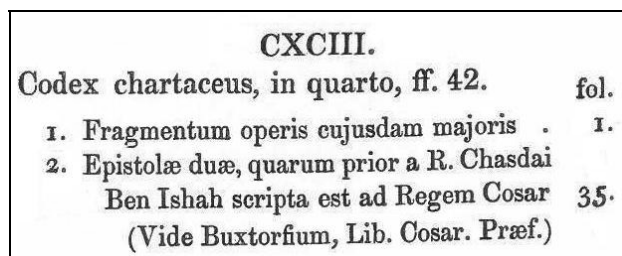


Fig. XVII: The original entry for Codex 193 in Kitchin's catalogue, according to which it comprised 42 folios in all and the correspondence between Ḥasdai ibn Shaprut and the King of the Khazars began on folio 35; this is, however, no longer correct. The *Fragmentum operis cujusdam majoris* (Fragment of a Larger Work) now occupies fols.1-11 and the correspondence purportedly exchanged by Ḥasdai ibn Shaprut (915–970) and the King of the Khazars, fols.12-18.¹⁹

¹⁸ Folios 117 to 121 have the same watermark as f.116.

¹⁹ The *Lib. Cosar* (should be *Liber Cosri*) cited in the catalogue entry is a Latin translation of Judah Halevi's theological treatise *Kitab al Khazari* (ספר הכוזרי) published by Johannes Buxtorf the Younger in 1660.

Codices 198 and 199 are also problematic. In contrast to the 15th and 16th century texts in the other codices, whose subject matter is of a general nature and impersonal, the texts in these two 17th century Dutch manuscripts relate to actual persons. The former is a miscellany of extracts from works of Kabbalah and other esoteric texts, transcribed in Amsterdam by R. Jacob ben Simon Franco Legarto (c.1600-1669) for his own personal use, on the eve of his departure in 1635 for the new Dutch settlement in Recife, Brazil. The latter contains three texts – two *responsa* and a polemical essay – relating to a halakhic controversy in 1650 over the appointment of the son of an *Anuss* (*Cristiano Nuevo*, *Converso* or *Marrano*) and a gentile woman, a certain Moseh Roiz da Costa who had become a *bona fide* Jew (he had undergone *giur*), to the most senior lay position in the Amsterdam Jewish community. Two of the texts are anonymous: the name in the colophon is clearly fictitious. Their author was actually the 17th century Jewish polymath, Joseph Solomon Delmedigo (1591-1655), writing under a pseudonym to hide his identity. The third is by the little known R. Issachar Ber Jeitless of Prague (Fig.XVIII).²⁰

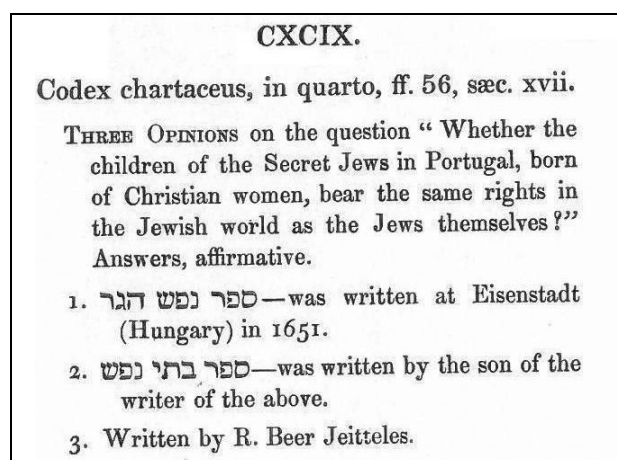


Fig.XVIII: The entry for Codex 199 in Kitchin's 1863 catalogue.

²⁰ This codex has been the subject of three previous articles by this writer:
 Tracing Two Lost Works by Delmedigo, *Christ Church Library Newsletter*, Volume 6, Issue 3;
 From Eisenstadt to Oxford: The Provenance of MS 199 in the Hebrew Collection of Christ Church Library, *Christ Church Library Newsletter*, Volume 9, Issues 1, 2 & 3;
 A Controversy in the Amsterdam Community in 1650: Can a *Ger Tzedek* be Appointed *Parnass*? *Hakirah*, Vol.19 (Summer 2015), p.117-142.

These are not the only items in the collection with a Dutch connection. The two separator folios, 81 and 81*, in Codex 195 and the endpapers in codices 198 and 200 all have early 17th century Amsterdam watermarks. Fell himself also had links to Holland. Following the Restoration of the Monarchy in 1660 and his own return to favour, he took up William Laud's vision of establishing a University Press and had printing presses installed in the cellars of the new Sheldonian Theatre. He also acquired a stock of typographical punches and matrices from the Dutch Republic together with the services of two Dutch typefounders. He also had dealings with manuscript brokers in Holland as part of his ambitious plans for new publications by the University Press and it was from them that he purchased many, if not all, of the Hebrew manuscripts

The recent discovery of a second and earlier entry in the Library's Donors Book that records a gift of fifteen and not thirteen Hebrew manuscripts, presents perhaps the most serious challenge to the simple assumption that the thirteen codices listed in Kitchin's catalogue are the thirteen that Fell gifted to the Library.

The pages in the Donors Book are numbered sequentially and configured by fine red lines into two columns, with margins above, below and on either side (Fig. XIX). Despite the formatting of the pages which indicates that the original intent was to maintain a systematic record, the actual entries are often haphazard.²¹

The entry for the fifteen Hebrew manuscripts is on p.134 of the Donors Book, in the right hand column which is headed A°MDCLX (1660). This was the year of the Restoration of the Monarchy and with it came John Fell's appointment to the position of Dean of Christ Church that his royalist father, Samuel Fell, had held until his imprisonment on the orders of the Parliamentary Visitors in 1647; he was later released but died in 1649, deprived of all his University offices.

This change for the better in the family's political fortunes is reflected in the wording of the entry at the top of the left hand column: *Ornatiss' doctissimus vir Joannes Fell S': Theol: Dr: Colendiss' huius Aedis Decanus, paternarum virtutum simul et Dignitatis meritissim' successor* (An accomplished scholar, John Fell, Doctor of Sacred Theology, revered Dean of this Church; [endowed])

²¹ A number of pages are blank. Furthermore, pages 166 to 173 (4 folios) are missing; there is, however, no indication that they were torn or cut out.

with both his father's strength and dignity, a worthy successor). The entry goes on to record the gift by Fell of a six volume set of the Talmud, made perhaps to mark the occasion.

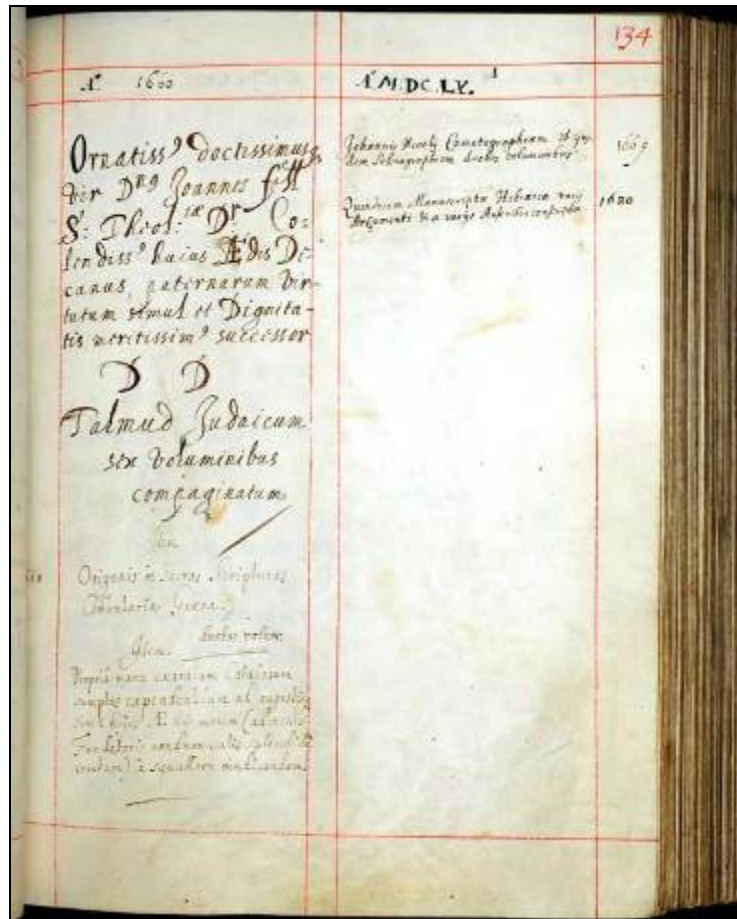


Fig.XIX.: Page 134 of the Library's Donors Book headed 1660. The second entry in the right hand column dated 1680 is that for the gift of fifteen Hebrew manuscripts: *Quindecim Manuscripta Hebraica vary Argumenti & varys Auctoribus con Scripto* (Fifteen Hebrew Manuscripts on various Topics and by various Authors and Scribes).²²

There are three further entries on p. 134, each tagged in an adjacent margin by a date later than 1660: one in the left hand margin dated 1668 and two in the

²² The entry above refers to a gift in 1669 of two books, *Selenographia* and *Cometographia*, by the 17th century Polish astronomer Johannis Hevelius.

right hand margin dated 1669 and 1680, respectively. Such tagged entries appear nowhere else in the Donors Book. The entry for the gift of the fifteen Hebrew manuscripts is the second of the two in the right hand column and reads: *Quindecim Manuscripta Hebraica vary Argumenti & varys Auteribus con Scripto* (Fifteen Hebrew Manuscripts on various Topics and by various Authors and Scribes).

Although the entries make no specific reference to Fell, they almost certainly all relate to gifts made by him. Why else would they be on this page and not on the designated pages of the years in which they were given? Which begs the question of how the fifteen manuscripts in the 1680 entry on p.134 became the thirteen codices in the 1683 entry on p.194?²³

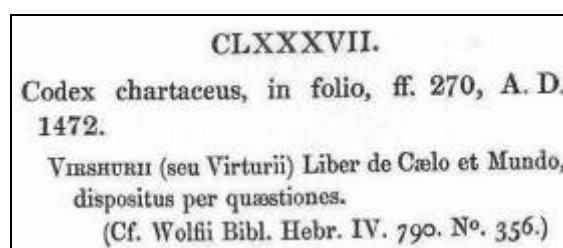
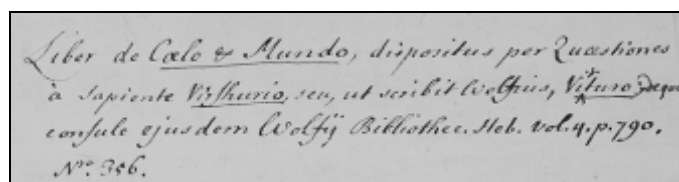
A plausible answer returns us to Codex 190. We have already seen that it comprises three distinct and physically very different manuscripts that were bound into a single codex some time between 1677 and 1698 (Fig.XII). We can now narrow this down to the three year period between 1680 and 1683. The individual manuscripts had probably been counted as three separate items in 1680 when the entry on p.134 was made. Their compilation into a single codex had the effect of reducing the total number of items in the collection by two, i.e., from the fifteen in 1680 on p.134 of the Donors Book to the thirteen in 1683 on p.194.

Thus, we can state with some confidence that the thirteen manuscripts referred to in the entry for Fell's gift on p.194 of the Donors Book (Fig.I) are indeed the thirteen codices of Hebrew manuscripts with dates prior to 1683 listed in Kitchin's catalogue.

²³ The Library has never possessed as many as twenty eight Hebrew manuscripts.

Codex 187: Hebrew Translations by Eli ben Joseph Ḥabillo of the Queries posed by John Versor (Versorius)

The inscription on the note stuck to the inside of the front cover reads: *Liber de Caelo & Mundo, dispositus per Questiones à Sapiente Virshurio, seu, ut scribit Wolfius, Virturo dequo consule ejusdem Wolfii Bibliothec. Heb. vol. 4. p.790, No.396.* (The Book of the Sky and of the World, elucidated by Questions posed by the Wise Virshurio...Wolf's *Bibliothec. Heb.* vol 4, p.790, No.396).



Johann Christoph Wolf's *Bibliothecae Hebraicae* was first printed in Hamburg in 1733, so this inscription must have been entered after that date. The entry in Wolf's compendium cited in the inscription, is for a manuscript that once belonged to Cornelius Schulting (1540-1604), a minister of the Reformed Church in Amsterdam.¹ It contains, however, just one of the texts found in the Christ Church Codex 187, that on the queries posed on Aristotle's *De Generatione et Corruptione* (Fig.187.1).

Paper, in folio (ff. 270): Neubauer OX 2453; IMHM Film No. F 15579.

¹ It is now held by the Staats und Universitätsbibliothek Hamburg, Cod. Hebr 266 (IMHM Film No. F 1065).

Codex 187 contains Hebrew translations by Eli ben Joseph Ḥabillo (עלי בן יוסף) (חבילי) of queries posed by John Versor (Versorius, וירשוריו), the French Dominican Thomist philosopher and Rector of the University of Paris (died. c1485),² on works by Aristotle and Thomas Aquinas.³

Aristotle:

- 1r–39r *De Caelo et Mundo* (On Heaven and Earth).
 39v–67v *De Generatione et Corruptione* (On Generation and Passing Away).
 68r–119v *De Anima* (On the Soul).
 120r–137v Four treatises from the *Parva Naturalia*:
 120r–128r *De Sensu et Sensibilibus* (On Sensation and the Sensible);
 128v–132r *De Memoria et Reminiscentia* (On Memory and Recollection);
 132v–136r *De Somno et Vigilia* (On Sleeping and Waking);
 136v–137v *De Longitudine at Brevitate Vitae* (On Longevity and Shortness of Life).
 151r–270v: *Physics*.

Thomas Aquinas:

- 138r–150v: *De Ente et Essentia* (On Being and Essence).

The translations of the queries on Aristotle's *De Anima* and the four treatises from the *Parva Naturalia* are found uniquely in this codex.

The manuscripts were all written in the town of Monzon, near Zaragoza in Spain, during a period of two years beginning in February 1472. Each has its own colophon and, except for the dates, these all read essentially the same. Typical is that appended to the translation of the queries on Aristotle's *De Anima* (fol.119r): "The copying of this book by Eli ben Yosef Ḥabillo, may his memory

² Also known as Jean Letourner.

³ Zonta, Mauro, *Hebrew Scholasticism in the Fifteenth Century*, Springer, Dordrecht, (2006) p. 172.

live in the World to Come, was completed on Friday the 23rd day of the month of
 Tevet in the year 233 (3 January 1473) here in Monzon..." (Fig.187.2).⁴



Fig.187.1: Folios 39v-40r of Codex 187. The first folios of Habbilo's translation of the queries on Aristotle's *De Generatione et Corruptione*



Fig.187.2: The colophon at the end of the Hebrew translation of the
 Queries on Aristotle's *De Anima* (fol.119r).

⁴ The town of Monzon, kingdom of Aragon:
<http://www.jewishencyclopedia.com/articles/10972-monzon>.

The colophons are all dated 1472 or 1473, some 20 years before the Expulsion of the Jews from Spain. The clearly visible watermarks are all variations of a glove (four fingers closed, thumb open) with a line extending out to a star from the middle finger (Fig.187.3). The examples of such marks in Briquet's catalogue⁵ all date from after 1473, which suggests that the colophons may refer to the date of Habillo's original compositions, of which the texts in these manuscripts are later copies.

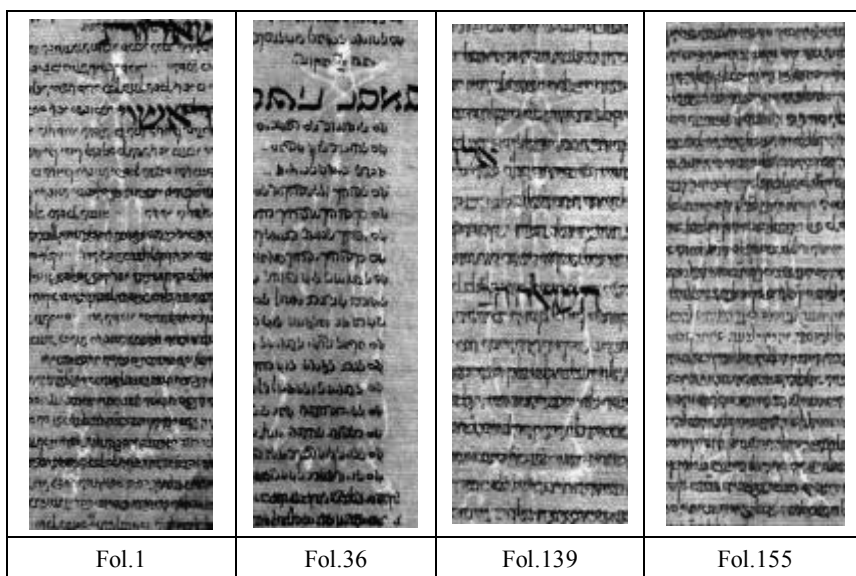


Fig.187.3: Four similar but not identical watermarks in Ms. 187.

Books within Books

Hebrew manuscripts are important and often unique witnesses of Jewish presence and intellectual activities in medieval Europe. Only a small percentage of the books and writings produced in the past have, however, been preserved.

The corpus of fragments reused in bindings has considerably enriched our knowledge of medieval Hebrew manuscripts. Called “Books within Books” or the “European Genizah”, by analogy to the treasure trove of Hebrew fragments recovered from the Cairo Genizah, they offer a new means of reconstructing the history of the Hebrew book and the Jewish communities in Medieval Europe.

⁵ Briquet online: http://www.ksbm.oew.ac.at/_scripts/php/BR.php. Motifs: Main - aux quatre doigts serrés, le pouce seul écarté, 11136, 11137; Main - aux quatre doigts serrés, le pouce seul écarté | manchette sommée d'une fleur ou d'une étoile, 11159.

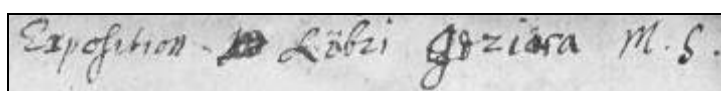
A number of such fragments can be seen between the leaves of Codex 187 (Fig.187.4).



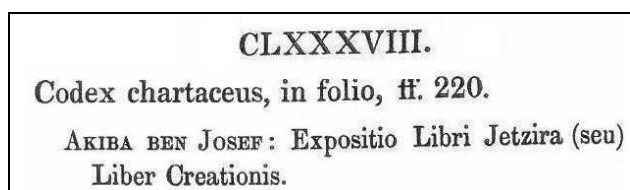
Fig.187.4: Books within Books: Fragments of earlier Hebrew manuscripts bound between the leaves of Codex 187.

Codex 188: A Mélange of Kabbalistic and Maimonidean Texts

A small inscription in the top left hand corner of the inside of the back cover reads:
Exposition Libri Jetzira M.S.



The entry in Kitchin's catalogue is only a little more informative: *Akiba ben Josef: Exposito Libri Jetzira (seu) Liber Creatonis.*



The work referred to in the inscription is an exposition of *Sefer Yetzirah* (ספר יצירה), the earliest known book of Jewish esotericism. However, the codex actually comprises much more. It is in fact a mélange of Kabbalistic and Maimonidean manuscripts in more than ten different Sephardi scripts: square, cursive and semi-cursive. Furthermore, every page is daubed with crudely drawn orange-coloured horizontal, angled or vertical lines; arcane scrawls, sketches and doodles; and/or phonetically spelled Hebrew writing, all possibly the work of a 17th century Christian Kabbalist.

Traces of an earlier Hebrew foliation can be seen on some folios and catch-words on others. There are, however, a number of problems with the integrity and sequencing of the folios. Two are missing: fol.17 (according to the pencilled foliation) and that which belonged between fols.167 and 168. There are also some errors in their order: what should have been fol.23, turns up as fol.77; and, judging by its content, fol.206 should actually follow fol.216. Nevertheless, considering the diversity of the codex's contents and scripts, and the many interposed folios, its collation is relatively free of error.

Paper (ff. 224), in folio: Neubauer OX 2455; IMHM Film No. F 15580.

The binding – embossed leather on board with two engraved metal clasps – is in the style of late 16th and early 17th century German sacred texts (Fig.188.1).



Fig.188.1: The panelled leather boards and clasps of Codex 188, typical of German bindings of the late 16th and early 17th centuries.

The watermark in the front endpaper is a Basilisk and closely matches Briquet 1392 and Tschudin 311, both dated 1602 (Fig.188.2).

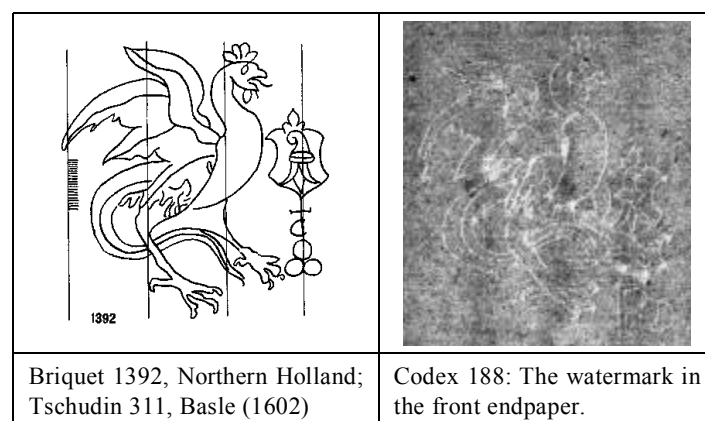


Fig.188.2: The watermark in the front endpaper of Codex 188. The fly leaf was most probably added when the codex was bound; the Basilisk watermark confirms both the place, northern Europe, and the date, early 17th century, this was done.

For our purposes, the contents of the codex will be examined under four headings:

- I. The Kabbalistic Texts.
- II. The Maimonidean Texts.
- III. The Arcane Orange-coloured Markings, Depictions and Writing.
- IV. The Christian Kabbalah Entries and Annotations.

Part I. The Kabbalistic Texts

1. *Sefer Yetzirah* (ספר יצירה): "Book of Formation" or "Book of Creation" (a complete copy on fols.3r–7r and an extract on fols.136r–137r).¹

Tradition attributes the composition of *Sefer Yetzirah* to the biblical forefather Abraham and its later transmission or redaction to the Talmudic Sage R. Akiba.² There are several different extant versions of the work; no other Jewish text exists in so many versions nor is there any other like it. The text here is an example of what is known as the Short Version.³ It is divided into six chapters by analogy to the six Orders of the *Mishna* and these are further sub-divided into *Mishnayot* (משניות) or what here are also termed *Masechtot* (מסכתות) (Figs.188.3 & 188.4).⁴

The work opens with a declaration that the Universe was created by the God of Israel through thirty two “wondrous paths of wisdom.”⁵ Specifically, ten numbers or Sefirot (the origin for the Sefirot of later Kabbalah) and the twenty two letters of the Hebrew alphabet: three "Mother" Letters: Aleph, Mem, Shin (א, מ, ש); seven "Doubles": Bet, Gimel, Dalet, Kaph, Peh, Resh, Tav (ב, ג, ד, כ, פ, ר, ת); and twelve "Simples" or "Elementals": He, Waw, Zayin, Heth, Teth, Yod, Lamed, Nun, Samekh, Ayin, Tsade, Qoph (ה, ו, ז, ח, ט, י, ל, נ, ס, ע, צ, ק).

¹ For a comprehensive English introduction to this work see: *Sefer Yetzirah – The Book of Creation* by Aryeh Kaplan, Weiser Books, Boston MA. USA (1997).

For a concise introduction see: *An Introduction to the Sefer Yetzirah* by Christopher P. Benton. www.maqom.com/journal/paper14.pdf

² An entry on fol.21v gives the date of the redaction as “3874 A.M. (114 CE) 46 years after the destruction of the Second Temple.”

³ The Hebrew text of the first printed edition of *Sefer Yetzirah*, Mantua 1562, was based on the Short Version (~1300 words).

⁴ The use of the term *Masechta* (מסכתא), which is usually translated as Tractate, as a synonym of the term *Mishna* (משנה) which is usually used to denote the basic unit into which Talmudic texts are sub-divided, is anomalous and can be confusing.

⁵ These are listed in the opening to the redacted extract of *Sefer Yetzirah* on fols.136r–137r and also on fol.53v.



Fig.188.3: Fol.3r. The title reads: “*Sefer Yetzirah* (Book of Formation) of our father Abraham, may he rest in peace, attributed to R. Akivah.”

The notion of the thirty two “wondrous paths of wisdom” is taken from the account of the Creation in *Genesis* 1, in which the word אלהים (God) occurs a total of thirty two times.⁶ Ten in the expression “God said – ויאמר אלהים;” these are paralleled by the ten Sefirot. The remaining twenty two instances parallel the twenty two letters of the Hebrew alphabet. Of these, the three occasions on

⁶ The number 32 written in Hebrew letters makes the word לב, meaning ‘heart’, the ruler of the spiritual.

which the text reads “God made – ויעש אלהים” parallel the three “Mother Letters;” the seven repetitions of “God saw – וירא אלהים” parallel the seven “Doubles,” which leaves twelve “Simples” or “Elementals.”⁷



Fig.188.4: Fol.7r. The final page of *Sefer Yetzirah*. Note the ubiquitous orange-coloured daubings.

As its name implies, *Sefer Yetzirah* is concerned with the mystery of Formation or Creation. In Jewish thought, there are two types of Creation: יש מעין – ‘something from nothing’ (*creatio ex nihilo*), and יש מיש – ‘something

⁷ Kaplan, *Op. cit.* p.7.

from something.’ The former is principally God’s prerogative but He has granted man the ability to create ‘something from something’: not just physical objects but abstract endeavours too. *Sefer Yetzirah* is concerned primarily with creation by means of manipulation of the letters of the Hebrew alphabet.

The creative powers latent in *Sefer Yetzirah* are hinted at in the following Talmudic anecdote:

R Ḥanina and R. Oshaia studied *Sefer Yetzirah* every Sabbath eve and, by this means, a calf third grown [to full size] was created for them and they ate it.⁸

With the passing of the Talmudic era, a cloak of silence was cast over occult activities. Only in the 12th and 13th centuries did Jewish mystical teachings once again become a subject of mainstream study. Emerging from the Gerona circle of Kabbalah, their dissemination throughout the Jewish world was advanced by Nahmanides’ devotion to Kabbalah and the appearance of *Sefer HaZohar* in 1290, which would replace *Sefer HaBahir* as the authoritative text of Kabbalah.

2. A assortment of texts relating to the 16th century exposition of *Sefer Yetzirah* written by Shlomo ben Shimon Turiel, a contemporary in Safed of R. Josef Caro (1488-1575), the author of the *Shulchan Aruch*, and of R. Moses Cordovero (1522-1570), one of the most prolific exponents of the teachings of the *Zohar* and pre-Lurianic Kabbalah (fols.9r–203v).⁹

Turiel produced this work between 1557 and 1571, most probably in the city of Safed, Northern Israel.¹⁰ Born to a family from the city of Teruel, Aragon, he was a child of the first post-Expulsion generation and only reached the Promised Land (ארץ הצבי) at the age of 52 after years of wandering and privation:

⁸ *TB Sanhedrin* 65b.

⁹ This commentary was the subject of a master’s thesis by Ruth Ben Natan: תורות קבליות ב"אשת נעורים" לר' שלמה לבית טוריאל (*Kabbalistic Teachings in "A Wife of Youth" by R. Shlomo Turiel*), Mount Scopus Library, Hebrew University of Jerusalem, Call No. BM 525 A7 T6732, System No. 365717. Its main chapter headings are (i) The Doctrine of the Sefirot, (ii) The Influence of Magic on the Heavenly Beings and (iii) The End of Days.

¹⁰ The shorter name שלמה טוריאל appears as an acrostic in the opening lines of fol.9r (Fig.188.5); the full patronymic שלמה בן שמעון בן אברהם בן חיים לבית טוריאל (Shlomo ben Shimon ben Abraham ben Chaim Turiel) is found on fol.9v. Teruel in Aragon, Spain, had a large Jewish community until the Expulsion in 1492.

And in the year 5317 (1557) when I was 52 years of age ...and I was in the Holy Land, those whom I dearly love gathered together with my friends...and asked me to pass on to them some of the insights into the Wisdom of Truth (חכמת האמת)¹¹ that I had received from my saintly masters. And they beseeched me to write a book for them from which they might know and understand a little of the Wisdom of Truth.

And even though I knew the inadequacy of my knowledge and understanding, I had to accede to their wishes. And so, turning to God, in whom I have always put my trust to help me, I girded my loins and to satisfy the wishes of my friends, I wrote two books: the first called “The Book of the Acquisition of Knowledge” (ספר קנין דעת) and the second, this one, which is an exposition of our forefather Abraham’s *Sefer Yetzirah*, attributed to R. Akivah who composed six Orders of Mishna of Kabbalah (שהוא חיבור שיתא סדרי משנה של קבלה) which is the Wisdom of Truth called “The Wife of Youth” (אשת נעורים).¹²

Turiel adds that the Masters of Kabbalah (בעלי הקבלה) took the name “The Wife of Youth” (*Eshet Neurim*) from the following biblical verses:

“Let your fountain be blessed and rejoice with the wife of your youth; a loving hind and graceful doe; may her breasts allure you at all times and may you be ever infatuated in her love” (*Proverbs* 5:18-19).

The Masters’ purpose was to evoke the loving and joyful relationship, as well as the intimacy, that should abound between a devotee and the Wisdom of the Truth (חכמת האמת) and of the Occult (חכמת הסוד) veiled within the Torah:

“For after the soul departs from the body, it has no positive and negative *Mitzvot*, nor narratives, but just the Occult (הסוד) and this is what will serve it in the Hereafter.”¹³

Turiel believed that the correct and fitting way for a practising Jew to shape his way of life is through Kabbalah. There was, however, a shortage of suitable books to guide beginners: “For by our many iniquities, most were lost in the multiplicity of forced conversions and only a few remain” (fol.116r). The purpose of this commentary on *Sefer Yetzirah* was to make the secrets of Kabbalah more accessible. Turiel does not, however, make any claim to originality. He writes: “And don’t imagine that it is from pride or a haughty heart

¹¹ The term by which Turiel refers to esoteric knowledge.

¹² Folios 13r, 20r, 22r & 217r.

¹³ Fol.13r in the margin (Fig.188.9) and fol.15r. The implication is that the Torah is as important as a source of esoteric knowledge as it is of the *Mitzvot*.

that I set out to interpret this profound book...For I have not added or invented even one word...they are all things received from the mouths of my Masters” (fol.97v).

The National Library of Israel, Jerusalem, possesses a well preserved and properly ordered manuscript copy of Turiel’s exposition on *Sefer Yetzirah* written in a uniform fine semi-cursive Sephardi script.¹⁴ By contrast, at least five different scripts can be identified in the various folios of the Christ Church codex as well as several instances of duplicate texts. The overall impression is that it comprises some of the original working papers from which the final text of the exposition was distilled. These include:

- i. Two Preambles to Turiel’s exposition, both in a neat semi-cursive Sephardi script (Fig.188.5): Preamble I, fols.9r-14r; Preamble II (incomplete), fols.22r-22v & 77r-79r.
- ii. Two Introductions to *Sefer Yetzirah*, including chapter headings, each in a different semi-cursive Sephardi script: fols.15r-16r and 18r-19v, respectively.
- iii. Three draft versions of Turiel’s exposition on *Sefer Yetzirah*, each comprising texts, diagrams and arrays of Kabbalistic alphanumeric permutations and combinations:¹⁵

Version I (semi-cursive Sephardi script): fols.149r-192v (folios א to מ, according to the discernible older Hebrew foliation);

Version II (semi-cursive Sephardi script): fols.48r-70v, 74r-76r & 82r-104r. There is a partial colophon (date only) on the last page of this draft (fol.47v) which reads (in translation): “Finished and completed on the 3rd of Adar I in the year 5331 (Monday, February 8, 1571).”

Version III (cursive Sephardi script – Fig.188.6): fols.24r-47v, 106r -117v, 118r-123v & 130r-134v (folios כה to מח, יג to כד, ו to יב & א to ה, respectively, according to the discernible older Hebrew foliation).

¹⁴ Ms. Heb 4°537, fols.53r–132v. The manuscript also contains three homilies composed by Turiel: two Sabbath homilies, fols .2r–9r and 122r–124v, and a third on the subject of Redemption, fols.127r–132v.

¹⁵ Many of the arrays are unfilled or incomplete.

- iv. Assorted Kabbalistic diagrams and letter arrays in a semi-cursive Sephardi script: fols.137v-146v (Figs.188.7 & 188.8).

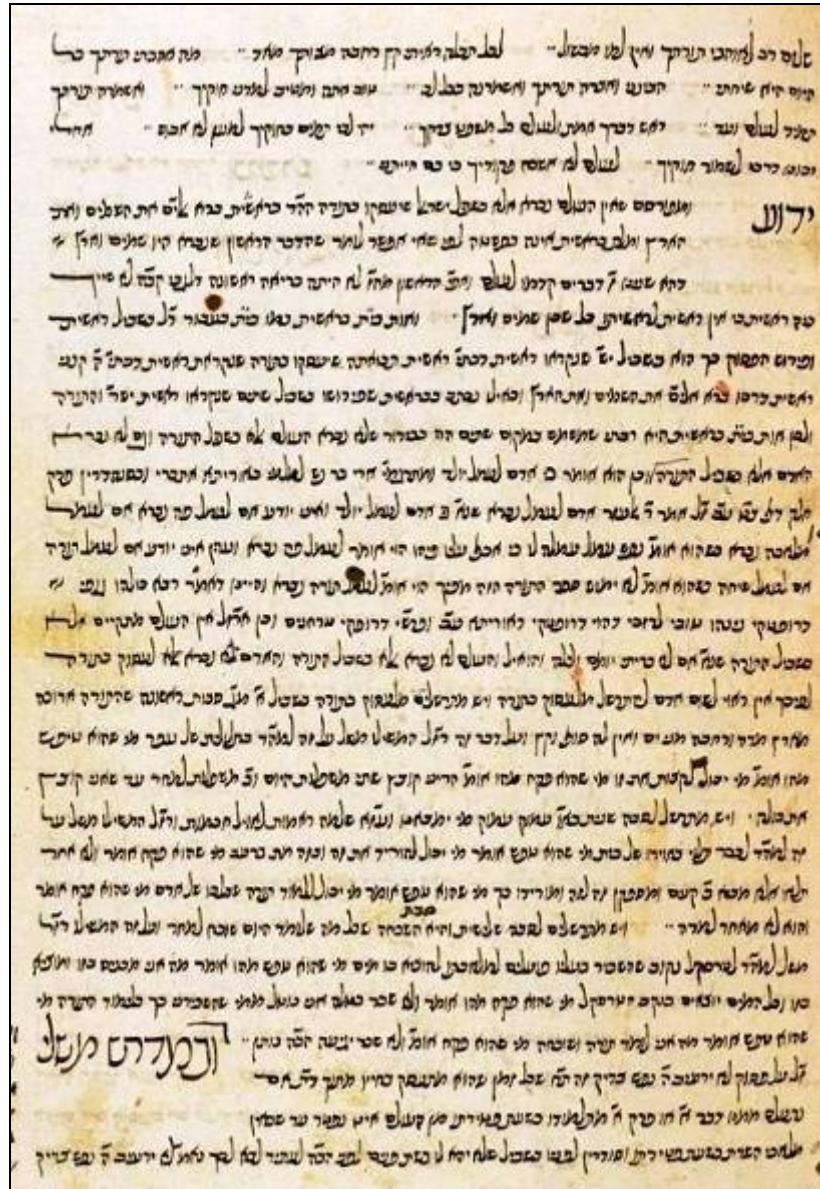


Fig.188.5: Fol.9r. The first page of Preamble I: an example of the fine semi-cursive Sephardi script. The initial letters of the phrases in the first four lines form an acrostic of Turiel's Hebrew name, שלמה טוריאל.



Fig.188.6: Fol.37r of Codex 188. An example of the cursive Sephardi script of Version III. Note the Hebrew foliation in the top left hand corner: לח = 38.

The sense that these are early drafts of the exposition is borne out by the annotations, in a variety of different scripts, inscribed between the lines (Fig.188.9)¹⁶ and the cross-referenced corrections (Figs.188.12 & 188.13). A number of Turiel's own rough notes, some in the first person (Fig.188.10), as well as several anomalous crudely written folios, are also interspersed between the texts (Fig.188.11).

¹⁶ For other examples of the corrections and annotations see fols.150r to 151r in Version I, fol.49r in Version II and fol.117v in Version III.

This image shows a Kabbalistic array of 231 pairs of letters, arranged in a grid with diagonal lines. The letters are in Hebrew, and the arrangement is a complex permutation of the alphabet, likely representing a specific Kabbalistic concept or a method for generating permutations.

Fig.188.7: Fol.140r. Paired Kabbalistic arrays of 231 pairs of letters: see Fig.188.15 too.

This image shows a table of 5040 permutations of the seven letters of the word "שבת" (Shabbat). The table is arranged in a grid with 10 columns and 504 rows. The letters are in Hebrew, and the arrangement is a complex permutation of the word, likely representing a specific Kabbalistic concept or a method for generating permutations.

Fig.188.8: Fol.143v. The footnote reads: “שבע אותות בונות ה' אלפים ומ' בתים וזה צורתן (Seven letters build five thousand and forty houses and this is their form).” In modern notation, the possible permutations of seven letters, $7! = 5040$.

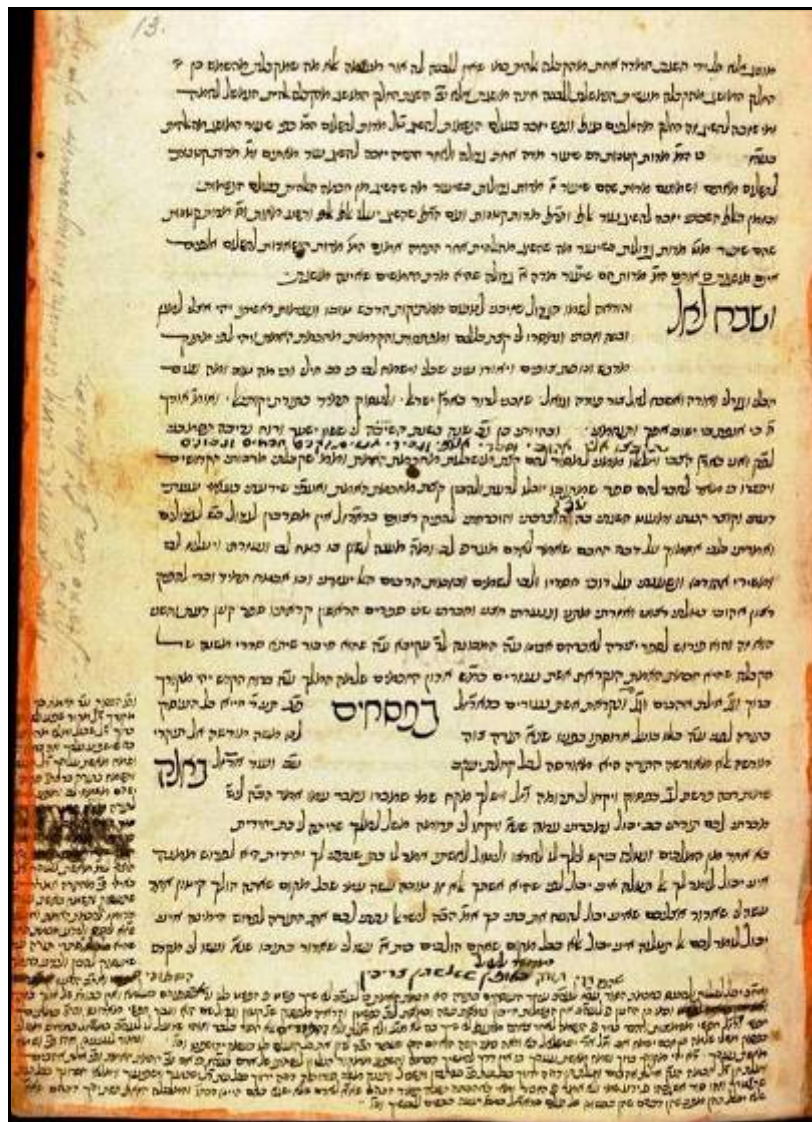


Fig.188.9: Fol.13r. Note the fine script of the text and the correction, in a cruder script, above the fourteenth line. The correction is in Turle's hand and adds the words omitted when the text was transcribed from the original note on fol.20r (see Fig.188.11).

The long note in the left and lower margins is an extract from the Introduction to *Sefer Yetzirah* on fol.15r.

Note too the faint Latin inscription in the left margin; attempts to decipher it have so far been unsuccessful.

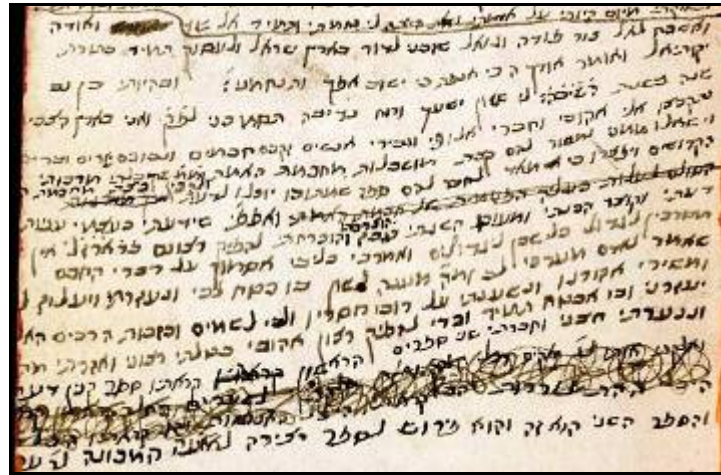


Fig.188.10: Fol.20r. An example of Turiel's rough notes. The text is that on fol.13r where Turiel describes how his friends had beseeched him to write a book explaining the Wisdom of Truth etc (p.28 above). It was transcribed onto fol.13r from this rough note but the copyist missed out some lines which had to be added later: see Fig.188.9.



Fol.16 recto



Fol.16 verso

Fig.188.11: Fol.16. An anomalous interspersed folio. The script on the verso page is landscape orientated and no other folio in the manuscript has the same watermark (see Fig.188.22).

The annotations on fols.185v and 149r in Version 1, respectively, are cross-references. The former reads (in translation): "This [the following paragraph] is

missing above from the end of the commentary on *Mishna* 3 of Chapter 1, folio *Aleph*" (Fig.188.12). The designation "folio *Aleph*" refers to the older Hebrew foliation of the page on which the commentary on *Mishna* 3 appears.

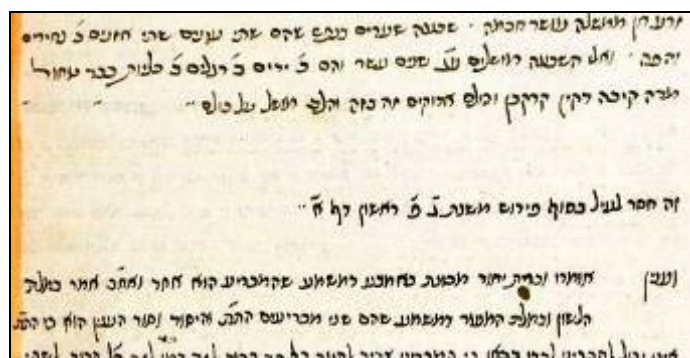


Fig.188.12: Fol.185v with the cross-reference - זה חסר לעיל בסוף פירוש - משנה ג' פי ראשון דף א' (This is missing above at the end of the commentary on *Mishna* 3 of Chapter 1, folio *Aleph*) - inscribed in the space between the paragraphs.

The corresponding reference at the end of the commentary on *Mishna* 3 on fol.149r reads: "כאן חסר סוף פירוש משנה זו והיא כתובה בסוף הספר" (The end of the commentary on this *Mishna* is missing from here and it is written at the end of the book)" (Fig.188.13).

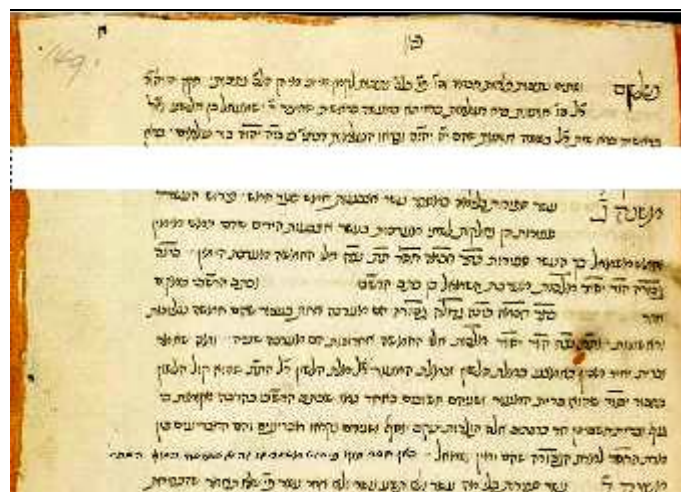


Fig.188.13: Fol.149r. The first three lines and the section on *Mishna* 3 (משנה ג'). Note the number א = 1 in the older Hebrew foliation. The matching reference was written in at the end of the section's last line.

The duplication of texts across the different versions is illustrated by the example in Fig.188.14 below. Other such duplicates are:

fol.48r–53v (Vers. III) & fol.186r–192v (Vers. I);
 fol.56r–57r (Vers II) & fol.156r–157r (Vers I);
 fol.88r–89v (Vers II) & fol.170r–171v (Vers I);
 fol.91v–104r (Vers II) & fol.173v–185v (Vers I);
 fol.130r–134v (Vers III) & fol.149r–153r (Vers I).

fol.158r
 (Version I)



fol.58r
 (Version II)



Fig.188.14: The duplicate texts on fol.158r (Version I) and fol.58r (Version II).

A full elucidation of Turiel's treatise is far beyond the remit of this work, but there is one feature that cannot go unmentioned: the profusion of diagrams and arrays of alphanumeric combinations and permutations that fill so many of its folios. The Mystical Potencies which, according to the Kabbalah of *Sefer Yetzirah*, are the tools of Creation (Figs.188.15 to 188.18).

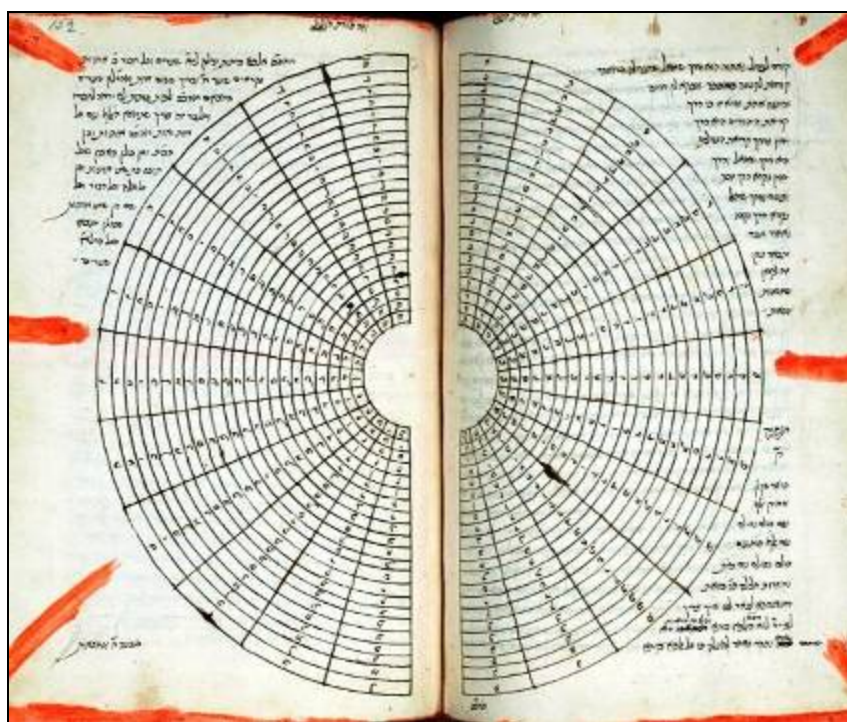


Fig.188.15: Folios 151v-152r. The fourth *Mishna* in Chapter 2 of *Sefer Yetzirah* reads: “Twenty two foundation letters: He placed them in a circle (גלגל - *Galgal*) like a wall with 231 Gates.”

In general, the number of straight lines that can connect pairs of points on a circle is given by the formula $L = n(n-1)/2$, where L is the number of lines and n the number of points. Thus, the number of lines that can connect pairs of the 22 letters arranged in a circle is $L = 22(22-1)/2 = 231$; these are the 231 Gates.

According to the early Kabbalists, this number is hinted at by the gematria of the last three letters of the word ישראל (Israel): ראל = 231.

Fig.188.16: Folios 166v & 167r. The array on fol.166v has the last 120 of the 720 possible permutations of the six Hebrew letters that form the word בראשית (In the beginning). The previous 600 are listed on fols.164r-166.

The copyist of Version I missed out the number תרעב = 672 at the bottom of the third from the right of the narrower columns of numbers, and erroneously started the fourth column with it. As a result, he was one number short when he came to the end of the last column and entered תשיט. The mistake was later realized and the letter ט = 20 was written over the יט to make תשך = 720, but the preceding 90 incorrect entries were not amended. There is a similar mistake on the duplicate of this page in Version III (fol. 127v).

The sentence in the lower margin of fol.166v reads (in translation): “Seven letters make five thousand and forty permutations.” It relates to the arrays of permutations of the seven “Doubles” letters (ב, ג, ד, כ, פ, ר, ט) that start on fol.167r but of which only the first two columns are filled.

The arrays in Arabic numerals that fill the remaining columns on fol.167r continue on fol.167v; their import has yet to be resolved but they may well be part of the Christian Kabbalah Entries and Annotations discussed in Part IV below.



Fig.188.17: Fol 128r. Some of the Mystical Numerical Potencies in Chapter 5 of *Sefer Yetzirah* (fol.5b):

(i) The number of possible permutations of seven, eight, nine, ten, eleven, twelve and thirteen letters (n factorial, $n!$): 5,040, 40,320, ... 6,227,020,800: "And from here go on and calculate what the mouth cannot utter and the ear cannot hear."

(ii) Some of the "sevens" listed in Chapter 5: the seven stars in the sky (Saturn, Jupiter, Mars, Sun, Venus, Mercury, Moon); seven days of Creation; seven openings to the soul (two eyes, two ears, the mouth and two nostrils); seven firmaments; seven earths; seven Sabbatical years.



Fig.188.18: Fol.8v. The six lines of text at the top of the page are paraphrased extracts from the eighth *Mishna* of Chapter 1 of *Sefer Yetzirah* which describes the creation of “the ten categories of existence out of nothing.” The inscribed circle below denotes the creation of the six categories of spatial direction by means of permutations of the three Mother Letters and three of the four letters in the Tetragrammaton.¹⁷

Above	משא	יה"ו	Below	שאם	הי"ו
East	אמש	וי"ה	West	שמא	וה"י
South	מאש	יור"ה	North	אשמ	הר"י

¹⁷ Isidor Kalisch, *Sefer Yezirah: English Translation, Preface, Explanatory Notes and Glossary*, New York, 1877. Available at: <http://hebrewbooks.org/38753>

3. A compilation of Biblical, Midrashic, Zoharic and Rabbinical citations relating to Abraham, the forefather of the Hebrews and, by tradition, the author of *Sefer Yetzirah* (fols.198r to 203v).

Abraham is by tradition the father of monotheism. The *Book of Genesis* records the many encounters and verbal exchanges he had with God, a legacy that he bequeathed to his children. They in turn, not only cherished this heritage but also added to and embellished it, thereby enhancing their forefather's repute. The result is the abundance of legends and stories about "our father Abraham" found in the Hebrew classics, of which his supposed authorship of *Sefer Yetzirah* is just one.



Fig.188.19: Folio 199r. Note the Hebrew foliation in the top left-hand corner: סח = 68. The text is evidently a fragment from a larger work.

Written in a semi-cursive Sephardi script reminiscent of those in Versions I and II, though somewhat more relaxed, these six folios are evidently a fragment from a larger work (Fig.188.19). The text begins on fol.198r, in mid-sentence,

and there is a Hebrew foliation that runs from סז (67) to עב (72). And as the extract begins, so it ends in mid-sentence on fol.203v, and with a catchword in the bottom margin that leads nowhere. There is no colophon.

4. A description of the form of the Kabbalistic Tree (fols.218r–222v).

The Kabbalistic Tree is a topological representation of the thirty two “wondrous paths” – the ten Sefirot and the twenty two letters of the Hebrew alphabet – by which the God of Israel created the world. The Sefirot are represented by ten circles arranged in three columns and the letters of the alphabet by twenty two connecting channels (צנורות lit. tubes) between them. The various forms of the Tree commonly shown diagrammatically all possess these basic components.



Fig.188.20: Fol.220v. The text delineates the number and orientation of the “channels” that emanate from certain of the Sefirot and that link them to others.

In the first paragraph of the text, the writer refers to “what we wrote above” which suggests that it too may have been composed by Turiel. His name, however, does not appear anywhere in the text nor is any date given for its composition (Fig.188.20).

5. The watermarks in the Kabbalistic Texts.

The manuscript of Turiel's exposition in the Israel National Library and all but two of the folios that comprise the groups of Kabbalistic Texts in Codex 188, exhibit one or other of the following mid-sixteenth century (c.1565) Italian watermarks: Briquet 496, 552, 636, 649 or their countermarks (Fig.188.21). The two exceptions are the interspersed anomalous fol.16 and the blank fol.194 (Fig.188.22).

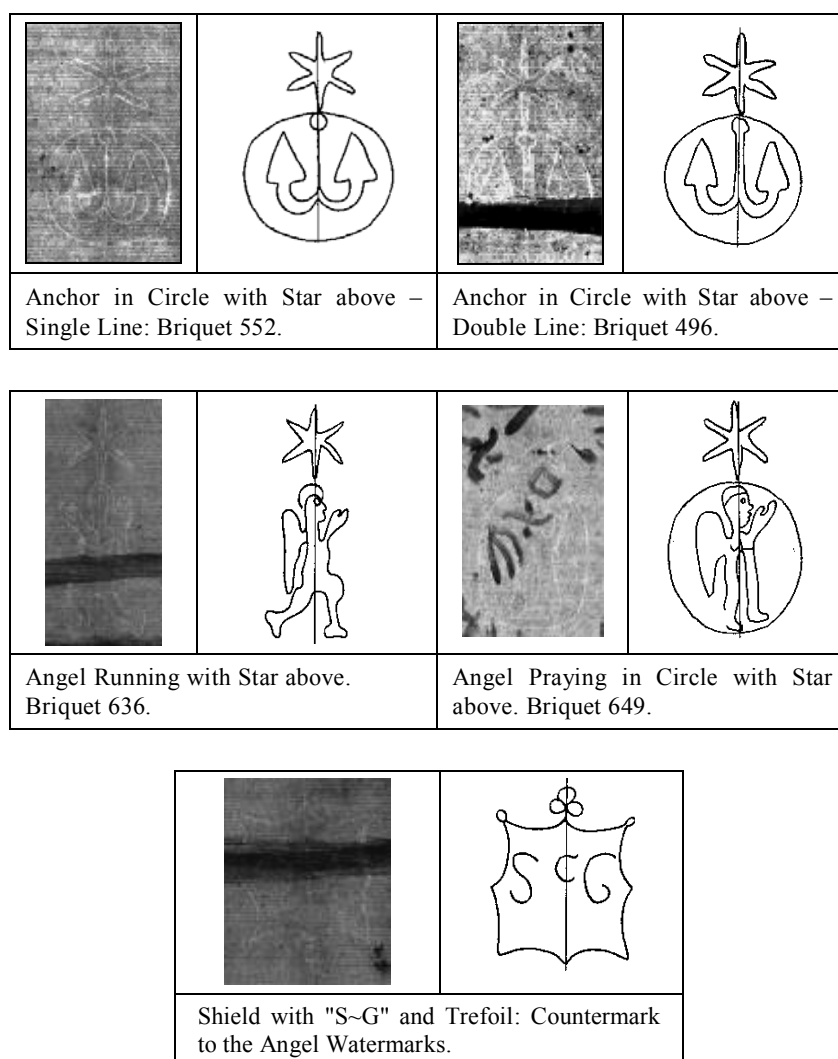


Fig.188.21: The Italian watermarks in the Kabbalistic texts.

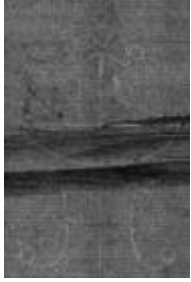
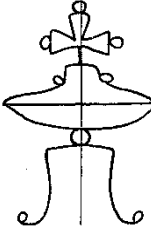


			
Folio 194: Cardinal's Hat; Maltese Cross above. Briquet 3417; Venzone 1540	Folio 16: Hand; Fingers open & flower above. Briquet 10790; Rome 1567/8		

Fig.188.22. The 16th century Italian watermarks in the blank separator fol.194 and the anomalous fol.16 (Fig.188.10 above).

Part II The Maimonidean Texts

The five Maimonidean texts in the codex can be grouped under two headings:

Letters and Correspondence attributed to Maimonides;

An Abstract and an Index of Halakhic works by Maimonides.

The Abstract, Index and all but one of the Letters are in the same stylised Sephardi script. There is no colophon as such but their copyist, Judah ben Shushan, is named in line 12 of fol.205r (Fig.188.26). The exception is an extract from the Testament Maimonides purportedly addressed to his son, Abraham, which is in a less practised Sephardi script; its copyist is not named. The manuscripts (folios 205 to 216) all exhibit the same early 16th century watermark (Fig.188.23).

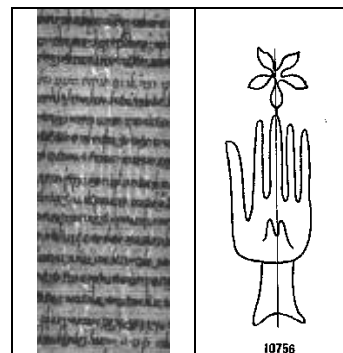


Fig.188.23: The watermark in the Maimonidean manuscripts. (fols.205 to 216): Hand – Fingers open – 5 Petal Flower above: letter M on back/palm of hand. Briquet 10756 (Perpignan 1526).

The Letters and Correspondence attributed to Maimonides.

1. The queries sent to Maimonides by the Wise Men of Lunel (fols.212r-215v) and his replies to them.

The opening words of the first line, אלה הן כ"ה שאלות (These are twenty five questions...) are problematic (Fig.188.24). Just twenty four and not twenty five queries and replies are actually delineated in this manuscript, the same twenty four as are found in all the other known versions of this correspondence.¹⁸



Fig.188.24: Fol.212r. The first line reads: אלה הן כ"ה שאלות (These are twenty five questions asked of Maimonides by the Wise Men of Lunel and his replies to them). The line above and to the left in smaller writing reads: ובראשם הרב הגדול ה"ר יונתן הכהן זצ"ל (And at their head the Grand Rabbi, R. Jonathan HaCohen of Blessed Righteous Memory).

¹⁸ For a detailed review of this correspondence, whose authenticity has been questioned by the Maimonides scholar R. Joseph Kapach (1917–2000), see (in Hebrew): אליהו נחום ולדמן, תשובות הרמב"ם לחכמי לונל, קובץ חצי גבורים–פליטת סופרים, חוברת ח, אלול תשע"ה

2. A letter sent by Maimonides to R. Pinchas of Alexandria in reply to his criticisms and queries (fols.216r-216v & fols.206r-206v).

The text starts mid-sentence in the top line of fol.216r; the preceding part of the letter is missing. It continues on fol.216v and from there to fol.206r.¹⁹ The letter ends one third of the way down fol.206v (Fig.188.25).



Fig.188.25: Fol.206v: The conclusion of Maimonides' letter R. Pinchas of Alexandria in reply to the questions he had put to him, followed by the first half of his purported last testament to his son Abraham.

The text is virtually identical to that in the volume of Maimonides' letters published in Venice in 1545 (אגרות הרמב"ם – אגרות להמאור הגדול),²⁰ where it

¹⁹ Fol.217 actually belongs to the Kabbalistic and not the Maimonidean texts. It comprises rough drafts, in his own hand, of Turiel's exposition on *Sefer Yetzirah*.

appears under the heading: “אגרת ששלח הרב הגדול מורה צדק רבי משה בן” (A letter that the great Rabbi, teacher of righteousness, R. Moshe ben Maimon of blessed memory, sent to the Dayan of Alexandria, R. Pinchas ben Meshullam of righteous blessed memory).

The letter ends with Maimonides’ reply to a question that R. Pinchas had put to him, one that does not appear amongst the queries put by the Wise Men of Lunel as delineated in the manuscript. Its inclusion here may, however, explain the discrepancy between the actual number of questions asked by the Wise Men of Lunel, “twenty four,” and “the twenty five” cited in the opening line of that manuscript. Both manuscripts were written by the copyist Judah ben Shushan, who may, unthinkingly, have included the query from R. Pinchas in the tally.

3. The first half of Maimonides’ purported Testament to his son: ספר הצווי להרמב"ם ז"ל (fol.206v).

There are two different versions of what purports to be Maimonides’ Testament to his son Abraham, neither of which has any real claim to authenticity.²¹ The text here most probably comes from a literary fiction composed by an admirer of Maimonides at the time of the controversy over his writings.²² It was inscribed on fol.206v in the space that remained unused below the letter to R. Pinchas of Alexandria but in a different Sephardi script (Fig.188.24). Its writing is basically the same as that of the copy of the Testament in the volume of Maimonides’ letters published in Venice in 1545.

The Abstract and Index of Halakhic Works by Maimonides.

4. The 613 *Mitzvot* (Divine ordinances incumbent on Jews) enumerated by Maimonides, listed by the order in which they appear in the cycle of weekly *Torah* readings (fols.205r–205v & 207r–210v).

²⁰ From line 20 on p.29a to line 7 on p.36b in the Venice 1545 version available at: <http://hebrewbooks.org/11502>

²¹ Israel Abrahams, *Hebrew Ethical Wills*, Jewish Publication Society, Philadelphia 2006, p100ff.

²² איגרות הרמב"ם, הוצאת שילת, ירושלים תשנ"ה, עמ' תרצח: יצחק שילת (Isaac Shilat): For an English translation of the other very different version see: Leon D. Stitskin, The Last Will and Testament of Maimonides, *Tradition*, Vol. 10, No. 2 (Winter 1968): <http://traditionarchive.org/news/article.cfm?id=105177>.

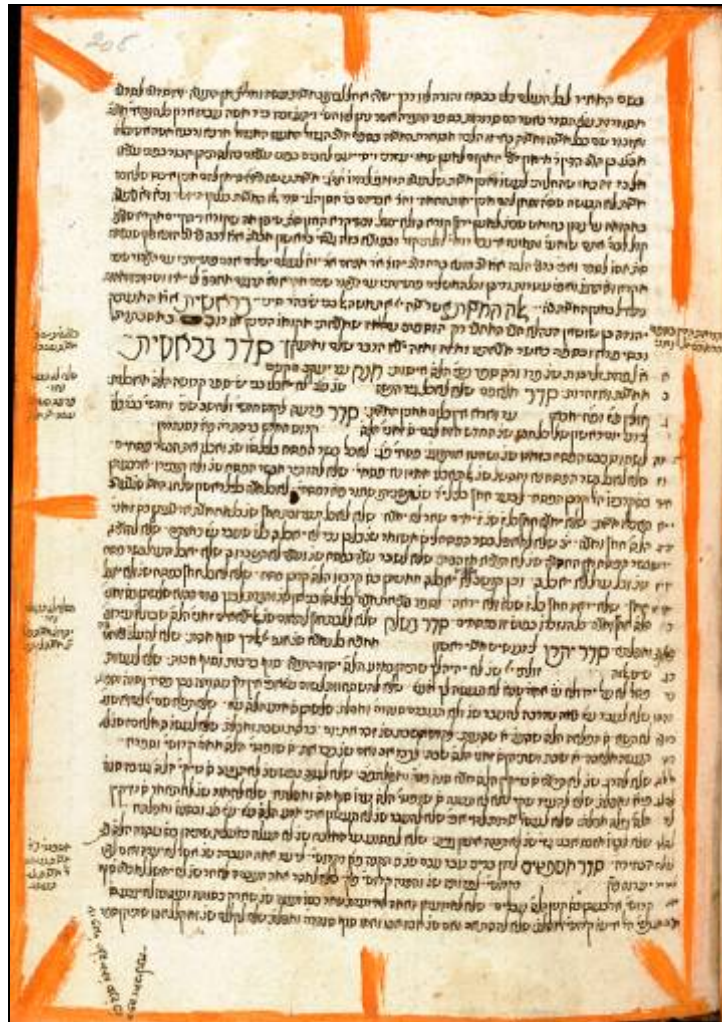


Fig.188.26: Fol.205r. The 613 *Mitzvot* enumerated by Maimonides, in listed by reference to the weekly Torah readings in which they appear. The originator of this novel presentation, Rabbi Abraham ibn Hassan Halevi, is named on line six, and the copyist, Judah ben Shushan, on line twelve at the end of his Introduction.

This novel presentation of the 613 *Mitzvot* is attributed to the early 16th century Turkish Rabbi, R. Abraham ibn Hassan Halevi; it is not found in any of Maimonides' own writings. It was, however, incorporated together with a number of other extraneous works, in an appendix to the first edition of the Hebrew Bible (מקראות גדולות) published by Daniel Bomberg (Venice, 1517). A publisher's endnote reads (in free translation):

“We found them [the items in the appendix] in a book, so garbled, that neither we nor any of the rabbis in this community could make out what it said. Notwithstanding, we have tried our very best to make sense of them but are not sure that what we have found is without error... And had their inclusion in this book not been so apt and proper, as well as advantageous to its readers, we would not have put them here...”

5. An alphabetic Hebrew index to Maimonides' code of *Halakhah*, the *Mishne Torah* or *Sefer Yad HaHazakah* (fols.211r–211v).

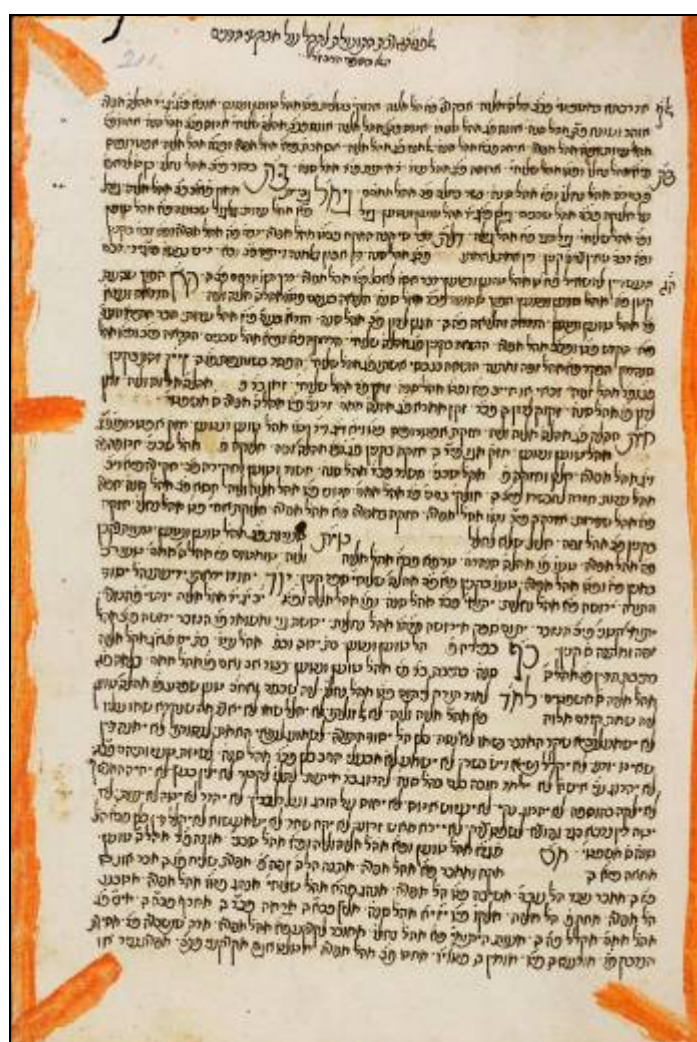


Fig.188.27: Fol.211r. The first page, letters א to מ, of the alphabetic subject index to Maimonides' *Mishne Torah* or *Sefer Yad HaHazakah*.

The heading reads: אלפבית"ג רבת התועלת להכל על מבקשי הדינים האלו בספרי הרב זצ"ל (A most useful Alphabetical Index for all those seeking these Laws in the books of the Rav [Maimonides] of Blessed Righteous Memory).

The index terms are typical Halakhic topics. For instance, under the letter ג: גביית ממון = The Collection of Money Owed; גזלן = Robber; גזל = Robbery. And under the letter מ: מנהג = Custom/Practice; מקח וממכר = Buying & Selling; מלקות = Flogging (Corporal punishment). Maimonides' code comprises a total of fourteen volumes and encompasses a multitude of topics. This small index, just one and a half pages, offers little more than a sampling of the topics and their occurrences in the text (Fig.188.27).

Part III The Arcane Orange-coloured Markings, Depictions and Writings.

Almost every page of the codex is marred by bold orange-coloured line-markings such as those in Figs.188.24, 188.26 and 188.27. Even the fore-edge, head and tail of the codex are painted orange. Orange-coloured Kabbalistic depictions and writings have also been inscribed in the unfilled spaces of the text folios, particularly in the margins, and on the otherwise completely blank pages. Angels are a recurring feature of these daubings and are generally represented by a stylised doodle (Fig.188.28).



Fig.188.28: The stylised doodle that represents an angel in the orange-coloured daubings.

A singular feature of the writings is the bizarre style of their script and the often difficult to decipher phonetically spelled Hebrew. Fortunately, the twenty two letters of the alphabet are written out in two lines across fols.19v and 20a which provide a key when in doubt (Fig.188.29a & 29b).

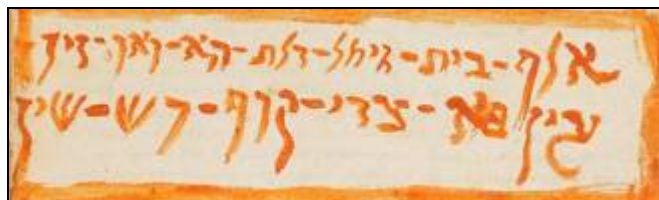


Fig.188.29a: Fol.19v. The top row with the letters א to י spelled out; the bottom row has the letters ט to ש.

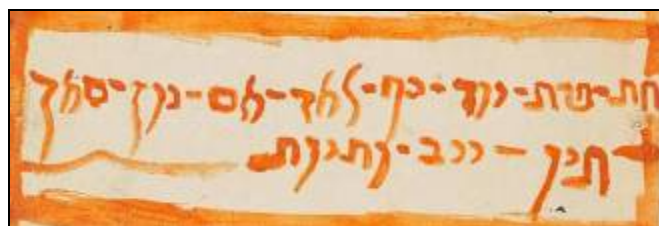


Fig.188.29b: Fol.20r. The letters ח to ס are written out in the top row; the bottom row has the letter ת followed by what appears to be כב ותיית which might be a phonetic misspelling of כב אותיות = 22 letters, the number of letters in the Hebrew alphabet. .

The inscription on fol.20v of Shlomo ben Shimon's name, the author of the exposition on *Sefer Yetzirah*, exemplifies both the bizarre script and the phonetically spelled Hebrew (Fol.188.30).



Fig.188.30: Fol.20v. The writing above the line reads: "שלמה בן שמעון טוריאלי" (Shlomo ben Shimon Turiel). The words below, רב אחום גאדול, are spelled phonetically; correctly spelled they would read רב חכם גדול (A great wise Rabbi).

This writing is on the reverse page, fol.20r, is the passage of text in Turiel's own hand in Fig.188.11.

The following three images (Figs.188.31 to 188.33) illustrate the variety of the arcane Kabbalistic depictions.



Fig.188.31: Folio 25r; Note the Hebrew foliation in the top left-hand corner: כ' = 26. The folio is part of Version III.

The text in the black script is a gloss on Chapter 5 of *Sefer Yetzirah* where God's creation of pairs of opposites (symmetry) is described. For example, the arms and legs of the human body, male and female, etc. (fol.205v).

The orange coloured phonetic writing below the stylised representations of the two angels reads on one side רגל ימין (right leg) and on the other side רגל שמלית (left leg).



Fig.188.32: Folios 7v–8r. A depiction of the twelve signs (houses) of the Zodiac and of the seven 'stars' together with the names of the angels that this version of Kabbalah assigns to them.

Reading counter clockwise from the top, the Zodiacal signs are:

קשת (Sagittarius), דגים (Pisces), טלה (Aries), עקרב (Scorpio), סרטן (Cancer), בתולה (Virgo), תאומים (Gemini), מאזניים (Libra), שור (Taurus), אריה (Leo), גדי (Capricorn), דלי (Aquarius).

Their heavenly agency is represented by the twelve surrounding angels

The seven 'stars' and their angels are:

חמה	(Sun)	רפאל	לבנה	(Moon)	גבריאל
		(Raphael)			(Gabriel)
כוכב	(Mercury)	מיכאל	נוגה	(Venus)	אניאל
		(Michael)			(Aniel)
מאדים	(Mars)	סמאל	שבתאי	(Saturn)	קפציאל
		(Samael)			(Kaftsiel)
צדק	(Jupiter)	זדקיאל			
		(Zadkiel)			

Different angels are assigned to the 'stars' in some of the other texts of Jewish mysticism.²³

²³ *Jewish Magic and Superstition* by Joshua Trachtenberg, Meridian Books & Jewish Publication Society, 1939, p.251: on line at <http://www.sacred-texts.com>.



Fig.188.33: Fols.173v & 174r (Version I). The writing and doodles in the margins refer to the flags and arrangement of the tribes of Israel around the Tabernacle in the Wilderness of Sinai (*Numbers* 2). The twelve tribes were divided into four groups, each headed by one of its three constituents tribes and, according to the Zohar, each under the patronage of a particular angel. Judah's group was to the East under the patronage of Uriel; Reuven's to the South with the angel Michael; Dan's to the North with Gabriel; and Ephraim's to the West under Raphael. This, however, presented a problem to the Kabbalists.

The text on fol.174r reads (in free translation): “Shlomo ben Shimon the author says: It is generally agreed by the Practitioners of Kabbalah that the four letters of the Tetragrammaton allude to [the four points of the compass] – the *Yod* to the South, the first *Heh* to the North, the second *Heh* to the East and the *WaW* to the West...” Taking the order of the letters and their respective compass points as pointers, the tribes should have journeyed with the Southern group (Reuven) in the lead, followed by the Northern group (Dan), then the Eastern (Judah) and last of all the Western (Ephraim). But they actually set out for the Promised Land in a different order: Judah first, then Reuven, followed by the Tabernacle, Ephraim and last of all, Dan (*Numbers* 10: 11-29).

In the subsequent pages, Turiel explains how R. Shimon bar Yochai²⁴ reconciled this quandary in the Zohar.

²⁴ The 2nd century Tannaitic sage who by tradition was the author of the Zohar.

The following Halakhic image (Fig.188.34) was incongruously interposed amongst the Kabbalistic texts by whoever arranged the collation of the codex.



Fig.188.34: Fol.195v:.. An anomalous interspersed folio showing a mnemonic of the laws of *Sheḥitah* (the Jewish method of slaughtering Kosher animals for human consumption) in the form of an open hand. One of the five Halakhic prerequisites that underlie *Sheḥita* is inscribed in each finger. The thumb delineates “Who is fit to be a *Shoḥet* (a slaughterer);” the index finger: “Which implement should be used – a sharp-edged knife;” the third finger: “Where the cut should be made – the trachea and oesophagus;” the fourth finger: “How the cut should be made;” the fifth finger: “What the *Shoḥet*’s thoughts and intentions should and should not be when carrying out his work.”

Part IV The Christian Kabbalah Entries and Annotations

An entry in Latin letters at the top of the left hand column of the array on fol.167v offers a possible clue as to how the codex may have come by its North European binding. Folios 167 and 168 belong to Version I of Turiel's exposition and are numbered $\text{יט} = 19$ and $\text{כא} = 21$, respectively, in the discernible Hebrew foliation. Folio $\text{כ} = 20$ is missing. The stub visible in the gutter between folios 167 and 168 suggests that it was torn out of the codex (Fig.188.35).

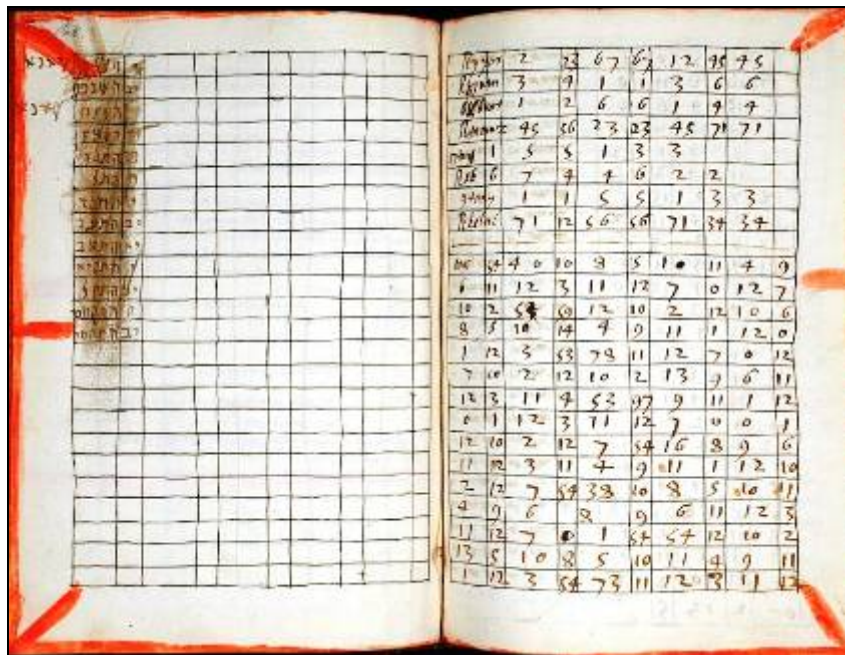


Fig.188.35: Folios 167v–168r. Note the entries in Latin letters in the top rows of the left-hand column of the grid on fol.167v, and the phonetically spelled Hebrew in the left margin of fol.168r. Note too the stub low down in the gutter between the folios and the just discernible Hebrew foliation $\text{כא} = 21$ in the top left-hand corner.

The import of the numbers in the grid on fol.167v has yet to be resolved but the entries in the top rows of the left-hand column are clearly recognizable as renditions of the names of the five summer months of the Jewish calendar: *Iyar*, *Sivan*, *Tammuz*, *Ab* and *Elul* and dates therein. The entry in the third row immediately below that for the month of *Sivan*, is a rendition of 6 *Shavuot*. The festival of *Shavuot* that marks *inter alia* the giving of the Torah on Mount Sinai, is celebrated on the sixth day of the month of *Sivan*. Row five, immediately

below that for the month of *Tammuz*, reads “17...”, which is traditionally the day in the month of *Tammuz* on which the walls of Jerusalem were breached prior to the destruction of the Temple and which Jews keep as a fast day. And the entry in row seven immediately below that for the month of *Av* reads “9...” which is traditionally the day in the month of *Av* on which the Temple was destroyed in 586 BCE and is also kept as a fast day (Fig.188.36).

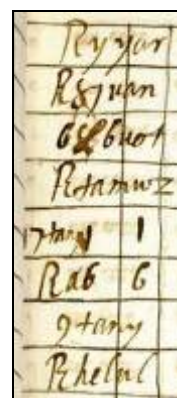


Fig.188.36: Fol.167v. An enlarged image of the entries in the first eight rows of the left-hand column of the grid. Renditions of the names of the five summer months of the Jewish calendar, *Iyar*, *Sivan*, *Tammuz*, *Ab* and *Elul*, can be seen in the first, second, fourth sixth and eighth rows, respectively.

No less intriguing are the “words” in the left-hand column on the opposite page (fol.168r), which appear to be a list of thirteen years written in the familiar abbreviated Hebrew *anno mundi* notation: the first is 5340 (1579CE) and the last 5566 (1805CE). The word in Hebrew lettering repeated in the left margin, שׂאנא, is evidently a phonetic spelling of the word שנה meaning ‘year’ (Fig.188.37).



Fig.188.37 Fol.168r. The first of the thirteen years is 5340 (1579CE) and the last 5566 (1805CE). The Hebrew lettering repeated in the left margin, שׂאנא, is evidently a phonetic spelling of the word שנה meaning ‘year.’

But it is the first two folios of the codex that are perhaps its most mysterious feature. There is a phonetically spelled inscription – שיר אשירים

אשר לישלמו – on fol. 1r, the black-ink letters of which have been over-written in orange paint. It is a misspelling of the first line of *Song of Songs*, the biblical love-poem composed by King Solomon, which, when written correctly, reads שיר השירים אשר לשלמה – *Shlomo's [Solomon's] Song of Songs* (Fig.188.38). There are similar phonetically spelled inscriptions with Messianic connotations on fols. 1v, 2v and the verso of the end fly-leaf (Fig.188.39).²⁵



Fig.188.38: Folio 1r. The letters of the phonetically spelled ink inscription over-written in orange by – שיר – אשר לישלמו.

But even more curious is the primitive image on fol.2r showing a person wearing a *Tallit* (prayer shawl) and *Tefillin* (Phylacteries), holding what looks like a pointer or pen in his right hand. Drawn in black and highlighted in orange, it is surrounded by a cacophony of phonetically spelled Hebrew words. The intended meaning of some of these can be deduced but not sufficient to construct a coherent text. One phrase that stands out is יהודה בהנ דאויך מהלך מאשיאח.

²⁵ The paper of folios 1 & 2 is of an inferior quality and there are no watermarks.

which, allowing for the phonetic spelling, means 'Judah son of David, the Messiah King' (Fig.188.40).



Fig.188.40: Folio 2r. A person wearing a Tallit (prayer shawl) and Tefillin (Phylacteries). Note the phrase *יהודה בן דאוד מהלך מאשיאח* (Judah son of David, the Messiah King) below the hand on the right-hand side of the page. Other phonetically spelled words can be made out but the full sense of the text, if indeed it has any overall cogent meaning, is unclear.



Fig.188.39: The phonetically spelled writing and angel doodle on the verso of the end fly-leaf..



Fig.188.41: Fol.223v. The final page of Codex 188. The folio number 224 is writ large in orange paint on the page facing the fly sheet numbered 244r.

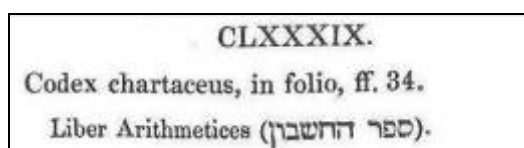
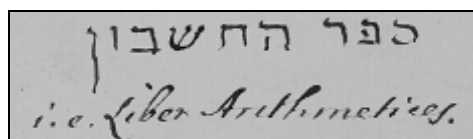
The rows of Hebrew letters, reminiscent of children's writing exercises, are a feature of many of the sundry scrawls.

Summarising, the overall impression is that several separate manuscripts, most but not all Kabbalistic, were bound into a single codex, not always ensuring they were in the right order or even relevant to one another, and that this was done somewhere in northern Europe early in the seventeenth century. When the ubiquitous orange-coloured daubings and doodles were drawn, or by whom and for what purpose, cannot be ascertained with any certainty. It must, however, have been after all the manuscripts had been assembled and numbered, seeing that the number 224 is writ large in orange paint on fol.223v (Fig.188.41), which would have been fol.224v counting the folio of which only the stub remains between fols.167v & 168r (Fig.188.35).

There remains the question of who arranged to have this mélange of folios bound in such an ornate and presumably expensive binding. I would conjecture that it was a Christian collector of Hebrew manuscripts, perhaps the same person who drew the sketch of the person wearing a *Tallit* (prayer shawl) and *Tefillin* (Phylacteries) on fol.2r and who wrote the phonetically spelled words in black on that and the other pages, as well as the transliterations in letters of the Latin alphabet of the names of the five summer months of the Jewish calendar on fol.167v and the list of thirteen years written in the abbreviated Hebrew *anno mundi* notation on fol.168r. He may perhaps have been a follower of Christian Kabbalah who looked upon Jewish mystical literature as a source of magical knowledge and this might explain many of the doodles. Clearly, there needs to be much more research done on this enigmatic codex.

Codex 189: Moses ibn Tibbon's Hebrew Translation of Abu Bakr al-Hassar's 12th Arabic Treatise on Arithmetic, *Kitāb al Bayān*

A note pasted on the inside cover reads: ספר החשבון – *i.e. Liber Arithmetices*. The entry in the catalogue of the Library's manuscripts compiled by G.W.Kitchin in 1863 adds little to this.



The manuscript is actually a 15th century copy of the Hebrew translation prepared by Moses ibn Tibbon in 1271 of Abu Bakr ibn Muhammad ibn Ayyash al-Hassar's seminal 12th century Arabic treatise on arithmetic, *Kitāb al Bayān wa-l-tadhkār*.

The Hindu number notation that employs nine numerals (digits) in decimal positions and a zero (*sifr* in Arabic and צפר in Hebrew) to indicate an empty position, had made its way to the Maghreb by the 10th century. Al-Hassar is believed to have taught mathematics during the 12th century in the city of Ceuta (Septa) on the north coast of Morocco. His most important contribution to mathematics was the introduction of a composite (radix) fractional notation in which the numerator and denominator are separated by a horizontal bar.¹ Just two of al-Hassar's works have survived: the *Kitāb al-Bayān wa-l-tadhkār* (*Book of*

Paper, in folio (ff. 34); Neubauer OX 2457; IMHM Film No. F 15581 (Institute of Microfilmed Hebrew Manuscripts, Jewish National Library, Jerusalem, Israel).

¹ For the earliest uses of symbols for fractions see:
<http://jeff560.tripod.com/fractions.html>

Proof and Recall), in which he describes this new notation and shows how it facilitates complex arithmetical calculations involving fractions; and the *Kitāb al-Kāmil fī sinā'at al-adad* (*The Complete Book on the Art of Number*), of which only the first volume is extant.² Al-Hassar is one of the earliest Western Arabic mathematical authors of whom a work has survived.³

The earliest external reference to a mathematical opus by Abu Bakr al-Hassar appears in ibn Khaldun's 14th century work *Muqaddimah*,⁴ where he refers to it as "the little al-Hassar." Five centuries were to pass, however, before an actual copy of the work was discovered and then only in the guise of a Hebrew translation. It was Moritz Steinschneider who, in 1874,⁵ first made the connection between "the little al-Hassar" cited by ibn Khaldun and a Hebrew manuscript of a mathematical treatise by Abu Bakr al-Hassar in the Vatican Library.⁶ Six years later, Adolf Neubauer, a librarian at the Bodleian Library, Oxford, identified a second copy of the same Hebrew translation at the Christ Church Library, Oxford.⁷ A third Hebrew version of al-Hassar's treatise has surfaced more recently as one of the works in a composite codex at the Russian State Library, Moscow.⁸

² M. Aballaghta & A. Djebbar, Découverte d'un écrit mathématique d'al-Ḥaṣṣār (Xlle S.): Le livre I du Kamil, *Historia Mathematica* 14 (1987), 147-158
Ahmed Djebbar, Mathematics in Medieval Maghreb, *Amuchma Newsletter-15* [African Mathematical Union], Universidade Pedagógica (UP), Maputo, Mozambique (1995).

http://www.math.buffalo.edu/mad/AMU/amu_chma_15.html

Selin, Helaine, Encyclopaedia of the History of Science, Technology and Medicine in Non-Western Cultures, Springer Science+Business Media, Dordrecht (1997) p. 614-615.

³ The earliest extant Arabic arithmetic text is a 12th century copy of the *Kitāb al-Fusūl fī al-Ḥisāb al-Hindī* written by *Abū al Ḥasan al Uqlīdisī* in Damascus in 952 CE. The work was translated into English and annotated by A.S.Saidan in *The Arithmetic of Al-Uqlidisi*, D.Reidel Publishing Co., Dordrecht-Holland (1978).

⁴ Walī al-Dīn Abd al-Raḥmān ibn Muḥammad ibn Muḥammad ibn Abī Bakr Muḥammad ibn al-Ḥasan Ibn Khaldūn (1332-1406). Arab historian and historiographer who developed one of the earliest non-religious philosophies of history in his *Muqaddimah* ("Introduction"). He is regarded as one of the founders of sociology, demography and economics.

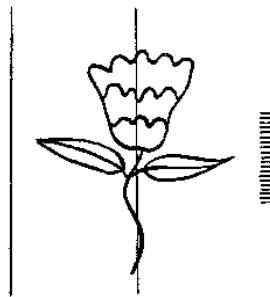
⁵ Steinschneider, Moritz, *Die Hebraeischen Übersetzungen des Mittelalters...*, Berlin 1893, pp. 557-558.

⁶ Vat. Ebr. 396. Paper, in quarto (ff.78); Institute of Microfilmed Hebrew Manuscripts (IMHM), National Library of Israel, Jerusalem: Film No. F 474.

⁷ Ms. 189. Paper, in folio (ff. 34); Neubauer OX 2457; IMHM Film No. F 15581.

⁸ Guenzburg 30; IMHM Film No. F 6711; fols.124r to 189r.

The colophon in the Vatican manuscript (fol.76v) gives the name of the copyist as Baruch b. Solomon b. Joab⁹ and the date and place of its completion as Thursday, 25th *Shevat* 5211 (February 6, 1451) and Montalcino, Italy; it does not, however, name the translator from the original Arabic. The best match to the partial watermarks clearly visible in the paper is Briquet 6645 (Lucca 1445). The manuscript is bound in a codex measuring 21x15 cm which bears the insignias of Pope Urbanus VIII (1623-1644) and of his nephew and librarian, Francisco Barberini (1626-1633), embossed in gold onto its green front and back covers, respectively.



6645

There are clear indications that the folios were severely cropped, both top and bottom, at the time they were bound in these covers at some time around 1630. The original length of the pages, at least 22cm, can be gauged from fol.16v which has a lengthy marginal note starting down the right hand side that continues across the page below the main text. Cropping the bottom of the folio to the same length as the other folios would have meant losing all or part of the last three lines of the note. To avoid this, the 'conscientious' binders folded over the bottom centimetre of the folio instead of cutting it off. The foliation appears to predate the binding, however, for in numerous instances the cropping cuts straight through the folio numbers in the top left-hand corner of the recto pages.

The outer spine of the codex was replaced in the 19th century and bears the insignias of Pope Pius IX (1846-1878) and his librarian Angelus Mai (1853-1854). Notwithstanding, the codex is not in the best of condition. The binding has broken open in a number of places and folios have come loose. Judging by the flow of the text, the folios numbered 17 and 19 should actually follow folio 9, leaving just folio 18 between folios 16 and 20.¹⁰

By contrast, the Christ Church manuscript is in almost mint condition. Measuring 30x23 cm, it comprises a total of seventy seven folios: forty three blank sheets of coarse paper (no watermark) – six at the front and thirty seven at the back – and thirty four folios of watermarked paper sandwiched between them on which the Hebrew text is written (Fig.189.1). The script is

⁹ ברוך הבי"א [הצעיר בבית אבין] ב"ר שלמה אבן ישר"ן ב"ר יואב ישר"ן

¹⁰ The correct order of the folios in the codex according to the flow of the text is: 1 to 9, 17, 19, 10 to 16, 18 and 20 to 77.

Provençal/Sephardic cursive and the text is configured in a single column on fols.1r to 4v and in double columns from fol.5r to fol.33r. The purpose of the forty three blank sheets is unclear.


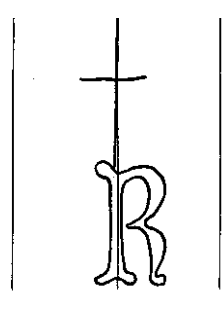
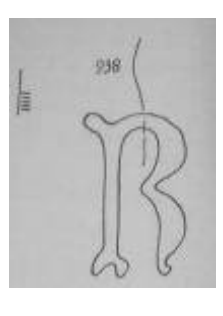
		
The watermark in the Christ Church Codex 189	Briquet 8941	Zonghi 938 (Italy 1456)

Fig.189.1: The watermark in the thirty four folios in the Christ Church codex on which Moses ibn Tibbon's Hebrew translation is written: Briquet 8941, (Palermo 1467, Bavière 1470, Naples 1470, Amalfi 1471 or Catania 1472);¹¹ alternatively Zonghi 938 (Italy 1456).¹² The dates are all consistent with that in the copyist's colophon.

There are two colophons on fol.31v (Fig.189.2). The first is that of Moses ibn Tibbon, the translator into Hebrew of the Arabic original:

“The work is done; and it is the Book of Arithmetic by Abu Bakr Mohammad, son of Abdullah, son of Abbas al-Hassar; and R. Moses ben R. Shmuel [ibn Tibbon], ben R. Yehudah, ben R. Shaul of blessed memory from Ramon Sefarad (Spain), translated it; and its translation was completed on the 18th day of the month of *Iyar* in the year 31 (May 12, 1271) in the city of Montpellier.”.

The second is that of the manuscript's copyist (Fig.189.3):

“And here Bari[?] (והנה בארי), its transcription was completed on the 12th day of the month of Adar Bet in the year 236 of the sixth millennium (March 17, 1476), one thousand four hundred and eight years since the destruction of the Temple, may it be speedily rebuilt, Amen Selah.”

The copyist is not named.

¹¹ Charles M. Briquet, *Les Filigranes*. Paris etc. 1907, p.478

¹² *Zonghi's Watermarks*, The Paper Publication Society, Hilversum, 1953.

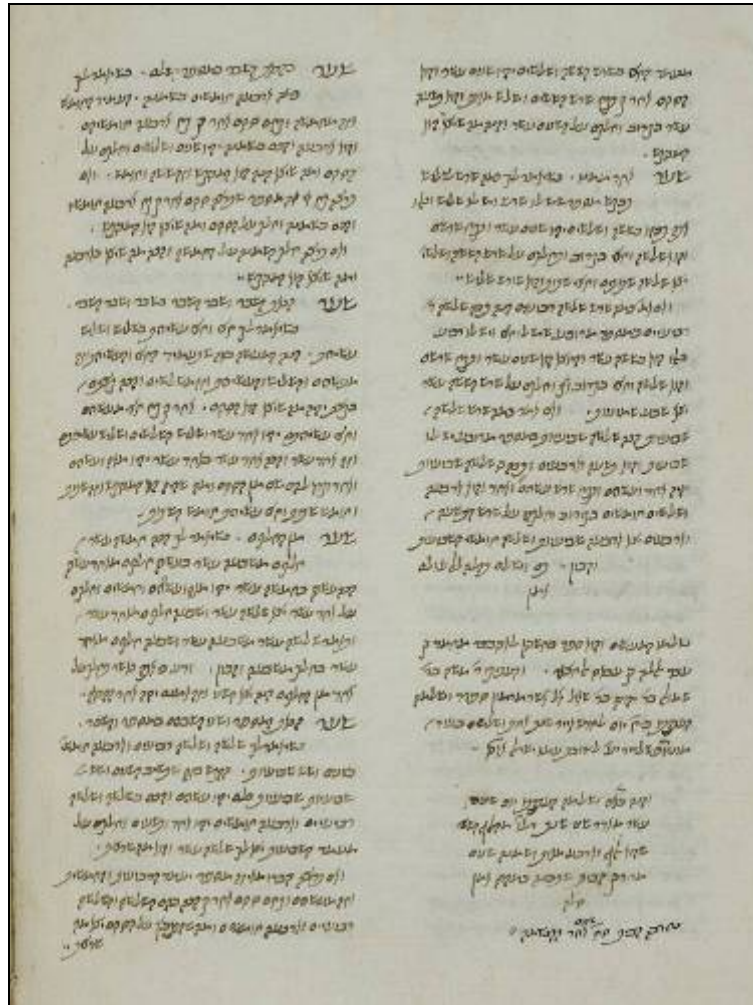


Fig.189.2: Fol.31v of Codex 189. Note the two colophons at the foot of the right-hand column, that of the translator, Moses bar Shmuel Tibbon and below it that of the unnamed copyist.

There is a copyist's mark, 'ד', above the word **בארי** in the top line of the colophon. Its purpose appears to be to indicate that the word is unusual or exceptional, i.e., not a regular Hebrew word or abbreviation.¹³ The word **בארי** as

¹³ The same mark appears above anomalous words elsewhere in the manuscript. For example, in the phrase **בארי** (בחסרון הו) meaning "without the [Hebrew letter/conjunction] vav" in the sub-sections numbered 61 to 69 in Part Two of the Christ Church Manuscript (fols 16r to 17v).

such appears just twice in the Hebrew Bible, each time as a person's name.¹⁴ In the present instance it may refer to a location and should be understood as “in Ari (ארי)” or as an actual place-name, i.e., “Bari.” Alternatively, it could be a possessive form of the word באר, i.e., “my elucidation” or “my clear rendering.”¹⁵

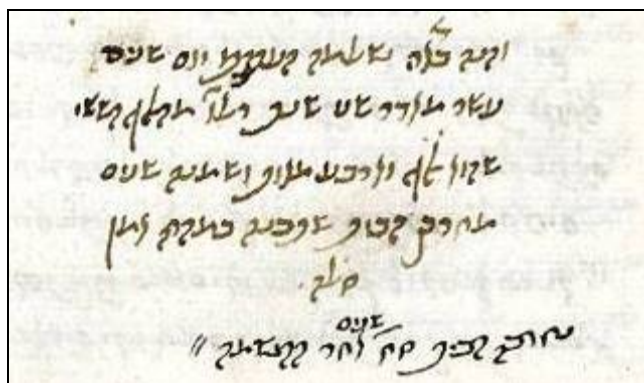


Fig.189.3: The copyist's colophon in the Christ Church manuscript. “And here Bari[?] its transcription was completed...one thousand four hundred and eight years after the destruction of the Temple, may it be speedily rebuilt, Amen Selah.” A note below in a darker ink reads: נחרב הבית ס"ח שנים אחר ההגשמה. (The Temple was destroyed 68 years after the incarnation). Adding these 68 years from the birth of Jesus gives 1476AD for the year the manuscript was written.

In the absence of any known place of Jewish habitation in the 15th century called Ari, the city of Bari in southern Italy, which had a flourishing Jewish community until the expulsion of the Jews from the kingdom of Naples in 1510–11, would appear to be the better alternative.¹⁶ Assuming the other possibility, namely, that it is a possessive form of the word באר, the colophon would read “Behold my clear rendition, its transcription was completed...” It may even be that the copyist intended the word בארי to have a double meaning and to indicate both where the text was written and to point to the fine quality of his script.

The Hebrew version of al-Hassar's treatise at the Russian State Library, Moscow, is titled “Abu Bakr's Book of Fractions.” It is the fourth of the six

¹⁴ *Genesis* 26:34; *Hosea* 1:1.

¹⁵ *Deuteronomy* 1:5; 27:8; *Habakkuk* 2:2.

¹⁶ The word בארי appears as the name of a location in the colophon of four other extant 15th century Hebrew manuscripts: IMHM Film Nos. 14563 (1451), 13819 (1473), 14619 (1480) and 6405 (1487).

medieval Hebrew works on mathematics and related subjects that the codex contains.¹⁷ Its text is, however, somewhat different from that in the Vatican and Christ Church manuscripts; a number of the worked examples in those manuscripts have been omitted and others amended or added; the last third of the text is arranged differently and the mathematical notation is, in some places, at variance with that in those two texts; there are also numerous copyist errors throughout. The colophon (fol.38r) gives the name of the copyist as Gad Ashtruck ben Yaacov (גד אשתרוק בן יעקב) and the year of its composition 5263 (1502/3); there is no reference to the translator.¹⁸ It is worded as a receipt for payments the copyist had received for lessons given to a person called Baruch and for the sale of a manuscript to him; the work is described as "...the book that I and al-Hassar, who is called Abu Bakr, wrote on Arithmetic..." At best, it appears to be an abridged redaction of Moses ibn Tibbon's translation.

Only in 1893 was an Arabic manuscript of al-Hassar's *Kitāb al-Bayān* first found and identified by W. Pertsch among the Arabic manuscripts in the Gotha Library, University of Erfuth, (Ms.1489).¹⁹ In 1901, the mathematician Heinrich Suter translated extracts from this manuscript into German in the course of his extensive study of medieval Arabic mathematical texts.²⁰ There is no copyist's colophon as such but the last line in the manuscript reads (in translation): "The blessed book is finished, praise be to Allah, for his help and favour...on Tuesday, 13th *Muḥarram* 836 (September 9, 1432)." The existence of a further six Arabic manuscripts containing all or parts of the *Kitāb al-Bayān* has since been reported, making a total of seven copies in all.²¹ The oldest of these is in the

¹⁷ The other five works are Abraham ibn Ezra's *Sefer ha-Mispar*, Gersonides' *Maaseh Hoshev* and three works composed by the copyist himself: a Treatise on Jewish Monetary Law and two short treatises on Arithmetic.

¹⁸ The colophon is worded as a receipt for payments the copyist received for lessons given to a person named Baruch and for the sale of a manuscript to him.

¹⁹ Pertsch, Wilhelm: Theil 3, Bd. 3: Die Arabischen Handschriften der Herzoglichen Bibliot [...], Gotha, 1881, p.114.

http://archive.thulb.uni-jena.de/ufb/receive/ufb_cbu_00002974

²⁰ H. Suter, "Das Rechenbuch des Abu Zakarījā el-Ḥaṣṣār", *Bibliotheca Mathematica*, 3. Folge 2. Band 1901, pp.12-40. "Abhandlungen zur Geschichte der mathematischen Wissenschaften mit Einschluss ihrer Anwendungen" (Discourses on the history of mathematical sciences, including their applications), Druck und Verlag von B. G. Teubner, Leipzig (1900).

<http://quod.lib.umich.edu/u/umhistmath/ACD4271.0001.001?rgn=main;view=fulltext>

²¹ Five of the further six manuscripts are cited by Paul Kunitzsch in the following articles:

Lawrence J. Schoenberg Collection.²² Written in Baghdad and dated *Safar* 590 (January/February 1194), it lacks the last quarter of the text of the Gotha manuscript.²³ The copy that has most recently come to light is a 16th century manuscript sold at auction in London in 2016.²⁴

By the 10th century, the knowledge preserved and developed in the Arabic Orient had begun making its way via the Maghreb to Spain, from where, after being translated into Latin, it would be taken up by European scholars. Chief amongst the translators of the Arabic scientific works was the Italian Gerard of Cremona (1114–1187) who had moved to Toledo in order to learn Arabic and access its libraries of Arabic books. By contrast, the Jewish scholars in Andalusia and the Maghreb who were proficient in both Hebrew and Arabic, would have had little recourse to translations: Maimonides' famous *Guide for the Perplexed*, his *Commentary on the Mishna* and his *Responsa* were all initially composed in Judeo-Arabic (Arabic written in Hebrew script). But their coreligionists in Provence and elsewhere in Europe would need Hebrew versions of these works.

Samuel ibn Tibbon (1150–1230) and his son, Moses ibn Tibbon (born in Marseille c.1190 and died 1283), were two of the most prolific Hebrew translators of their time. It was Samuel ibn Tibbon who first translated Maimonides' *Guide for the Perplexed* into Hebrew as well as several chapters from his *Commentary on the Mishna*. His son Moses ibn Tibbon, a physician and author in his own right, is best known for his many Hebrew translations of

"A New Manuscript of Abu Bakr al-Hassar's Kitāb al-Bayān." Suhayl, *International Journal for the History of the Exact and Natural Sciences in Islamic Civilisation*, 3, 2002-03, S.187-192: <http://www.ub.edu/arab/suhayl/volumes/volum3/paper%203.pdf>

"Al-Hassar's Kitāb al-Bayān and the Transmission of the Hindu-Arabic Numerals." <http://www.muslimheritage.com/topics/default.cfm?ArticleID=705>

²² Rare Book & Manuscript Library, University of Pennsylvania, LJS 293: http://dla.library.upenn.edu/dla/medren/detail.html?id=MEDREN_4819340

²³ The missing text is that from fols.98 to 127 in the Gotha manuscript, which corresponds in the Christ Church manuscript to the Hebrew text from the fourteenth line of the right-hand column of fol.24v to the twenty first line of the right-hand column of fol.31v and in the Vatican manuscript to that from the thirteenth line of fol.56v to the second word in the fourth line from the bottom of fol.76r.

²⁴ "Abu Muhammed bin Abdullah bin Ayyash known as Hassar...*Kitāb al-Bayān Wa al-Tidhkar*." Christies of South Kensington, Lot 146; Sale Date April 18th 2016: <http://www.christies.com>

Arabic works on philosophy, mathematics, astronomy and medicine, of which the translation of Abu Bakr al-Hassar's *Kitāb al-Bayān* is an example.

The texts of the Vatican and Christ Church manuscripts are essentially identical and appear to have been copied from the same source. Not only do their versions of ibn Tibbon's translation match, but both include the same appendix to al-Hassar's treatise comprising a further nine examples and exercises. Whether these were added to the translation by Moses ibn Tibbon himself or by some later copyist is unknown, but they must have been present in the source from which the texts of both manuscripts were copied. Apart from the inevitable copyist errors, such differences as there between the two manuscripts relate only to their scripts (Italian and Provencal/Sephardic, respectively), the layout of the script and the annotations and corrections (marginalia) added by the respective copyists or later readers.²⁵

Allowing for the differences that will inevitably arise when a text is translated into a different language, there is an almost one to one correspondence between ibn Tibbon's Hebrew text and the Arabic texts in the Gotha and Schoenberg manuscripts. Every topic and worked example in the latter texts appears at the corresponding point in ibn Tibbon's Hebrew translation. Even al-Hassar's Arabic exaltations and invocations to Allah are matched by similar Hebrew praises and calls to God.²⁶ The one significant exception is in the opening lines of the work, where al-Hassar explains what motivated him to write it. In Suter's translation the reason he gives is "that it was after I came to the realisation that the basis of [all] the sciences and fine literature, is the science of numbers, [coming of course] after Allah and the divine entities..."²⁷ The corresponding passage in the Hebrew translation reads: "Behold, God placed in numbers a hint of how to attain knowledge of His Oneness and of the order of His Creation, and by which to know every sealed and cryptic thing."²⁸ In both versions he adds that he composed the work to be "a guide to beginners and a

²⁵ There are numerous instances of the same error in both versions; to cite just one. The text of worked example 42 on the multiplication of fractions in both the Christ Church (fol.12v) and Vatican (fol.28v) manuscripts reads: "...two thirds of five and five sixths by five sevenths of..." The symbolic representations in both versions, however, read as: "...two thirds of five and five sixths by six sevenths of..." The Gotha (Suter *op. cit.* p.26) and the Schoenberg (fol.44v) Arabic versions both have "six sevenths", which is the fraction to which the answer given in all four texts corresponds.

²⁶ Karpinski L.C., *The History of Arithmetic*, Rand McNally, Chicago (1925), p.50.

²⁷ Suter, *op.cit.* p..13.

²⁸ Fol.1r in both the Christ Church and Vatican manuscripts.

reminder to practitioners” and that “everything I have compiled, described and explained in this book, derives from the teachings of the older scholars, which I have logically clarified and expanded upon.”

In their passage from east to west, the original Hindu numerals evolved into a number of different forms. Our present European numerals are descended from the set of 11th century glyphs known as the Western Arabic or “Gobar” numerals (digits) that developed in the Maghreb and Andalusia (Fig.189.4). The term “Gobar” derives from the Arabic *ghubār*, meaning a sand or dust board, the device on which the numerals that the Arabs developed from the original Hindu forms were first written. In his Hebrew translation, ibn Tibbon translates the term as אבק = dust. The zero digit – *sifr* in Arabic and צפר in Hebrew – was a small circle.

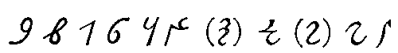

(a)	
(b)	

Fig.189.4: (a) The Gobar (Western Arabic) numerals (digits) from one to nine in the Gotha manuscript (in ascending order from right to left), as reproduced in Suter's translation (p. 15); (b) The corresponding Eastern Arabic numerals on fol.4r of the Schoenberg manuscript.

Whereas the 15th century Italian copyist of the Vatican manuscript chose to employ a contemporary European form of the Gobar-based digits for the numbers in his text (Fig.189.5), the unnamed copyist of the Christ Church manuscript chose the first nine letters of the Hebrew alphabet, *Aleph* to *Tet*; not as *gematria* but as the digits of a positional decimal notation (Fig.189.6). Thus, writing the numbers from left to right in a Provencal/Sephardic Hebrew cursive script, he denotes the integer 543 by 273 (גדה in modern Hebrew block letters) and 583696 by 273696 (וטוגחה).²⁹ By contrast, in the decimal multiplication table on fol.3v of the Christ Church manuscript, the copyist entered the numbers in the traditional Hebrew format from right to left (Fig.189.7).

²⁹ As perhaps Moses ibn Tibbon did before him in his original translation. For a 15th century use of the letters of the Greek alphabet as symbolic numerals, see Karl Menninger, *Number Words and Number Symbols*, Dover Publications, (1992) p.274.

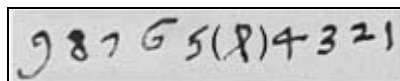
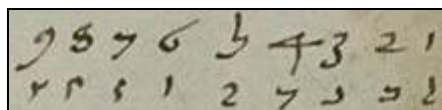


Fig.189.5: The 15th century European numerals used by the Italian copyist of the Vatican manuscript (fol.2v).



א ב ג ד ה ו ז ח ט

Fig.189.6: The schema in the margin of fol.1v of the Christ Church manuscript showing the contemporary 15th century European numerals and the Hebrew letters in cursive Provencal/Sephardic script used exclusively by the copyist for the digits from one to nine; the corresponding modern Hebrew block letters are shown below for reference.

	10	9	8	7	6	5	4	3	2	1	
1	י	ט	ח	ז	ו	ה	ד	ג	ב	א	1
2	כ	יח	יז	יז	יח	י	ח	ז	ו	ה	2
3	ל	כח	כז	כז	כח	יח	יז	יז	יח	ז	3
4	מ	לח	לז	לז	לח	כח	כז	כז	כח	ז	4
5	נ	מח	מז	מז	מח	לח	לז	לז	מח	ז	5
6	ס	נח	נז	נז	נח	מח	מז	מז	נח	ז	6
7	ע	סח	סז	סז	סח	נח	נז	נז	סח	ז	7
8	פ	עח	עז	עז	עח	סח	סז	סז	עח	ז	8
9	צ	פח	פז	פז	פח	עח	עז	עז	פח	ז	9
10	ק	צח	צז	צז	ק	פח	פז	פז	ק	ז	10

Fig.189.7: The decimal multiplication table on fol.3v of the Christ Church manuscript in which the numbers are written in the traditional Hebrew format from right to left. The same table, though not as neatly drawn, appears in the Vatican manuscript (fol.7v).

Al-Hassar's treatise is a didactic text; it addresses the student directly and is written in a clear and user-friendly style. The worked examples all assume the student is working with a dust board. The methods of calculation require moving numbers around and rubbing out some as it proceeds, a mode for which the dust board was well suited in the same way as are a black/white board, chalk/marker and eraser.³⁰ Finding the result was what mattered and not the intermediary steps.³¹

In the Introduction, Al-Hassar states that he has arranged the work in two parts: the first on integers and the second on fractions. For our descriptive purposes, however, we will divide the text into three parts: Part One on integers; Part Two on fractions; Part Three on computations.³² By reason of its superior physical condition, the Christ Church manuscript will be our primary Hebrew source.

In Part One, integers and the operations associated with them are examined under ten chapter headings:³³

1. Numeration: On number scales (levels) and number names; 2. Notation: The Gobar digits and their use in a positional decimal notation; 3. Addition; 4. Subtraction; 5. Multiplication; 6. Denomination; 7. Division; 8. Halving; 9. Doubling; 10. Extraction of Roots.³⁴

The chapter on Denomination is sub-titled "Division of a Small Number by a Larger One", and it is here that the horizontal bar notation first appears in the context of the naming and symbolic representation of the ratio of a smaller

³⁰ "Hindu arithmetic entered Islam with the dust board (*takht*) as an intrinsic tool of it, writing and rubbing out being made by the fingers or with a stylus" (Saidan, *op. cit.* p.351). There is no clear evidence, however, for its use in India.

³¹ Some algorithms (14th century?) suitable for paper and pen/pencil calculations appear in the appendices of both the Christ Church and Vatican manuscripts and are described below.

³² Suter divides the treatise into seven Chapters (*Kapiteln*): our Parts 1 and 2 correspond to his Chapters 1 and 2; our Part 3 encompasses his Chapters 3 to 7. The Gotha manuscript does not have the appendices found in the two Hebrew manuscripts.

³³ Folios 1r to 7r in the Christ Church manuscript and folios 1r to 9v, 17r to 17v and 10r to 14r (in that order), in the Vatican manuscript

³⁴ This chapter only deals with the roots of "square" numbers, e.g. 625 (sq. rt. = 25) & 583696 (sq. rt. = 764). Extracting the square roots of integers and fractions in general, is the final topic in al-Hassar's treatise: folios 30r. to 31v in the Christ Church codex, folios 69v to 73r in the Vatican manuscript and pages 37 to 39 (*Siebentes Kapitel*) in Suter's translation of the Gotha manuscript.

number to a larger one using Gobar numerals (integers).³⁵ The chapter opens with a review of the various classes of integers – prime or composite, odd or even – and of their divisibility and remainder rules.³⁶ Following this preamble, which al-Hassar states is an essential prerequisite to the subject at hand, the formal classical definition of the ratio of a smaller number to a larger one is presented:

The ratio of a smaller number to a larger one is the number of parts, one or more, that the former is of the latter.³⁷

From which the following names (designations) are obtained:

[Thus]...the ratio of one to three is called “a third” [one part of three]...that of one to four, “a fourth” [one part of four]; that of two to four, “two fourths” [two parts of four]...that of six to eight, “six eighths” [six parts of eight]...that of nine to ten, “nine tenths” [nine parts of ten].

Thus far, it is all quite straightforward and familiar. But al-Hassar now presents a different method for naming the ratios in those instances where the larger number can be factorised.

When it is said to you, “Name one part of fifteen.” Now you have already learned that fifteen is a composite number that arises from the multiplication of three by five; it follows, therefore, that three is one fifth of fifteen and five is one third of fifteen; thus, since one is a third of three, one part of fifteen [a fifteenth] is “one third of a fifth.”³⁸

Based on this, he proposes that seven parts of fifteen [seven fifteenths], might be symbolically represented by integers as follows:

Write the factors 3 and 5 in a line, and put the 7 over the 3:

$$\begin{array}{cc} 7 & \\ 3 & 5 \end{array}$$

Now find a multiple of 3 which, when deducted from 7, leaves a remainder less than 3; the only possibility here is $7 - (2 \times 3) = 1$.

³⁵ The order of the chapters is not arbitrary. The chapter on Multiplication is followed by that on Denomination and not, as might have been expected, by that on Division, because the new notation would be required in the latter.

³⁶ Division is treated as the repeated subtraction (השלכה) of the divisor (divider) from the dividend.

³⁷ “Each number is either a part of a larger number [a unit fraction] or parts [a proper fraction] of it” - Euclid, VII.4.

³⁸ $\frac{1}{3} \cdot \frac{1}{5} = \frac{1}{15}$.

Delete the seven and replace it by the remainder, 1; put the multiplier, 2, over the 5:

$$\begin{array}{cc} 1 & 2 \\ 3 & 5 \end{array}$$

Now draw a line between the two rows of numbers:

$$\begin{array}{cc} 1 & 2 \\ \hline 3 & 5 \end{array}$$

Al-Hassar reads this symbolic representation, from right to left, as “two fifths and a third of a fifth.”³⁹

He derives a symbolic representation for eleven fifteenths, $\frac{2}{3} \frac{3}{5}$, in a similar way. He reads this, from right to left, as “three fifths and two thirds of a fifth.”⁴⁰ Note, that whereas multi-digit integers are read from left to right in the direction of decreasing powers of ten, the symbolic representation of fractions is written and read from right to left.

In modern terminology, what al-Hassar contrived was a *composite fraction notation* in which a sequence of numerators and denominators are aligned, one above the other, with a horizontal line between them. Reading from right to left, each of the successive terms above the line is the numerator of the fraction whose denominator is the product of all the terms below and to the right of it. In the simplest case – two integers, a and b , above the line and two, c and d , below – this gives:

$$\frac{b}{d} \frac{a}{c} \Rightarrow \frac{a}{c} + \frac{b}{dc}.$$

Employing this notation, a fifteenth is denoted in the Christ Church Library manuscript by

$$\frac{1}{3} \frac{0}{5} \Rightarrow \frac{0}{5} + \frac{1}{3 \times 5} = \frac{1}{15},$$

seven fifteenths by

$$\frac{1}{3} \frac{2}{5} \Rightarrow \frac{2}{5} + \frac{1}{3 \times 5} = \frac{7}{15}$$

³⁹ $\frac{1}{3} \frac{2}{5} \Rightarrow \frac{2}{5} + \frac{1}{3 \times 5} = \frac{7}{15}$

⁴⁰ $\frac{2}{3} \frac{3}{5} \Rightarrow \frac{3}{5} + \frac{2}{3 \times 5} = \frac{11}{15}$

and eleven fifteenths by

$$\frac{23}{52} \quad \left(\frac{2}{3} \frac{3}{5} \Rightarrow \frac{3}{5} + \frac{2}{3 \times 5} = \frac{11}{15} \right).$$

The copyist of the Christ Church manuscript chose to place the symbolic representations in the margins outside the running text, whereas they are embedded within the text in the Vatican manuscript (Fig.189.8).



Fig.189.8: Folio 5r of the Christ Church manuscript. Reading from top to bottom, the three entries in the margin between the columns are:

$$\frac{1}{3} \frac{2}{5} \Rightarrow \frac{7}{15}, \quad \frac{2}{3} \frac{3}{5} \Rightarrow \frac{11}{15} \quad \text{and} \quad \frac{1}{2} \frac{0}{6} \frac{0}{8} \Rightarrow \frac{0}{8} + \frac{0}{6 \times 8} + \frac{1}{2 \times 6 \times 8} = \frac{1}{96}.$$

This novel combination of a mixed radix notation was later taken up by Fibonacci (c.1175-1250) in Chapter 5 of his *Liber Abaci* (1202).⁴¹ However, it would take

⁴¹ This notation can be expanded to more terms, $\frac{cba}{fed} \Rightarrow \frac{a}{d} + \frac{b}{ed} + \frac{c}{fed}$, and so on.

another three centuries for it to evolve into the simpler notation now commonly used for all vulgar fractions.⁴²

The reverse operation, “Division of a Large Number by a Smaller One”, is taken up in the chapter headed “Division” (the seventh of the ten) and it is here that al-Hassar first demonstrates an application of his new notation. The context is how to deal systematically with the remainder when the dividend is not an integer multiple of the divisor. The example he brings is the division of ninety eight thousand seven hundred and forty six (98746) by thirty six (36).⁴³

The compound number thirty six has the factors four and nine, so first divide the ninety eight thousand seven hundred and forty six by four. This gives twenty four thousand six hundred and eighty six with two remaining over the four. Now divide the twenty four thousand six hundred and eighty six by nine. This gives two thousand seven hundred and forty two with eight remaining over the nine.

$$98746 \div 4 = 24686 \text{ R } 2 \quad 24686 \div 9 = 2742 \text{ R } 8$$

Al-Hassar now shows how the two remainders, the two over four from the first division and the eight over nine from the second, can be combined using his new notation.

Draw a horizontal line and write the nine and the four beneath it with the nine on the right and the four on the left. Now place the eight over the nine and the two over the four. Placing the integer [part of the quotient] to its right gives the final answer, two thousand seven hundred and forty two and eight ninths and two fourths of a ninth.⁴⁴

$$\frac{2}{4} \frac{8}{9} 2742 \Rightarrow 2742 + \frac{8}{9} + \frac{2}{4 \times 9} = 2742 \frac{17}{18}.$$

In this neat way, the remainders from any sequence of divisions by the factors of a compound divisor can be combined using al-Hassar's new notation. He now goes on to show how, having obtained this expression, the answer can be checked using the technique of “casting out sevens.”

⁴² This composite fraction notation also appears in a work by the Maghreb mathematician Ibn al Yasamin (d.1204), *Talqih al-aḥkār bi ruṣūm ḥurūf al-ghubār* (Fertilization of Thoughts with the Help of Dust Letters). See: Lamrabet, Driss, *Introduction à l'histoire des mathématiques maghrébines*, Rabat, 1994, 2013.

⁴³ Fol.5v in the Christ Church manuscript and fol.11r in the Vatican manuscript.

⁴⁴ Mixed numbers comprising an integer and a simple fraction are written with the integer to the right of the fraction.

The answer will be correct if dividing both the dividend and the quotient by seven leaves the same remainder. Dividing the dividend by seven gives a remainder of four:

$$98746 \div 7 = 14106 \text{ R } 4$$

Dividing the integer part of the quotient by seven leaves a remainder of five:

$$2742 \div 7 = 391 \text{ R } 5$$

Dividing the nine below the line in the fractional part of the quotient by seven leaves a remainder of two and multiplying this by the remainder five from the integer part gives ten.

$$9 \div 7 = 1 \text{ R } 2 \quad 2 \times 5 = 10$$

Dividing this ten by seven leaves a remainder of three. To this add the remainder of one that is left from dividing the eight that is above the nine by seven; this gives four.

$$10 \div 7 = 1 \text{ R } 3 \quad 8 \div 7 = 1 \text{ R } 1 \quad 1 + 3 = 4$$



Multiply this four by the other number below the line, namely, the four; this gives sixteen. Dividing the sixteen by seven leaves a remainder of two which when added to the two above the four in the expression gives four.

$$4 \times 4 = 16 \quad 16 \div 7 = 2 \text{ R } 2 \quad 2 + 2 = 4$$

Thus, when they are divided by seven, the dividend and quotient leave the same remainder, i.e., four, which bears out the correctness of the result.

The focus of Part Two is on the multiplication of simple, mixed, complex and compound fractions.⁴⁵ It comprises seventy two sub-sections or headings (שערִים), in the first of which the new notation by which a horizontal bar (*vinculum*) separates the numerator and denominator of a fraction is formally presented along with its basic usages and applications.⁴⁶

The first fraction is a half, followed by a third, a fourth, a fifth...and to depict a half, write a two and draw a line above it, and over the line write a

one thus  $\left(\frac{\aleph}{2}\right)$...and for a third, a three and a one over it thus 

⁴⁵ Fols. 7r–18r in the Christ Church manuscript, 14r to 42r in the Vatican manuscript and pp. 23 to 28 in Suter's translation.

⁴⁶ Sub-section 1: fols. 7r & 7v in the Christ Church manuscript and fols. 14r & 14v in the Vatican manuscript.

$\left(\frac{\kappa}{\lambda}\right)$...and for two thirds, write a two in place of the one $\frac{2}{3}$ $\left(\frac{2}{\lambda}\right)$ and so on.⁴⁷

All simple fractions whose denominators are ten or less, or a prime number greater than ten, are represented in this way. For example, a quarter, five sixths, an eleventh, two thirteenths, six nineteenths: $\frac{1}{4}$, $\frac{5}{6}$, $\frac{1}{11}$, $\frac{2}{13}$, $\frac{6}{19}$..., respectively, in modern Arabic numerals.

Al-Hassar moves on to the symbolic representation of those simple fractions whose denominators are greater than ten and can be factorised. These are designated 'by two names' i.e., as a fraction of a fraction. For example:

a twelfth (a half of a sixth),

$$\frac{\frac{1}{2}}{\frac{1}{6}} \quad \left(\frac{1}{2 \cdot 6} \Rightarrow \frac{0}{6} + \frac{1}{2 \times 6} = \frac{1}{12} \right);$$

a twenty eighth (a quarter of a seventh),

$$\frac{\frac{1}{4}}{\frac{1}{7}} \quad \left(\frac{1}{4 \cdot 7} \Rightarrow \frac{0}{7} + \frac{1}{4 \times 7} = \frac{1}{28} \right);$$

ten fifteenths or two thirds (three fifths and a third of a fifth),

$$\frac{\frac{2}{3}}{\frac{1}{5}} \quad \left(\frac{1 \cdot 3}{3 \cdot 5} \Rightarrow \frac{3}{5} + \frac{1}{3 \times 5} = \frac{10}{15} = \frac{2}{3} \right);$$

twenty one twenty fourths or seven eighths (five sixths and a quarter of a sixth),

$$\frac{\frac{1 \cdot 2}{4}}{\frac{1}{6}} \quad \left(\frac{1 \cdot 5}{4 \cdot 6} \Rightarrow \frac{5}{6} + \frac{1}{4 \times 6} = \frac{21}{24} \right);$$

and forty seven one hundred and forty threes (four thirteenths and three elevenths of thirteen),

$$\frac{\frac{3}{11} \cdot \frac{7}{13}}{\frac{1}{11}} \quad \left(\frac{3 \cdot 4}{11 \cdot 13} \Rightarrow \frac{4}{13} + \frac{3}{11 \times 13} = \frac{47}{143} \right).$$

Similarly for those designated by three or more names, i.e., a fraction of a fraction of a fraction, or a fraction of a fraction of a fraction of a fraction, and so on. For example, $\frac{\frac{1 \cdot 2 \cdot 5}{2 \cdot 6 \cdot 9}}{\frac{1}{11}}$ $\left(\frac{1 \cdot 5 \cdot 7 \cdot 9}{2 \cdot 6 \cdot 9 \cdot 11} \right)$, which reads nine elevenths and

⁴⁷ The Hindus wrote the denominator under the numerator but without the horizontal bar. The horizontal bar first appeared in Europe in Fibonacci's *Liber Abbaci* (1202), an innovation that he took from Arab sources.

seven ninths of an eleventh and five sixths of a ninth of an eleventh and half of a sixth of a ninth of an eleventh, i.e., ninety seven parts of one hundred and eight:

$$\frac{1\ 5\ 7\ 9}{2\ 6\ 9\ 11} \Rightarrow \frac{9}{11} + \frac{7}{9 \times 11} + \frac{5}{6 \times 9 \times 11} + \frac{1}{2 \times 6 \times 9 \times 11} = \frac{1067}{1188} = \frac{97}{108}$$

Turning to other applications of the his new notation, al-Hassar enjoins that the terms in a row of unrelated simple fractions – for example, three quarters, four fifths, five sixths, six sevenths and ten elevenths – should be clearly separated from one another: this is realised in the Christ Church manuscript⁴⁸ by means of vertical strokes, $\frac{3}{4} | \frac{4}{5} | \frac{5}{6} | \frac{6}{7} | \frac{10}{11}$ ($\frac{10}{11} | \frac{6}{7} | \frac{5}{6} | \frac{4}{5} | \frac{3}{4}$), and in the Vatican manuscript by blank spaces, $\frac{10}{11} \frac{6}{7} \frac{5}{6} \frac{4}{5} \frac{3}{4}$.⁴⁹

Numbers comprising an integer and a simple or composite fraction (mixed fractions) are denoted with the integer to the right of the fraction.⁵⁰ For example, eight and two sixths $\frac{2}{6} r$ ($\frac{2}{6} 8 \Rightarrow 8 \frac{1}{3}$) or one and a seventh and a third of a seventh:

$$\frac{1}{7} | \frac{1}{3} | 1 \Rightarrow 1 \left(\frac{1}{7} + \frac{1}{3} \cdot \frac{1}{7} = \frac{4}{21} \right) = 1 \frac{4}{21}.$$

Conversely, when the fraction (simple or composite) is to the right of a number, it indicates taking that fraction of the number. For example, three fourths of a fifth of eight (three twentieths of eight):

$$r \frac{3}{4} \frac{1}{5} 8 \Rightarrow \left(\frac{0}{4} \frac{3}{5} \right) \times 8 = \frac{3}{20} \times 8 = \frac{24}{20} = 1 \frac{1}{5}.$$

Standardised notations such as the now familiar arithmetical signs (+, −, ×, ÷, etc.) only came into use in the late sixteenth and early seventeenth centuries with the spread of printed books. In their absence, arithmetical operations were often indicated by a juxtaposition. Thus, for example, the simple addition of two

⁴⁸ Christ Church manuscript, fol.7v.

⁴⁹ Vatican manuscript, fol.14v. There is some confusion here. Although the text in the Vatican manuscript has "...four fifths...", the copyist entered a 2 under the 4 in the symbolic representation and not a 5. Furthermore, the words "six sevenths" do not appear in the text though the fraction is included in the symbolic representation. And to compound it all, neither the words nor the fraction appear in the Schoenberg manuscript (fol.25v) which also has spaces between the terms.

⁵⁰ Fibonacci followed this Arab practice of placing the fraction to the left of the integer.

⁵¹ Sub-sections 2 and 4, respectively: fol.7v in the Christ Church manuscript and fols.15r & 15v in the Vatican manuscript.

fractions is represented in al-Hassar's treatise by placing their symbolic representations side by side:

$$\frac{7}{2} \frac{3}{7} \Rightarrow \left(\frac{4}{5} + \frac{3}{4} \right).$$

A notation could, however, have more than just one usage. For example, the constituent fractions represented by the sequence of numerators and denominators in the composite fraction notation are linked by the conjunction 'and' (= plus). In this way, the composite fraction $\frac{5}{6} \frac{4}{5} \frac{3}{4}$ is read (from right to left) as three fourths and four fifths of a fourth and five sixths of four fifths of a fourth:

$$\frac{5}{6} \frac{4}{5} \frac{3}{4} \Rightarrow \frac{3}{4} + \frac{4}{4 \times 5} + \frac{5}{4 \times 5 \times 6}.$$

Al-Hassar now adds an alternative usage of this notation, namely, that it can also be read without the conjunction 'and' as a sequence of simple fractions such that each fraction is that part of the following fractions. Taking the above example, this gives (reading from right to left) three fourths of four fifths of five sixths, i.e., $\frac{3}{4} \times \frac{4}{5} \times \frac{5}{6}$ in modern notation.⁵²

In each of the remaining seventy one sections, a different calculation involving the multiplication of a fraction (or fractions) is exemplified: an integer by a simple fraction; a composite fraction by a mixed fraction; a composite fraction by another composite fraction; a fraction of a mixed fraction (simple or composite) by an integer, a simple fraction, a composite fraction or another mixed fraction (simple or composite); and so on. Each of these "how to" worked examples starts with the words "When it is said to you (כשיאמר לך) ..." In a number of instances, al-Hassar shows how to check the answer arrived at by the technique of "casting out" and some of the more advanced or complex examples are also followed by a scholium (פרק). Suter remarks: "These sections are the richest of all known examples of fractions in Arabic arithmetic books, so extensive that it appears tiring, unwieldy and confusing for the practitioner."⁵³ So

⁵² The Andalusian mathematician, El-Qalasadi (1412-1486), differentiated between the two usages by inserting a vertical line between the individual fractions in the latter:

$\frac{7}{5} \frac{4}{5} \frac{3}{4}$ (Suter *op. cit.* p.27). The latter usage is exercised in sub-sections 60 to 69 of

Part One: Christ Church manuscript fols.16r and Vatican fols.36v to 42v.

⁵³ Suter, *op. cit.* p. 24.

much so, that at times the work reads almost like a manual or recipe book.⁵⁴ Not surprisingly, there are numerous copyist errors in both Hebrew versions, many of which were later noticed and corrected in the margins.

The following are a representative sample of these worked examples.

- (i). On the multiplication of a fraction by an integer.⁵⁵

When it is said to you, multiply five sixths by ten. Place the five sixths on one row and the ten on the row below, in this way:

$$\begin{array}{r} 2 \\ 1 \\ \hline 10 \end{array} \quad \left(\begin{array}{c} \frac{5}{6} \\ 10 \end{array} \right)$$

Multiply the five above the six by the ten, $5 \times 10 = 50$, and divide the result by six, $50 \div 6 = 8 \frac{2}{6}$. The answer is eight and two sixths.

- (ii). On the multiplication of a composite fraction by an integer.⁵⁶

When it is said to you, multiply a fifth and a half of a fifth by twelve. Place the fifth and a half of a fifth on one row and the twelve on the row below, in this way:

$$\begin{array}{r} 11 \\ 22 \\ \hline 12 \end{array} \quad \left(\begin{array}{c} \frac{1}{2} \frac{1}{5} \\ 12 \end{array} \right)$$

Multiply the one above the five by two, $1 \times 2 = 2$, and add to this the one that is above the two: $1 + 2 = 3$. Multiply the three by twelve, $3 \times 12 = 36$, and divide the result by the denominator, i.e., by two, $36 \div 2 = 18$, followed by five, $18 \div 5 = 3 \frac{3}{5}$. The answer is three and three fifths.

- (iii). On the multiplication of a simple fraction by another simple fraction.⁵⁷

⁵⁴ “The fractions involve numerous complications peculiar to the Arabs which fortunately found little favour with their European translators.” Karpinski L.C., *The History of Arithmetic*, Rand McNally, Chicago (1925), p.50.

⁵⁵ Sub-section 2: fol.7v in the Christ Church manuscript and fol.14v in the Vatican manuscript.

⁵⁶ Sub-section 3: fol.7v in the Christ Church manuscript and fol.15r in the Vatican manuscript. There is a copyist error in the wording of the example in the Christ Church manuscript. It reads “multiply two fifths...” and not “a fifth” whereas the answer given requires that it be the latter. The symbolic representation of the calculation is, however, correct as is the text in the Vatican manuscript.

When it is said to you, multiply seven eighths by nine tenths. Place the seven eighths on one row and the nine tenths on a row below, in this way:

$$\begin{array}{r} \text{ז} \\ \text{ח} \\ \hline \text{י} \end{array} \quad \left(\begin{array}{c} \frac{7}{8} \\ \frac{9}{10} \end{array} \right)$$

Multiply the seven above the eight by the nine above the ten, $7 \times 9 = 63$, and divide the result by the denominators i.e., by eight, $63 \div 8 = 7\frac{7}{8}$, followed by ten, $7\frac{7}{8} \div 10 = \frac{7}{10} + \frac{7}{80}$. The answer is seven tenths and seven eighths of a tenth:

$$\begin{array}{r} \text{ז} \text{ ז} \\ \text{ח} \text{ י} \end{array} \quad \left(\frac{7}{8} \frac{7}{10} \Rightarrow \frac{7}{10} + \frac{7}{8 \times 10} = \frac{63}{80} \right).$$

- (iv). On the multiplication of a composite fraction by a simple fraction.⁵⁸

When it is said to you, multiply six sevenths and a third of a seventh by eight ninths. Place the six sevenths and a third of a seventh on one row and the eight ninths on a row below, in this way.

$$\begin{array}{r} \text{ז} \text{ ז} \\ \text{ח} \text{ ז} \\ \hline \text{ט} \end{array} \quad \left(\begin{array}{c} \frac{1}{3} \frac{6}{7} \\ \frac{8}{9} \end{array} \right)$$

Multiply the six above the seven in the upper multiplicand by the three below the line, $6 \times 3 = 18$, and add the product to the one above the line making nineteen. Multiply this by the eight in the lower multiplicand, $19 \times 8 = 152$. Divide the one hundred and fifty two by the denominators of the two multiplicands, i.e., by three, $152 \div 3 = 50\frac{2}{3}$, followed by seven, $50\frac{2}{3} \div 7 = 7 + \frac{1\frac{2}{3}}{7}$, followed by nine, $(7 + \frac{1\frac{2}{3}}{7}) \div 9 = \frac{7}{9} + \frac{1\frac{2}{3}}{9} + \frac{\frac{2}{3}}{9}$. This gives seven ninths and a seventh of a ninth and two-thirds of a seventh of a ninth:

⁵⁷ Sub-section 28: fol.11r in the Christ Church manuscript and fol.24v in the Vatican manuscript.

⁵⁸ Sub-section 29: fol.11r in the Christ Church manuscript and fol.25r in the Vatican manuscript.

$$\frac{\text{ש } \text{ל } \text{ז}}{\text{ז } \text{ז } \text{ז}} \left(\frac{2}{3} \frac{1}{7} \frac{7}{9} \right).$$

- (v). On the multiplication of the sum of two fractions by an integer.⁵⁹

When it is said to you, multiply the sum of three quarters and four fifths by fifteen. Place the three quarters and four fifths in a row with the fifteen below them, in this form:

$$\frac{\text{ז } \text{ז}}{\text{ז } \text{ז}} \frac{\text{ז}}{\text{ז}} \left(\frac{4}{5} \frac{3}{4} \right).$$

Starting with the row of fractions, multiply the three (the numerator) that is over the four by the five (the denominator) under the four ($3 \times 5 = 15$) and the four (the numerator) that is over the five by the four (the denominator) under the three ($4 \times 4 = 16$). Adding the two products gives thirty one: $15 + 16 = 31$.

Multiplying the thirty one by the fifteen gives four hundred and sixty five, ($31 \times 15 = 465$). Dividing this by the denominators of the two fractions, four followed by five, gives twenty three and one fifth and a quarter of a fifth:⁶⁰

$$465 \div 4 = 116 \frac{1}{4}; 116 \frac{1}{4} \div 5 = 23 \frac{1}{5} + \frac{1/4}{5} \Rightarrow \frac{1}{4} \frac{1}{5} 23.$$

- (vi). On the multiplication of a fraction of one integer by a different fraction of another integer.⁶¹

When it is said to you, multiply five sixths and half a sixth of eight by eight ninths and a fifth of a ninth of twelve:

$$\begin{array}{l} \text{ז } \frac{\text{ז } \text{ז}}{\text{ז } \text{ז}} \quad 8 \left(\frac{1}{2} \frac{5}{6} \right) \\ \text{ל } \frac{\text{ז } \text{ז}}{\text{ז } \text{ז}} \quad 12 \left(\frac{1}{5} \frac{8}{9} \right) \end{array}$$

Taking the top row first, multiply the five over the six by the two in the denominator, $5 \times 2 = 10$; add the product to the one above the line, $10 + 1 = 11$ and multiply the sum by eight, $11 \times 8 = 88$.

⁵⁹ Sub-section 5: fol.8r in the Christ Church manuscript and fol.15v in the Vatican manuscript.

⁶⁰ A copyist error in the Christ Church manuscript gives the answer as “twenty three and two fifths and a quarter of a fifth.”

⁶¹ Sub-section 39: fol.12v in the Christ Church manuscript and fol.28r in the Vatican manuscript.

Moving to the second row, multiply the eight over the nine by the five in the denominator, $8 \times 5 = 40$; add the product to the one above the line, $40 + 1 = 41$ and multiply the sum by twelve, $41 \times 12 = 492$. Multiply the eighty eight by the four hundred and ninety two, $88 \times 492 = 43296$. Divide the forty three thousand two hundred and ninety six by the denominators of the two composite fractions: two, five, six and nine.

$$43296 \div 2 = 21648; \quad 21648 \div 5 = 4329 \frac{3}{5};$$

$$4329 \frac{3}{5} \div 6 = 721 \left(\frac{3}{5} + \frac{3/5}{6} \right) \text{ and } 721 \left(\frac{3}{6} + \frac{3/5}{6} \right) \div 9 = 80 \left(\frac{1}{9} + \frac{3/6}{9} + \frac{3/5/6}{9} \right).$$

This gives eighty and a ninth and three sixths of a ninth and three fifths of a sixth of a ninth and zero halves of a fifth of a sixth of a ninth:

$$\begin{array}{r} 0 \ 3 \ 3 \ 1 \\ 5 \ 2 \ 1 \ 2 \end{array} \quad \frac{0}{2} \frac{3}{5} \frac{3}{6} \frac{1}{9} 80 \Rightarrow 80 \frac{48}{270} = 80 \frac{8}{45}$$

Dividing by the denominators in the reverse order – nine, six, five and two – produces a different but equivalent composite fraction, i.e., one with the same value:

$$\frac{6}{9} \frac{4}{6} \frac{1}{5} \frac{0}{2} 80 \Rightarrow 80 \frac{96}{540} = 80 \frac{8}{45}$$

Because of the different ways in which a juxtaposition could be understood – addition in the case of two fractions or taking that fraction of a number when the fraction (simple or composite) is to the right of the number – ambiguities could arise, especially where complex calculations were concerned. For example:

- (vii). On the multiplication of a fraction and an integer and two simple fractions and a whole number and a fraction by a similar expression.⁶²

When it is said to you, multiply three fourths of five and a half and five sixths of three and two fifths by two thirds of four and a seventh and three eighths of two and three elevenths, write down the question in this form (reading from right to left):

⁶² Sub-section 58: fol.15v in the Christ Church manuscript and fol.35r in the Vatican manuscript.

$$\begin{array}{c} \frac{2}{5} \cdot 3 \frac{5}{6} \frac{1}{2} 5 \frac{3}{4} \\ \frac{1}{11} 2 \frac{1}{8} \frac{1}{7} 4 \frac{2}{3} \end{array} \quad \left(\begin{array}{c} \frac{2}{5} 3 \frac{5}{6} \frac{1}{2} 5 \frac{3}{4} \\ \frac{1}{11} 2 \frac{1}{8} \frac{1}{7} 4 \frac{2}{3} \end{array} \right)$$

$$\dots \text{ the answer is } \frac{0 \ 6 \ 5 \ 5 \ 5 \ 1}{10 \ 7 \ 8 \ 8 \ 9 \ 11} 25 \Rightarrow 25 \frac{6593}{44352} = 25.148587\dots$$

To arrive at this result, al-Hassar had read each of the symbolic representations as the sum of two parts, each a fraction of a mixed fraction. In modern notation this gives:

$$\left(\frac{3}{4} \cdot 5 \frac{1}{2} + \frac{5}{6} \cdot 3 \frac{2}{5} \right) \times \left(\frac{2}{3} \cdot 4 \frac{1}{7} + \frac{3}{6} \cdot 2 \frac{3}{11} \right) = 25.148587\dots$$

However, because of the different ways in which a juxtaposition can be understood other readings were also possible. Al-Hassar was clearly aware of this and so he continues:

This question can be read in different ways. For example, take the five sixths from the second part of [the expression in the top row] and join it to the first part, whereupon the first part becomes taking a fraction of an integer and two fractions.⁶³ This gives:

$$\frac{2}{5} 3 \frac{5}{6} \frac{1}{2} 5 \frac{3}{4} \Rightarrow \frac{3}{4} \left(5 + \frac{1}{2} + \frac{5}{6} \right) + 3 \frac{2}{5}.$$

Furthermore, the expression does not have to be read as the sum of two parts; it could just as well be read as the sum of three, four, five or even more parts.

In the scholium that follows, al-Hassar brings other examples of how this expression could be read.

$$\text{In two parts: } \frac{2}{5} 3 \frac{5}{6} \frac{1}{2} 5 \frac{3}{4} \Rightarrow \frac{3}{4} \cdot 5 + \left(\frac{1}{2} + \frac{5}{6} \right) \cdot 3 \frac{2}{5}$$

In three parts:

$$\frac{2}{5} 3 \frac{5}{6} \frac{1}{2} 5 \frac{3}{4} \Rightarrow \frac{3}{4} + \left(5 \frac{1}{2} + \frac{5}{6} \right) + 3 \frac{2}{5} \quad \frac{2}{5} 3 \frac{5}{6} \frac{1}{2} 5 \frac{3}{4} \Rightarrow \frac{3}{4} \cdot 5 + \frac{1}{2} \cdot \frac{5}{6} + 3 \frac{2}{5}$$

⁶³ He adds that a calculation of a type that has already been exemplified in sub-section forty four.

Arithmetical texts were all hand written at the time which would only have added even more ambiguities to those already inherent in the absence of standardised signs and the reliance on juxtapositions.⁶⁴

In the last two sub-sections in Part One, nos. 71 and 72,⁶⁵ al-Hassar introduces a novel way of representing the subtraction of a fraction, which may be one of the earliest instances of an arithmetical sign. His innovation was to employ the Arabic word *illā* (except for) as what we would now term a minus sign in the representation of multiplications involving fractions.⁶⁶ In the Hebrew versions, the Arabic word *illā* is translated as אלא. Its usage was not, however, standardised and its meaning was modulated by how the various juxtapositions were read. For example in sub-section 71:

On the Multiplication of a Fraction with a Stipulation (בתנאי).⁶⁷ When it is said to you, multiply three fourths lacking (חסר) a sixth by four fifths except for (אלא) a third, write down the question in this form:

$$\frac{3}{4} \text{ אלא } \frac{1}{6} \times \frac{4}{5} \text{ אלא } \frac{1}{3} \left(\frac{1}{6} \text{ illā } \frac{3}{4} \right) \left(\frac{1}{3} \text{ illā } \frac{4}{5} \right)$$

This can be read in two different ways:

(i) Take three fourths minus a sixth and multiply it by four fifths minus a third.

$$\left(\frac{3}{4} - \frac{1}{6} \right) \times \left(\frac{4}{5} - \frac{1}{3} \right) = \frac{49}{180}$$

Al-Hassar gives the result for this reading as:

$$\frac{3}{5} \frac{3}{8} \frac{2}{9} \Rightarrow \frac{2}{9} + \frac{3}{8 \times 9} + \frac{3}{5 \times 8 \times 9} = \frac{98}{360} = \frac{49}{180}$$

⁶⁴ In al-Uqlīdisī's treatise, groups of numbers are in some instances surrounded by lines apparently to separate them from the writing around them, but this is not systematically adhered to; addition and multiplication are likewise indicated in places by the insertion of three dots, ∴ (the modern handwritten 'therefore sign'), between the numbers, though, as often as not, they too are omitted (A.S.Saidan, *op. cit.* p.423).

⁶⁵ Fol.18r in the Christ Church manuscript and fol.41v-42v in the Vatican manuscript.

⁶⁶ The same Arabic word was used in a similar way some two hundred years later in the *Miftāḥ al Ḥisāb* written by the Persian astronomer and mathematician, Jamshīd al-Kāshī (c. 1380–1429): see Saidan *op. cit.* p.424.

⁶⁷ '...mit Ausschliessung (*istitnā*)' i.e. 'an exception' in Suter's translation (*op. cit.* p.28).

- (ii) Take three fourths minus a sixth of three fourths and multiply the result by four fifths minus a third of four fifths.

$$\left(\frac{3}{4} - \frac{1}{6} \cdot \frac{3}{4}\right) \times \left(\frac{4}{5} - \frac{1}{3} \cdot \frac{4}{5}\right) = \frac{15}{24} \times \frac{8}{15} = \frac{8}{24} = \frac{1}{3}$$

The second of the sub-sections, no. 72, is headed, “On the Multiplication of a Fraction of a Number with a Stipulation (בתנאי).” The worked example reads:

When it is said to you, multiply three fourths of five except for (אלא) a sixth by four fifths of three except for (אלא) a fourth, write down the question in this form:

$$\frac{3}{4} \text{ אלא } 2 \frac{3}{7} \left(\frac{1}{6} \text{ illâ } 5 \frac{3}{4} \right)$$

$$\frac{3}{4} \text{ אלא } 2 \frac{3}{7} \left(\frac{1}{4} \text{ illâ } 3 \frac{4}{5} \right)$$

This can be read in three different ways:

- (i) Take three fourths of five minus a sixth of five and multiply it by four fifths of three minus a fourth of three.

$$\left(\frac{3}{4} \cdot 5 - \frac{1}{6} \cdot 5\right) \times \left(\frac{4}{5} \cdot 3 - \frac{1}{4} \cdot 3\right) = 4 \frac{65}{80}$$

Al-Hassar gives the result for this reading as:

$$\frac{0}{6} \frac{1}{8} \frac{8}{10} 4 \Rightarrow 4 \left(\frac{8}{10} + \frac{1}{8 \times 10} \right) = 4 \frac{65}{80}.$$

- (ii) Take three fourths of five minus a sixth of three fourths of five and multiply it by four fifths of three minus a fourth of four fifths of three.

$$\left(\frac{3}{4} \cdot 5 - \frac{1}{6} \cdot \frac{3}{4} \cdot 5\right) \times \left(\frac{4}{5} \cdot 3 - \frac{1}{4} \cdot \frac{4}{5} \cdot 3\right) = 5 \frac{5}{8}$$

- (iii) Take three fourths of five minus a sixth and multiply it by four fifths of three minus a fourth.

$$\left(\frac{3}{4} \cdot 5 - \frac{1}{6}\right) \times \left(\frac{4}{5} \cdot 3 - \frac{1}{4}\right) = 7 \frac{169}{240}$$

Al-Hassar concludes: “What we have said about the multiplication of fractions should suffice for any person who studies it attentively...And may God the guide, show us the way to what is right.”

Part Three encompasses a variety of operations and computations involving fractions and combinations of integers and fractions. These include the transformation, addition and subtraction of fractions; summations of numerical series; examples of useful commercial and monetary calculations; the famous wheat and chessboard problem; algebraic type computations in which the value of an unknown quantity (*šai* in Arabic, translated as דבר in Hebrew and meaning 'a thing') is sought; and some novel methods for extracting exact and/or approximate square roots of integers and fractional numbers. Here too, many of the worked examples are accompanied by a scholium (פרק).

Taking the designations in al-Hassar's treatise as our guide, the text of Part Three can be viewed as comprising five chapters, each composed of headings and sub-headings, in each of which a specific type of calculation or problem is first delineated and then exemplified by one or more worked examples or solutions.

- 3.1 Transforming Fractions (שער פריטה).⁶⁸
 - 3.1.1. Changing a Fraction's Denominator (five sub-headings).
- 3.2 Addition.⁶⁹
 - 3.2.1. The Addition of Fractions (nine sub-headings).⁷⁰
 - 3.2.2. Monetary Calculations (five sub-headings).⁷¹
 - 3.2.3. The Summation of Numerical Series (ten sub-headings).⁷²
 - 3.2.4. The Article on Doubling (המאמר בכפול).⁷³

If a chessboard were to have grains of wheat placed upon each square such that one was placed on the first square, two on the second, four on the third, and so on; how many grains of wheat would there be on the board at the finish?
- 3.3 Subtraction (שער ההשלכה).⁷⁴
 - 3.3.1. The Subtraction of Fractions (four sub-headings).⁷⁵

⁶⁸ Christ Church fols.18v to 19r; Vatican fols.42r to 44r; Suter's *Drittes Kapitel* p. 28-29.

⁶⁹ Suter's *Viertes Kapitel* p. 29-34, there is, however, no break or new heading at this point in the Hebrew texts.

⁷⁰ Christ Church fols.19r to 20r; Vatican fols.44r to 46r; Suter p.29.

⁷¹ Christ Church fols.20r to 21r; Vatican fols.46r to 48v; Suter p.29-31.

⁷² Christ Church fols.21r to 22v; Vatican fols.48v to 52r; Suter p.31-34.

⁷³ Christ Church fol.22v; Vatican fol.52r.

⁷⁴ Suter's *Fünftes Kapitel* p.34-35.

⁷⁵ Christ Church fols.22v to 23r; Vatican fols.52r to 54r. There are 12 sub-sections.

3.3.2 Monetary Calculations (seven sub-headings).⁷⁶3.3.3 The Reed and Fish Problems.⁷⁷

(i) A reed, standing in the mud by a river bank, has a third of its length in the mud, a quarter in the water and 10 spans (units of length) showing above the water. How long is the reed? [Ans. 24 spans]

(ii) A reed, standing in the mud by a river bank, has a third of its length and two spans in the mud, a quarter of its length and three spans in the water and 10 spans (units of length) showing above the water. How long is the reed? [Ans. 36 spans]

(iii) If a fish's head is a third of its weight, the tail a quarter and its middle weighs 10 pounds, how heavy is the fish? [Ans. 24 pounds]

3.4 Division (שער החלוקה).⁷⁸3.4.1. Division of a Smaller Number by a Larger One (twenty two sub-headings).⁷⁹3.4.2. Division of a Larger Number by a Smaller One (twenty six sub-headings).⁸⁰3.4.3. The Augmenting (חיתום) of Fractions.⁸¹

Know that this section is of great assistance in the whole of arithmetic and especially in algebra (Hebrew: חיתום; Arabic: *el-ğēbr*).⁸²

If it is said to you, by how much must a third be augmented in order to become one? In other words, by what number must a

⁷⁶ Christ Church fols.23r to 24r; Vatican fols.52r to 54r;

⁷⁷ Christ Church fol.24r; Vatican fol.55v.

⁷⁸ Suter's *Sechtes Kapitel* p.35-37.

⁷⁹ Christ Church fols.24r to 26v; Vatican fols.56r to 61v. The headings of the 22 sub-sections are listed at the end of the section on fols.26v and 61v, respectively. The text of sub-sections 16 to 21 is missing, however, in the Christ Church manuscript; an entry in the left-hand margin of fol.26r opposite where they should appear reads בכאן חסר (there are [items] missing here).

⁸⁰ Christ Church fols.26v to 29r; Vatican fols.61v to 67v.

⁸¹ Christ Church fol.29v; Vatican fols.68v to 69v; Suter p.36.

⁸² Depending on the context, the Hebrew word חיתום can mean Algebra or, as in the present instance, refer to a procedure for augmenting a fraction. In all the instances, the corresponding Arabic word is *el-ğēbr*.

third be multiplied to make one? Answer: By one divided by a third.

3.4.4. The Reduction (ירידה) of a Fraction.⁸³

Know that Reduction (Hebrew: ירידה; Arabic: *el-hatt*) is the reverse of Augmenting.

If it is said to you, by how much must one be reduced in order to become a half? In other words, by what must one be multiplied to make a half? Answer: By a half divided by one.

3.5 Extracting the Roots of Integers and Fractions.⁸⁴

3.5.1. Finding the Roots of Integers and Fractions that have Exact (Rational) Square Roots.⁸⁵

3.5.2. Finding the Approximate Roots of Integers and Fractions that do not have Exact (Rational) Square Roots.⁸⁶

A full and detailed description of all the computations is far beyond the remit of this article. Suffice to say, that although al-Hassar employs his new composite notation throughout, the underlying mathematics is not new. Indeed, the topics and the order in which they appear are little changed from that in earlier Arabic arithmetical texts.

The last worked example before the colophons on fol.31v of the Christ Church codex is "Find the square root of three sevenths."

Multiply $\frac{3}{7}$ by the square of its denominator: $49 \cdot \frac{3}{7} = 21$; then take the square root of 21 which is approximately $4\frac{3}{5}$ and divide it by the square root of 49: $4\frac{3}{5} \div 7 = \frac{23}{35}$. The result is a fairly close approximation to the square root of $\frac{3}{7}$.⁸⁷

The method used here is typical of those al-Hassar employs to find approximate values for irrational square roots. It is also the last item in Suter's German

⁸³ Christ Church fol.29v; Vatican fol.69v; Suter p.36-37.

⁸⁴ Suter's *Siebentes Kapitel* p.37-39.

⁸⁵ Christ Church fols.30r to 31r; Vatican fols.69v to 72r; Suter p.37.

⁸⁶ Christ Church fols.31r to 31v; Vatican fols.72r to 73r; Suter p.37-39.

⁸⁷ For another example see: Friedrich Katscher, "Extracting Square Roots Made Easy: A Little Known Medieval Method – Al-Hassar's Description of the Method." *MAA Convergence*, vol. 7 (Nov. 2010), DOI:10.4169/loci003494. The example he describes is on fol.31r of the Christ Church manuscript and fol.73r of the Vatican text.

translation of the Gotha manuscript and is, presumably, where both al-Hassar's original treatise and Moses ibn Tibbon's Hebrew translation ended. However, neither the Vatican nor the Christ Church manuscript actually ends at this point.

In the Vatican manuscript, this worked example is followed by a further nine examples and exercises, only after which does the colophon appear on fol.76r.⁸⁸ In the Christ Church manuscript, the order is reversed and the same nine examples and exercises appear immediately after the colophons, starting at the top of the left-hand column of fol.31v and continuing up to fol.33r (Fig.189.2). They do not, however, appear in Suter's translation nor, by implication, in the Gotha manuscript.

The presence of these items at the end of the Vatican and Christ Church manuscripts is anomalous. Judging by their subject-matter, they really belong much earlier in the text. The first seven are arithmetical calculations involving fractions and belong in the relevant sections of Parts Two and Three. The subject of the eighth item is long multiplication, and that of the ninth is the technique of "casting out nines" used to check the result of a multiplication, both of which really belong under the heading "Multiplication" in Part One. A method for carrying out long multiplications does in fact appear under that heading but it is very different from the one presented here. It is the method that was employed when working with a sand table and involves the deletion and rewriting of numerals at each step; this is easily done on a sand table though it can be somewhat confusing and prone to errors. The given worked example is the multiplication of 43 by 76 and reads as follows.⁸⁹

When it is said to you, multiply 43 by 76. Put the 43 in one row and write the 76 in the row below, in such a way that the units column of the second number is under the tens column of the first, in the following manner:

$$\begin{array}{r} 43 \\ 76 \end{array}$$

Now multiply the last digit of the upper number with the first of the lower, i.e., 4 with 7; this gives 28. Place the 8 above the 7 in the top line and the 2 to its left:

⁸⁸ There is also an appendix on the subject of the extraction of cube roots that is found in neither the Christ Church Codex 189 nor Suter's translation.

⁸⁹ Christ Church fol.3v; Vatican fol.7v. For another example of this method see: *Episodes in the Mathematics of Medieval Islam* by J.L. Berggren, Springer, New York (1986), p.34

$$\begin{array}{r} 2843 \\ 76 \end{array}$$

Now multiply the same 4 by the 6 below it, which gives 24; superimpose the 4 on the upper line (which leaves it unchanged) and add the 2 to the 8 above the 7, which gives 10; delete the 8 and put in its place the zero from the ten; add the 2 to this and the one from the ten which gives 3; delete the 2 and put the 3 in its place.

$$\begin{array}{r} 2843 \rightarrow 2043 \rightarrow 3043 \\ 76 \quad 76 \quad 76 \end{array}$$

Move the lower number one place to the right so that the 6 is under the 3 and the 7 under the 4; then multiply the 3 from the upper number by the 7 below which gives 21; add to this the 4 from the upper row which gives 25; now delete the 4 and set in its place the 5; put the 2 in the place of zero.

$$\begin{array}{r} 3043 \rightarrow 3253 \\ 76 \quad 76 \end{array}$$

Multiply the 3 by the 6 below it which gives 18; replace the 3 with the 8 and add the 1 to the 5 which gives 6; delete the 5 and put the 6 in its place.

$$\begin{array}{r} 3253 \rightarrow 3268 \\ 76 \quad 76 \end{array}$$

So the result of the multiplication is 3268.

This method became obsolete with the introduction of paper from the Islamic world into medieval Europe and by the fifteenth century, when the Vatican and Christ Church manuscripts were written, there was clearly a need for a better technique (algorithm), especially for multiplying large numbers.⁹⁰ Accordingly, the eighth item begins: "On the multiplication of integers by another method that is not from the book:" the "book" is presumably al-Hassar's treatise. What follows is the now familiar pen and paper method of long multiplication. Two worked examples are given: squaring twenty two, $22 \times 22 = 484$, and multiplying four hundred and thirty two by three hundred and twenty three, $432 \times 323 = 139536$.

This as far as the Vatican manuscript goes, but the copyist of the Christ Church manuscript added an example of the lattice (gelosia or sieve) technique

⁹⁰ Suter (*op. cit.* p.17), expresses surprise that there is no reference to the Lattice Multiplication or to any other method in the Gotha manuscript, attributing this to al-Hassar's continued use of a sand board or to copyists' omissions.

for the multiplication of large numbers, in this instance, to calculate the square of the number 56742 (Fig.189.9).⁹¹

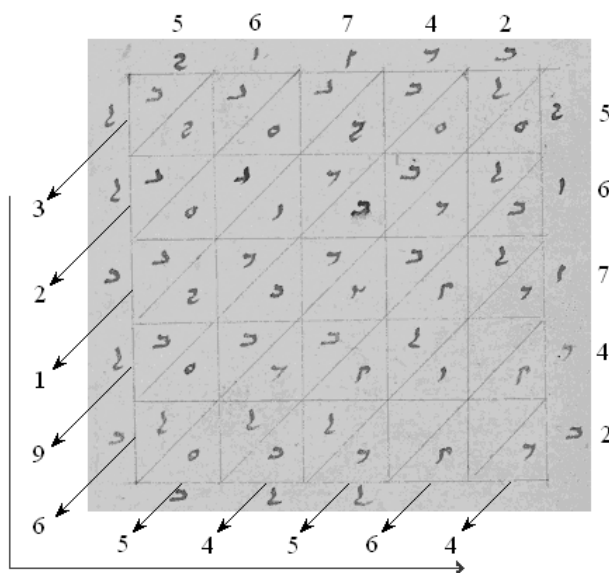


Fig.189.9: The 5 x 5 grid on fol.33r of the Christ Church manuscript for calculating the square of 56742 (**21975**), annotated to show how the multiplication is carried out. The multiplicand is across the top of the lattice and the multiplier down the right side; in this example both are the same. A product is calculated for each cell by multiplying the digit at the top of the column and the digit at the right of the row: the tens digit of the product is placed above the diagonal that passes through the cell, and the units digit below. After filling all the cells, the digits in each diagonal are summed, starting from the bottom right cell and the units digit of the sum is entered below the adjacent column, as shown; if the sum is greater than ten, the tens are carried into the next diagonal (written outside the grid at the bottom of each diagonal). After summing all the diagonals, the answer, 3219654564, is read off from top to bottom on the left and continuing from left to right below the grid.⁹²

The earliest extant example of the lattice technique in Europe is in a 14th century Latin manuscript, *Tractatus de minutis philosophicis et vulgaribus* (A

⁹¹ Fibonacci is often credited with introducing this technique into Europe but this is incorrect. What he described in Chapter 3 of his *Liber Abaci* is a related technique known as “chessboard multiplication” that works differently. The cells are not divided diagonally and only the lower-order digit is entered in each cell.

⁹² The copyist explained and carried out the procedure correctly but, for some unexplained reason, he entered an incorrect answer, 22106564, in the text.

Treatise on Small Measurements, Scientific and General).⁹³ It also appears in the earliest printed mathematics book, the *Treviso Arithmetic*, published in the town of that name in 1478, two years after the date of the Christ Church manuscript.



Fig.189.10. Abacist vs. Algorismist by Gregor Reisch, *Margarita Philosophica*, Strasbourg, 1504. The woodcut shows Arithmetica observing an algorist and an abacist. She appears to favour the algorist; her dress is adorned with Gobar-based numerals and she is looking approvingly in his direction.

By the fifteenth century, the abacus and Roman numerals that had been in common use for more than a thousand years, were being replaced across Europe by the algorithm and Gobar-based numerals. The transition was slow in coming; the “abacists” would not surrender to the “algorists” without a fight (Fig.189.10).

The advantages of calculating with pen and paper were not always immediately apparent.⁹⁴ The abacists’ archaic modes of doing arithmetic would,

⁹³ Bodleian Library, Oxford, MS Digby 190, fol.75r.

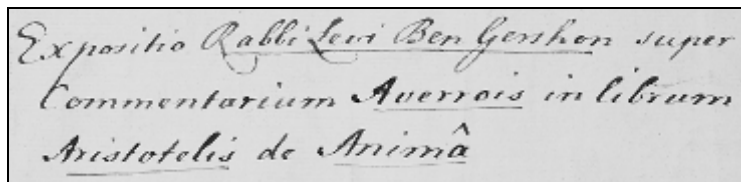
⁹⁴ For an entertaining demonstration of the relative advantages, see Richard Feynman’s “The Abacist versus the Algorist”: <http://press.princeton.edu/chapters/i9662.pdf>

however, ultimately prove inadequate in the expanding mercantile economies of the Renaissance and this, together with the falling price of paper and the concomitant spread of printing, would ultimately lead to the triumph of the algorists in the sixteenth century.⁹⁵

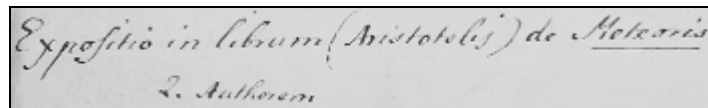
⁹⁵ A version of this Introduction to Al-Hassar's Treatise, suitably adapted for educational purposes, has been published in:
MAA Press Periodicals: *Convergence*, May (2017):
DOI:10.4169/convergence20170501
<http://www.maa.org/press/periodicals/convergence/moses-ibn-tibbon-s-hebrew-translation-of-al-hassars-kitab-al-bayan>

Codex 190: Three Hebrew Expositions on Works by Aristotle

There are two inscriptions in this codex, one on a note stuck onto the inside of the front cover and the other on the inside of the back cover. The former reads: *Expositio Rabbi Levy Ben Gershon super Commentarium Avenois in Librum Aristotelis de Anima* (An exposition by R. Levy ben Gershon of Averroes' supercommentary on Aristotle's *de Anima*);



and the latter: *Expositio in librum (Aristotelis) de Meteoris; 2. Authorem* (An exposition of Aristotle's book *de Meteoris*).¹



According to the original entry in Kitchin's 1863 catalogue (Fig.190.1), the codex should contain just these two works. It actually comprises, however, three separate manuscripts, each the product of a different copyist and each containing a different text; the only feature they have in common is that all three contain a commentary on a work by Aristotle.

Paper and parchment (ff. 175), in folio: Neubauer OX 2450; IMHM Film No. F 32854.

¹ The similarity between the handwriting and format of these two and those of the inscription in Codex 190, whose subject matter is also medieval philosophy, suggests that they were probably entered by the same person and, likewise, after 1733.

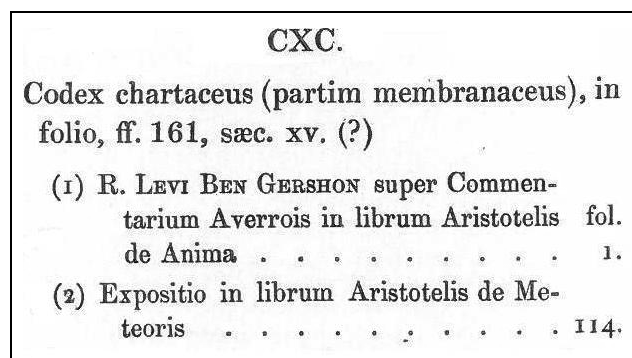


Fig. 190.1. The original entry for Codex 190 in Kitchin's catalogue.

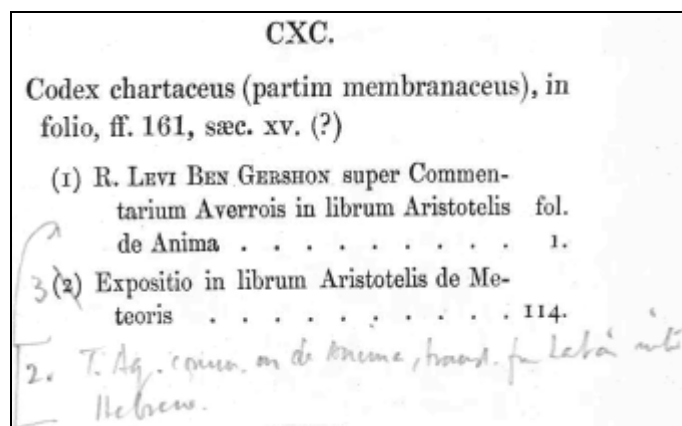


Fig. 190.2. The pencilled addition in the corrected entry for Codex 190 in the Library's present amended copy of Kitchin's catalogue. The supercommentary by R. Levi Gershon (Gersonides) occupies fols. 1 to 34; the Hebrew translation of the commentary by Thomas Aquinas on *De Anima* fols. 36 to 116; folios 117 to 121 are blank and the commentary on *Aristotle's Meteoris* now begins on fol. 122.²

The manuscript missing from the original catalogue entry is a Hebrew translation of a commentary by Thomas Aquinas on Aristotle's *De Anima*. It is in fact the second manuscript in the codex (Fig. 190.2). There is a colophon, but the name Thomas Aquinas has been erased from it (Fig. 190.5). Its omission from the catalogue has been corrected by a pencilled note in the Library's present copy: "T. Aquinas]. Comm. on de Anima, transd. from Latin into Hebrew".

² Folios 117 to 121 have the same watermark as f. 116.

The simplest explanation for Kitchin's error is that the manuscript's subject, Aristotle's *de Anima*, is the same as that of the first manuscript. Placing perhaps too much reliance on the inscriptions, Kitchin had overlooked the physical differences between the two and credited both to R. Levi ben Gershon.

Manuscript 1: fols. 1r–34v

A supercommentary by R. Levi ben Gershon (Gersonides, 1288–1344) on Averroes' *Commentary on Aristotle's De Anima*: on paper but with no colophon. It does, however, give the date of the work's composition: "The month of Tevet in the 84th year of the sixth millennium (5084AM)" which corresponds to January 1324CE

	Piccard 127239 (Trakai, Lithuania 1428)	Briquet 6687 (Perpignan 1391, Montpellier 1393, Venice 1398)

Fig.190.4. The watermark – four flowers opposed in pairs – in the first manuscript in Codex 190, folios 1 to 34.

The best match for the watermark is Piccard 127239, (Trakai, Lithuania 1428). The script, however, is Sephardi (Provençal?) which might make Briquet 6687 (Perpignan 1391, Montpellier 1393, Venice 1398 or Fano 1402) a more likely choice.³

³ Trakai, which was founded before 1321, was home to one of the most ancient and important Jewish communities, Karaite as well as Rabbinite, in the Polish–Lithuanian Commonwealth.

Manuscript 2: fols.36r–116v

A commentary by Thomas Aquinas on Aristotle's *De Anima*. The quires in this manuscript are of an early type in which the paper leaves are protected by parchment outer sheets or guards. The script is semi-cursive Sephardi and the colophon, which is on a parchment page and has been partially deleted (fol.116v), reads: "Completed, a commentary on the book *De Anima*...[deletion]...year 208 (1447/8) and I, Moshe Levi, wrote it for my master, Maestro Abraham, the physician Di Balmes (Fig.190.5)."⁴

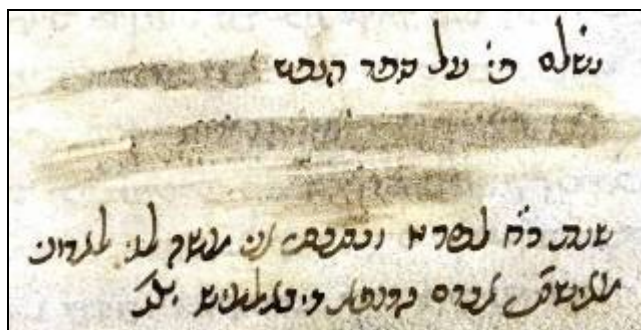


Fig.190.5: The colophon on fol.116v with the deleted reference to Thomas Aquinas.

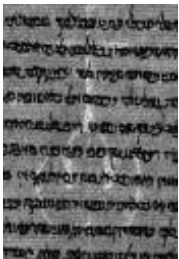
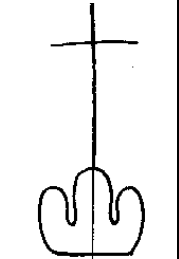

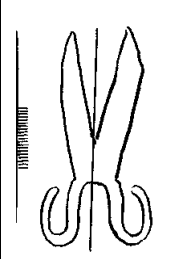
			
<p>The watermark in the first of the “guarded” quires: f.45. Briquet 11702 (Pisa 1440)</p>	<p>The water mark in the remaining “guarded” quires: f.121. Briquet 3661 (Venice 1438)</p>		

Fig.190.6: The watermarks in the "guarded" quires of Codex 190.

⁴ R. Abraham de Balmes of Lecce (d. 1489), court physician to King Ferdinand I of Naples. Not to be confused with his grandson, Abraham de Balmes ben Meir (d. Venice 1523), the Italian physician and translator.

The colophon in a copy of this same text in the Vatican Library reads: “Completed, the interpretation and commentary on the book *De Anima* which Thomas Aquinas expounded... (נשלם הפי' והבאור על ספר הנפש אשר פי' טומאסי) (מאקוינו).”⁵ For whatever reason, the reference to Aquinas was deleted from the colophon in Codex 190. The translator is not named in either the Vatican or the Christ Church manuscript.

The watermark in the first of the “guarded” paper quires is quite different from that in the remainder (Fig.190.6). Of the few recorded instances of the scissors watermark prior to 1447, the date in the colophon, the best match is Briquet 3661 (Venice 1438). By contrast, the triple mount with a single rod above watermark is found in Italian paper around 1447 from various locations. A good example is Briquet 11702 (Pisa 1440).

Manuscript 3: fols.122r–175v

A supercommentary by R. Levi ben Gershon on Averroes’ *Commentary on Aristotle’s Meteoris*; on paper but with no colophon. There is a censor’s stamp: Dominico Irosolomi[ta]no, Aless[and]ro Scipione, 1597 on the last page.

The watermark in this manuscript is a Fleur de Lis with two flowers or cloverleaves and the, letter M beneath; there is also a corresponding countermark on the opposing folios (Fig.190.7). This mark closely matches Piccard 127926 (Mantua 1566) and is consistent with the text’s Italian script.

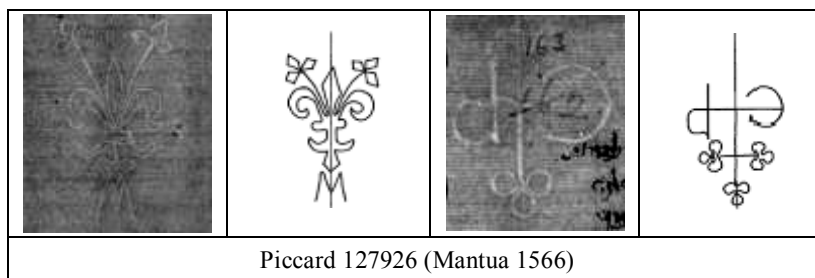


Fig.190.7 The watermark and its countermark in the supercommentary by R. Levi ben Gershon on Averroes’ *Commentary on Aristotle’s Meteoris*.

⁵ Biblioteca Apostolica Vaticana, Citta del Vaticano (2008), Neof 18. See *Hebrew Manuscripts in the Vatican Library*, compiled by the Staff of the Institute of Microfilmed Hebrew Manuscripts and edited by Benjamin Richler, Jewish National and University Library, Jerusalem, p.544.

There are two 17th century London watermarks in the fly leaves at the front of the codex (Fig.190.8).

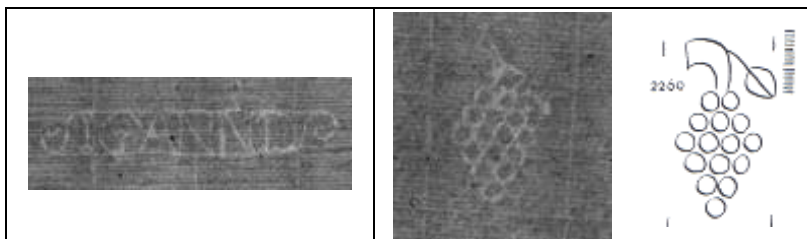


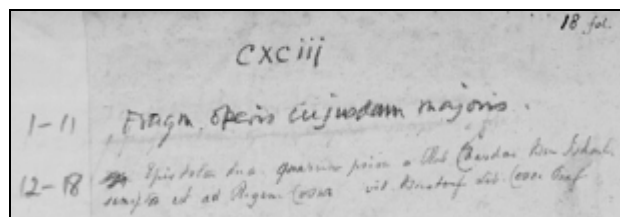
Fig.190.8: The watermarks in the flyleaves, i & ii, of Codex 190. These are variants of a group of late 17th century London watermarks, Nos. 2247 to 2260, in *Watermarks by Edward Heawood MA*, The Paper Publication Society, Hilversum (1950), all of which comprise a stylised bunch of grapes and a monogram that contains *inter alia* some permutation of the letters I, A, N and D.

It would appear that the three manuscripts were bound together into the present codex between 1680 and 1683, perhaps at the behest of John Fell himself.

Codex 193: Two Unrelated Texts: “Speech is Dumb” and the Khazar Correspondence.

This is one of the most intriguing but also one of the most problematic items in the collection. The two faint inscriptions on the inside of the front cover, each in a different hand, read:

- 1–11 *Fragm. Operis Cujusdam Majoris (A Fragment of a Larger Work).*
12–18 *Epistolae duae quarum prior a Rab Chasdai Ben Ishah Scripta est ad Regem Cosar vid Buxtorf Lib. Cosar Praef (Two letters, the first of which was written by Rav Chasdai ben Isaac to the Khazar King: see Buxtorf's Liber Cosar¹).*



There is also a barely discernible deleted line of writing between the two inscriptions; the folio numbers, 1–11 and 12–18, appear to be recent additions, as does the pencilled annotation, *18 fol.*, in the top right-hand corner.

The two manuscripts are little more than fragments: eleven and seven folios, respectively, and have nothing in common except that they both date from the late 15th or 16th century; they were probably only bound into a single codex for convenience at some later date. The first (fols.1r to 11v) is an allegory, in a style akin to a Renaissance morality play or tale, on the Culpability of Speech for the evils it uniquely facilitates and what should or can be done about this. The second (fols.12r to 18r) contains copies of the letters purportedly exchanged by Ḥasdai ibn Shaprut,² one of the most eminent Jews in 10th century Spain, and a

Paper (ff.18), in quarto: OX 2454; IMHM Film No. F 15582.

¹ A Latin translation entitled *Liber Cosri* of Judah Halevi's theological treatise *Kitab al Khazari* (ספר הכוזרי) published by Johannes Buxtorf the Younger in 1660.

² Ḥasdai ibn Shaprut (915–970), scholar, physician, diplomat, and patron of science, was the first Jew to hold a senior public office under the Arab caliphs in Spain.

King of the Khazars (Cosars) whose predecessors, together with many of their subjects, had reportedly embraced Judaism.

Sadly, there is, a serious problem regarding the integrity of Codex 193. According to the original entry in Kitchin's catalogue (Fig.193.1), it should comprise 42 folios and not its present 18. Furthermore, the exchange of letters between Ḥasdai and the King, which now occupies fols.12 to 18, should begin on fol.35 from where it presumably continued up to fol.42. Taking Kitchin's entry at face value, it would appear that when he prepared the catalogue, the codex contained a further twenty four folios (19 to 42), now apparently lost. The deleted line in the inscription may possibly have referred to these missing folios.

CXCIIL.	
Codex chartaceus, in quarto, ff. 42.	fol.
1. Fragmentum operis ejusdam majoris .	1.
2. Epistolæ duæ, quarum prior a R. Chasdai Ben Ishah scripta est ad Regem Cosar	35.
(Vide Buxtorfium, Lib. Cosar. Præf.)	

Fig.193.1: The original entry for Codex 193 in Kitchin's catalogue, according to which it comprised 42 folios in all and the correspondence between Ḥasdai ibn Shaprut and the King of the Khazars began on folio 35. This is, however, no longer correct.

There are, unfortunately, still some errors even in the amended entry in the Library's present copy of Kitchin's catalogue (Fig.193.2).

CXCIIL.	
Codex chartaceus, in quarto, ff. 42.	fol.
f. 12-18 1. Fragmentum operis ejusdam majoris .	1.
f. 1-11 2. Epistolæ duæ, quarum prior a R. Chasdai Ben Ishah scripta est ad Regem Cosar	35.
(Vide Buxtorfium, Lib. Cosar. Præf.)	

Fig.193.2: The entry for Codex 193 in the Library's present copy of Kitchin's catalogue. The two pencilled addenda to the left are in the wrong order: the "Fragment of a Larger Work" is in fact still the first item in the codex (fols.1-11), and the correspondence is the second (fols.12-18), i.e., the order they were in originally.

The First Manuscript (fols.1r-11v): An Allegory on the Culpability of Speech for the Evils it Facilitates or "Speech is Dumb."

An old Hebrew foliation in the top margin of the recto pages of the manuscript runs from פד (84) to צד (94), indicating that what we have now are just the last 11 of what had once been 94 folios. The script is semi-cursive Sephardi and the text begins mid-sentence on the top line of fol.1r; there is no indication of what might have preceded it. It ends on fol.11v with the signature of Joshua di Viana,³ followed by the Hebrew phrase תם ונשלם (finished and completed) and an enigmatic six line verse postscript that involves a riddle.⁴ The partial watermarks in this manuscript are variants of the widespread medieval hand/glove category, in this instance with four fingers closed, thumb open and a six petal flower or star extending from the tip of the middle finger (Fig.193.3).⁵



Fig.193.3: The partial watermarks in the first manuscript in Codex 193: four fingers closed, thumb open and a six petal flower or star extending from the tip of the middle finger

³ Most probably the town of Viana in the Kingdom of Navarre that only came under the Spanish crown in 1512; see footnote 20 below.

⁴ For a discussion of the fragmentation of Hebrew manuscripts see:

⁵ בנימין ריצלר, כתובי-יד עבריים שנתפצלו, אסופות; ספר שנה למדעי היהדות א (תשמז) קה-קנת.
Some one hundred and fifty different categories of watermarks that were in use prior to 1600 have been indentified and catalogued. Of these, only eight are representations of human figures or parts of the human body, and of the latter, only the hand (or glove) is found in any great frequency. Horodisch A., *The Aesthetics of Old Watermarks*, The Briquet Album, The Paper Publications Society, Hilversum (1952), p.107

Treated as a play, the work comprises three Acts and the *dramatis personae* are a King, a Yemenite sage, the king's wise men and Justice.

The first Act (fols. 1r–5v) opens with a lengthy discourse given by the King, in which he presents an exhaustive catalogue of the many evils that Speech (לשון) facilitates. The four principle headings are:

Uttering a Vain Oath (שבועת שווא). It is written in the Torah, “You shall not take the name of the Lord your God in vain, for the Lord will not hold guiltless whosoever takes His name in vain.”⁶

Calumny (מלשינות). An informer (מלשין) is one who puts his fellow's money or body in the hands of gentiles or reveals to them matters concerning Israelites.

Gossip (רכילות). It is written in the Torah, “Do not go tale-bearing among your people; nor stand idly by the blood of your neighbour.”⁷

Slander (דבות). Whoever besmirches a person's name (המוציא שם רע) and slanders his fellow, denigrating him with the intention of disgracing him, is most despicable and subversive in the eyes of God.

The King goes on to list some of the other evils that Speech facilitates and by which a person may sin: Lying (כזב), Flattery (חנופה), Scorn (ליצנות), Profanity (נבלות הפה), Perjury (עדות שקר) and Cursing One's Father and Mother (המקלל אביו ואמו). These evils are not, however, as grave as those covered by the four principle categories, for a person is not always guilty of them (אין אדם נכשל בהם תמיד).

And when the King had finished declaiming the blemishes of Speech (מומי הלשון) and all the abominations it engenders, the countless casualties it has resulted in – men, women and children, destroying even entire towns and cities – that all the people did cry out and weep...and they tried to bite off their tongues with their teeth.

And this greatly distressed the King for it was not right or proper; the [people's] pain was clearly beyond bearing.

The King's subjects were so chastened and shocked by his admonition that they resolved to forswear speech altogether and began to bite off their tongues. But the pain that this caused them distressed the King still more; it was clearly

⁶ Exodus 20:7.

⁷ Leviticus 19:16.

too much. There had to be a better way of dealing with the evils that Speech (לשון) engenders than biting off their tongues (לשון).⁸

Act Two (fols.5v–7v) opens with the solution the King proposes for putting an end to these evils. Instead of them cutting off their tongues, he decrees that Speech should be paraded before the townspeople, in a hat and tunic that proclaim its ignominy, and then be put to death.⁹ Whereupon, a Yemenite sage (חכם תימני) steps up and hands him the following letter from Justice (צדק):

"O great and illustrious King; I am Justice your devotee...I departed from you just three days ago and I am sending you this letter with one of my trusted lads who will speak on my behalf. Please listen to him, for if you do I will yet return to you; but if you refuse to...I will never see you again and this is farewell."

The King is taken aback. Justice had always been a friend and source of strength to him, so why had it now threatened to desert him? The Yemenite sage explains:

"I have been sent regarding the sentence handed down on Speech. Thus says Justice: This sentence is darkness and a deathly shadow; it is unconscionable and will anger all beings above and below...Speech is not to blame for these evils for it is just an articulation of the mind; it only intones what the mind forces it to say and, like a slave, has no choice in the matter; it is *Anuss* (the Hebrew term for compelled or constrained)...and God will forgive it."¹⁰

Mortified by this rebuke, the King turns angrily on his wise men:

"Can you refute what the Yemenite has said? What can the King and his advisers say when the sentence they handed down on Speech is overruled? Those who would judge have themselves been judged. It is shameful that the eyes of the court were so blind as not to see the difference between compulsion and free-will."

The wise men do not, however, relent and they put forward two counter arguments. First, that the Yemenite sage is lying about being sent by Justice:

⁸ The Hebrew word, לשון, can mean speech or tongue.

⁹ The detailed description of the parade through the streets of the town – the tunic embroidered with the victim's alleged sins, the degrading cap and the crier who leads the procession – is reminiscent of an Auto-da-fé.

¹⁰ In Jewish law, no blame attaches to a person who is forced to sin against his will. This general principle is derived from the Torah ruling that no guilt attaches to innocent victims of rape (*Deuteronomy* 22:25-27).

“You are not an agent of Justice; it never sent you. Except for his own self-esteem, this Yemenite has no brain in his head!”

Second and more to the point, that Speech itself had never claimed it was under duress when uttering these evils.

Ignoring the personal abuse, the Yemenite sage rejects the notion that Speech’s silence denotes consent. Scripture, he replies, has instructed us: “Open your mouth and speak up for the dumb.”¹¹ Speech cannot speak for itself; it is as though dumb. Furthermore, a victim’s silence may be the result of shock or trauma and someone else should speak up for him or her.

In the fierce debate that ensues, both the Yemenite sage and the wise men cite Talmudic precedents which they each claim support their particular position. However, it all ends inconclusively with the wise men still insisting that the sentence of death be carried out on Speech. Unsure what to do next, the King writes a personal letter to Justice:

“I have heeded the voice of the Yemenite you sent and have not carried out the death sentence on Speech. However, the wise men and leaders of my kingdom disagree with the Yemenite and have put forward several counter arguments. If I have found favour in your eyes, please come and guide us as to how we should act.”

Justice accepts the King’s invitation and at the opening of Act Three (fols.7v–11v) we find it seated next to him as the court reconvenes on the morrow. What follows is a colloquium or academic seminar, with Justice in the role of professor, on the legal aspects of the arguments presented by the wise men and the Yemenite sage on the previous day.

Justice is not impressed by either side’s submissions:

“What I see here is just sophistry (פלפולים): a jumble of knowledge (בקיאות) and reasoning (סברא). But just as perceiving the light requires both illumination and clear vision...so there are two qualities that all honest judges and adjudicators (שופטי צדק ויושבי על מדין) must possess: (i) the acumen (שיקול הדעת) to make correct logical deductions and (ii) a thorough knowledge of the Law as expounded in the Mishna and Talmud.

Moving on to the matter at hand, he notes that the wise men and the Yemenite sage had both agreed that if Speech was indeed forced to utter the evils it articulates, no blame would attach to it; this is an instance of the general rule

¹¹ *Proverbs* 31:8

derived by logical reasoning (סברא) that an *Anuss* is blameless. But this begs the question of what constitutes compulsion such that it would excuse an otherwise forbidden act. For example, what if a person resists at first but later consents; or if a person falsely authenticates a bill of sale under the threat that, should he refuse, his house will be burnt down; and are vows taken under duress subsequently binding? To rely on reasoning alone in deciding such fraught and diverse issues, as had both the wise men and the Yemenite scholar, is too simplistic. They must be adjudicated by reference to the Law.

"But," the wise men ask, "if the Law is what really matters in the end, why did you say that judges need the ability to make proper logical deductions too? Isn't it superfluous?"

"Not at all", replies Justice. "It is needed to differentiate one case from another and one law from another. For without discretion (שיקול דעת), there is neither knowledge nor understanding."

The second point of law raised in the debate was the Yemenite's contention that even if Speech had not claimed it was under duress, the Scriptural injunction, "Open your mouth and speak up for the dumb," should be invoked. Namely, that it is a court's duty to speak up on behalf of those who cannot speak for themselves. The wise men ask how far judges should go in applying this principle. Should it be accorded to all litigants and in all instances? For are not all litigants, to some extent, "dumb" when it comes to pleading their cause before the court? And if so, how will the actual truth of the matter come to light if the Judges themselves become involved in the submissions? As the Talmud warns, "Be careful in your choice of words, lest they learn to lie from them."¹² Furthermore, no matter how judiciously judges apply this principle, how can they avoid being suspected of having taken a bribe from one side or the other, or even from both?

These are genuine concerns and their complexity defies a simple answer. Turning first to Heaven, Justice calls upon God's celestial beings to watch over and guide those who are charged with administration of the Law.

"Peace, a fullness of peace, to the most renowned Rabbis and Sages, the earthly bearers of God's mace (נושאי כלי ה')...May the multitude of God's angels (מלכין), worshipful attendants (פלחין) and holy messengers (עיריין קדישין) protect you...and rise to your assistance..."

¹² *Mishna Avot* 1:9.

More down to earth, he counsels these same Rabbis and Sages, in the strongest terms, to shun the taking of any contingent payment (מלקבל תנאי) from the community in which they live. For the receipt of such conditional payments may impugn them and bring them into disrepute: they may be thought willing to accept bribes. Any remuneration they receive should be in the form of an honorarium and in a fixed amount agreed between them and the community; and it should only suffice to cover their legitimate living expenses. Above all, they must protect their independence and maintain a respectful distance from the community at all times and not be ‘yes-men’, as the King’s wise men had been.¹³ As the Talmud states: “If a scholar is loved by the townspeople, it is not by virtue of his pre-eminence but because he does not rebuke them for neglecting Heavenly matters” (*TB Kethubot* 105b).¹⁴

The six line enigmatic verse postscript or riddle below the signature of Joshua di Viana on fol.12v (Fig.193.4) may not be by him but is an interpolation added by the copyist. It reads (in translation):

“I have contemplated the law of *Ḥametz*¹⁵ and *Matzah*¹⁶
And the one has no measure over the other but this:
That in *Ḥametz* there is a drop of ink, like a mustard seed,
And from *Matzah* it is totally lacking and absent.
And from here is a hint to the prohibition
of *Ḥametz* in any amount.”

¹³ Justice’s reply opens with a reworking of phrases from the first chapter of the *Book of Daniel* which recount how Daniel and his companions resisted orders from the King that would have required them to transgress their dietary laws.

¹⁴ A manuscript at the Hebrew Union College, Cincinnati, USA, (CIN314: IMHM Film No. F 18265) contains a copy of the reply given by Justice to the wise men’s final request for guidance. It too is signed by Joshua di Viana but makes no mention of Justice or of the events and exchanges that preceded it in Codex 193. The heading simply reads: “A text written and sealed with the [signet] ring of a wise and understanding man, which informs all the practitioners of religious law of the blights, blemishes and impairments of any scholar who is known to accept a payment from the community, for it is great, and his sin is onerous in the community and congregation.” A letter in the same batch of manuscripts is addressed to one “Joseph Ora of Viana in the Kingdom of Navarre...”.

¹⁵ Any food product made from wheat, barley, rye, oats, spelt, or their derivatives, which has leavened (risen).

¹⁶ The unleavened bread traditionally eaten by Jews during the Passover festival, during which the consumption of *Ḥametz* is forbidden.

The prohibition on consuming *Ḥametz* on the Passover festival is absolute; even an infinitesimal amount is forbidden.¹⁷ The analogy to Justice's caution to the Rabbis and Sages would appear to be that they, likewise, should shun any contingent payment – any 'leavening' (*Ḥametz*) – no matter how small. But what is the measure, the 'drop of ink' no larger than a mustard seed, that distinguishes *Ḥametz* from *Matzah* and which hints at the prohibition against consuming even the minutest amount of *Ḥametz* on the Passover festival?

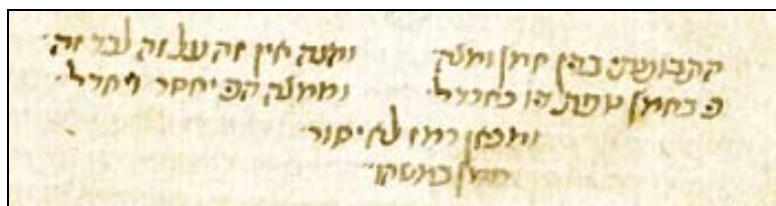


Fig.193.4. The verse postscript or riddle below the signature of Joshua di Viana on fol.11v of Codex 193:

הַתְּבוֹנְנֵתִי בְּדִין חֻמֶּץ וּמִצָּה וּמִנָּה אֵין זֶה עַל זֶה לְבַד זֶה
כִּי בַחֲמֵץ טַפַּת דִּיו כִּחְרָדֵל וּמִמִּצָּה הַכִּי יִחְסֹר וַיִּחְדַּל
וּמִכֶּאֱן רִמְזוּ לֵאמֹר חֻמֶּץ בְּמִשְׁהוּ

The Hebrew words, *Ḥametz* (חֻמֶּץ) and *Matzah* (מִצָּה), both contain the letters מ (*Mem*) and צ (*Tsadi*); in the word *Ḥametz*, the *Tsadi* is in the form ץ that it takes when it is the final letter of a word. The third letter in the word *Ḥametz* is a ח (*Het*) and that in *Matzah* is a ה (*Heh*). The only difference between these two Hebrew letters, and hence between the two words, is the gap in the 'left leg' of the letter ה (*Heh*) in the word *מִצָּה* (*Matzah*). A gap so small, that a drop of ink, a 'measure' no larger than a mustard seed, would suffice to close it and convert the letter ה (*Heh*) in the word *מִצָּה* (*Matzah*) into the letter ח (*Het*) in the word *חֻמֶּץ* (*Ḥametz*).¹⁸

¹⁷ The metaphor of a mustard seed as the measure sufficient to incur a prohibition is found in the Talmud but in a very different context (*TB Berachot* 31a): "The daughters of Israel have undertaken to be so strict with themselves that if they see a drop of [menstrual] blood (דָּם) no bigger than a mustard seed, they wait seven [clean] days afterwards [before engaging in sexual intercourse]."

¹⁸ In the Introduction to his 16th century commentary, *Kol Yehudah*, on Judah HaLevi's *Kuzari* (סֵפֶר הַכוּזָרִי), Judah Moscato notes the importance that a drop of ink can have in the context of the accuracy required of copyists when transcribing texts: "For a drop of ink out of place can change the entire meaning of a passage."

The Second Manuscript (fols.12r-18v): The Khazar Correspondence: the Letters exchanged by Ḥasdai ibn Shaprut and the King of the Khazars.

The historical truth of the adoption of Judaism by the Khazars, an Asian people who once occupied the area of Eastern Ukraine, has been the subject of much scepticism ever since it was first reported over a thousand years ago. However, the discovery among the Hebrew manuscripts in the Cairo Genizah of (i) an original document written by Khazarian Jews residing in Kiev during the first half of the 10th century (the Kievan Letter¹⁹); (ii) a diplomatic letter from an unnamed Khazarian Jew (the Shechter Text²⁰) that describes their military exploits, the geography of their land and the manner of their acceptance of Judaism and (iii) fragments of Ḥasdai ibn Shaprut's diplomatic correspondence containing references to the Khazars,²¹ has finally "put to rest...the widely promulgated belief...that the already known Hebrew sources describing the Judaization of the Khazars were mere forgeries or an unbelievable romance."²²

This is not to say that there are no discrepancies between these Hebrew sources, the reconciling of which has provided much grist to the academic mill. Conversely, they have also been seized upon by those who have claimed that these same sources are forgeries and, furthermore, that any evidence produced to support their authenticity has also been faked.²³ Evidently, the notion that a people may once have freely chosen Judaism over Christianity or Islam, is a notion some find difficult to accept. But our concern here will be only with the provenance of the letters in the Christ Church Codex 193.

The best known of the medieval Hebrew sources is Judah Halevi's theological treatise *Kitab al Khazari* (ספר הכוזרי) completed in 1140 and subtitled "*Book of Refutation and Proof on Behalf of the Despised Religion.*" It was composed during the period of the Crusades, when Christianity and Islam, both of whom claimed to have superseded Judaism, were fighting each other for possession of Jerusalem, Israel's ancient capital, and the Land of Israel. The

¹⁹ Cambridge T-S (Glass) 12.122; a.k.a the "Kievan Letter."

²⁰ T-S Misc. 35.38; a.k.a the "Cambridge Document."

²¹ Golb & Pritsak, *Khazarian Hebrew Documents of the Tenth Century*, Cornell University Press, Ithaca (1982), pp. 75-95.

²² Golb & Pritsak, *Op. cit.* p.xiii.

²³ Constantine Zuckerman, On the Date of the Khazar's Conversion to Judaism and the Chronology of the Kings of the Rus Oleg and Igor, A Study of the Anonymous Khazar Letter from the Genizah of Cairo, *Revue des Études Byzantines* 53. 1995, p. 237-270.

Crusaders had captured Jerusalem, slaughtered its Jewish population and made it the capital of their Kingdom; meanwhile, the remaining Jews scattered across the Moslem *Ummah* remained *dhimmis*, a conquered and powerless people.

Reports of the adoption of Judaism by the Kings and people of Khazar were current and widely believed at the time.²⁴ Credence was given to this by the reported existence of letters that had been exchanged by Ḥasdai ibn Shaprut, one of the most eminent Spanish Jews of the 10th century, and a King of the Khazars named Joseph, a direct descendant of the king who had originally adopted Judaism some two or three hundred years earlier.²⁵ The existence of this Hebrew (Khazar) correspondence is cited, though not without some reservations, in two medieval Hebrew texts: (i) the legal treatise *Sefer HaIttim* by the 12th century R. Judah ben Barzilai of Barcelona²⁶ and (ii) the chronicle *Sefer HaKabbalah* by Abraham ibn Daud.²⁷ The passage in ibn Daud's chronicle has been added at the foot of the last page of the Christ Church Codex 193 (fol.18v), but in a different Sephardi script from that of the correspondence (Fig.193.5).²⁸

Another 400 years would pass before the appearance of what would be presented as copies of the actual letters exchanged by Ḥasdai and Joseph, the Khazar king. They first appeared in a Hebrew miscellany compiled and published in Constantinople in 1577 by Isaac Akrish, under the heading קול מבשר (*Kol Mevasser – A Voice Heralding Good Tidings*).²⁹

An avid bibliophile, Akrish was born in Salonika in 1530, where his family had finally settled following the expulsion of the Jews from Spain and its

²⁴ There is an Arabic account of the event written by the 11th century Andalusian geographer and historian, al-Bakri: see Dunlop D.M., *The History of the Jewish Khazars*, Schocken Books, New York (1967), p.90.

²⁵ There are also a number of medieval Arabic, Karaite and Christian references to the Khazar's adoption of Judaism: see Dunlop D.M., *The History of the Jewish Khazars*, Schocken Books, New York (1967), pp.89- 115; Landau M., *The Present State of the Khazar Problem*, *Zion*, Vol. (January 1943), pp. 94-106 (in Hebrew).

²⁶ "We have seen...the copy of a letter which King Joseph...wrote to R. Ḥasdai. We do not know if the letter is genuine and if the Khazars are *gerim* (proselytes)...there may be falsehoods in it or people may have added to it..." Dunlop D.M., *Op. cit.* p. 132

²⁷ "You will find congregations of Israel spread abroad...as far as Daylam and the river Itil where live the Khazar peoples who became *gerim*. (proselytes). Their king Joseph sent a letter to R. Ḥasdai..." Dunlop D.M., *Op. cit.* p. 127.

For a full English translation of the passages from *Sefer HaIttim* and *Sefer HaKabbalah* see: Dunlop D.M., *Op. cit.* pp. 132 &127, respectively.

²⁸ For an English translation of the King's reply by Brian Deutsch see: www.chch.ox.ac.uk/library-and-archives/hebrew-manuscripts.

²⁹ National Library of Israel, System No. 003687769; Bodleian Opp. 8° 1098.

overseas possessions in 1492. Despite being lame in both legs, he led the life of a wanderer for many years, collecting books and manuscripts as he went. Arriving in Cairo, he found employment as the tutor of the grandchildren of R. David ben Zimra (Radbaz), the *Haḥam Bashi* or Chief Rabbi of Egypt, spending much of his earnings on hiring scribes to copy manuscripts for him.³⁰

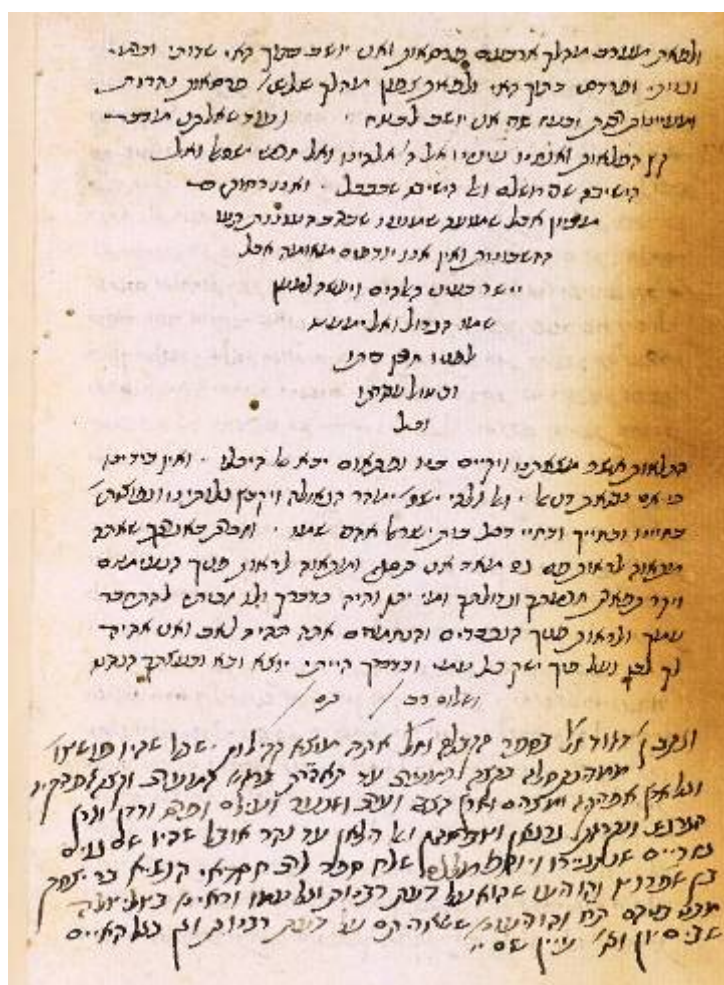


Fig.193.5: Fol.18b of Codex 193. The final page of the King's reply in the Christ Church manuscript. The extract from ibn Daud's chronicle appears as an appendix in a different script.

³⁰ For a short biography of Akrish and an account of his literary activities see: Abraham Yaari, *Studies in Hebrew Booklore* (מחקרי ספר), Mossad Harav Kook, Jerusalem (1958), p.235ff. in Hebrew.

Akrish left Cairo for Constantinople in 1553, stopping off on the way in Crete, then still a Venetian territory. It was the year of Pope Julius III's edict that all copies of the Talmud be burnt and the local authorities accordingly confiscated his books and manuscripts threatening to destroy them. Summoning up the courage to challenge the local governor, Akrish regained his collection and brought it with him to Constantinople, where he came under the patronage of the leading court Jew, Don Joseph Nasi and the wealthy widow Esther Kira.³¹

Some eighty years after the publication of *Kol Mevasser*, the Christian Hebraist Johannes Buxtorf the Younger received a copy of the book from a friend. Although he regarded the letters it contained with suspicion, as would many of the scholars who came after him, he decided, to include them in the Preface to the Latin translation of Judah Halevi's *Kitab al Khazari*, entitled *Liber Cosri*, that he published in 1660.³²

In the preface to *Kol Mevasser*, Akrish relates that despite the many stories he had heard about the existence of a sovereign Jewish nation somewhere on earth, like most of his contemporaries, he could not believe them to be true.

Throughout my life, I have heard people talk about the lost Tribes, saying that there are places where Israelite kings rule, lacking naught but the Temple Service and Prophecy...And that they wage wars and have conquered and subjugated other nations...But, like many others, I found this hard to believe...for all the stories and mariners' tales are just fabrications made up to strengthen the down-trodden and give them hope...

It all seemed too far fetched; a Jewish fantasy. Only after personally hearing accounts of the existence of autonomous Jewish kingdoms in Ethiopia and in the mountains north of India, "from the mouths of disinterested non-Jews (מסיח לפי תומו)" that he met on his travels, did he begin to consider there may be some truth to the stories.

He gives four reasons why he ultimately came to believe in the existence of these Jewish kingdoms, even down to his own times, and why he decided to

³¹ Except for a small remnant that was saved by the efforts of his wife, the entire collection he had amassed was destroyed in the great fire of Istanbul in 1569: Yaari, *Op. cit.* p. 244.

³² Judah Ha-Levi, *Liber Cosri*, Gregg International Publishers Ltd. (1971).

publish the Khazar Correspondence. The first was a letter that an old friend, a rabbi and physician to the Turkish Governor of Egypt, had shown him. It was from the Abyssinian prince Doshdomor and had been given to his friend the physician by the Governor on one of his routine visits. The letter was a request for urgent military assistance from the Turkish authorities, "...for were it not for an officer of the Jews who helped me in the war with twelve thousand horsemen, I would myself have been in danger and might have lost all my forces."

The second involved another Abyssinian official, this time unnamed, who was passing through Egypt on his way to Constantinople and who invited every Jew he met to join him on a visit to "the kingdom of the Jews," assuring them that he would guide them "in peace and tranquillity, on the wings of eagles, for their border is near to mine" adding that he himself had been there many times.

Thirdly, the Governor of Ottoman Egypt and conqueror of Yemen, Sinan Pasha,³³ and his general staff, boasted that had their treasury not been emptied by the high cost of their otherwise successful campaign in Yemen, they would have continued on to the Jewish kingdom that lay just beyond and to its great fortified cities.³⁴

And finally, it was seeing a letter that had been sent to the Khazar king and his reply to it.

When I heard these words and saw a letter that was sent to the king of the Khazars and his reply, I decided to print them "with an iron pen and lead" (*Job* 19:24) to strengthen [the people] in order that they might truly believe that the Jews have a kingdom and dominion.

Akrish's interest was not in the Khazars as such, he was neither an anthropologist nor an historian, but in what they and their kingdom meant for Jewish hopes and aspirations of a renewal of their ancient sovereignty and it is in this context that the letters he published in *Kol Mevasser* should be viewed.

³³ He becoming known as Fātih-i Yemen (Victor of Yemen) and was later appointed vizir of the Sultan Murad III.

³⁴ This "Jewish kingdom" may have been the Falasha people who lived in the area around Lake Tana, in northern Ethiopia. Calling themselves "House of Israel" (*Beta Israel*). They practice a form of biblical Judaism and claim descent from Menilek I, traditionally the son of the Queen of Sheba and King Solomon. In recent years the vast majority have moved to and been settled in the State of Israel.

The existence of the handwritten copy of the letters exchanged by Ḥasdai ibn Shaprut and the King of the Khazars in the Christ Church Codex 193, appears to have gone unnoticed prior to the publication of Kitchin's catalogue in 1863. Buxtorf's 1660 edition of *Kol Mevasser* had become the generally accepted version of the correspondence and scholarly interest was concentrated on the historical truth or otherwise of the Khazars and their purported adoption of Judaism, not on the letters themselves.³⁵

Written in a Sephardi semi-cursive script, the salient fact regarding the Christ Church text is that it is to all intents identical to that of *Kol Mevasser*, a congruence that cannot be just coincidence.³⁶ Both are 16th century documents and allowing for the few scribal errors in the manuscript, most of which are corrected in the marginalia, either could be the source of the other.³⁷ Alternatively, they may both be Akrish's own creations.³⁸

Ḥasdai's letter to the Khazar king is prefaced in both the Christ Church text and *Kol Mevasser* by a verse colophon, the initial letters of whose first twenty five lines form an acrostic of his Hebrew patronymic: **אני חסדאי בר יצחק בר עזרא שפרוט** (I am Ḥasdai bar Issac bar Ezra Shaprut); the relevant letters are indicated in the handwritten copy by superscript dots.³⁹ In the letter itself, which

³⁵ Apparently unaware of Ḥasdai's historical actuality, Buxtorf dismissed the reference to the correspondence in ibn Daud's chronicle as no more than an interpolation.

³⁶ The corrections in the three marginalia in the Christ Church manuscript are incorporated into the text of Akrish's printed version.

³⁷ Dunlop, who personally examined the Christ Church manuscript, remarks that "this manuscript presents a remarkably close similarity to the printed text" (*Op. cit.* p.130). In a letter dated August 1st 1942, now attached to an inside cover of Codex 193, Dunlop thanks the Christ Church Librarian, Mr. Hiscock, for making the manuscript available to him.

³⁸ The only difference is that the passage from ibn Daud's chronicle that refers to the exchange of letters which has been added *verbatim* on the last page of the Christ Church codex (fol.18v) in a different Sephardi script from that of the body of the text, does not appear in the printed version in *Kol Mevasser*. It may well be a later addition (Fig.193.5).

³⁹ It has been conjectured that the first letters of the last ten lines of the preface are an acrostic of the name of his secretary, Menahem ben Saruk. However, the first letters of four of these lines in the sixteenth century *Kol Mevasser*/Christ Church text do not fit the name. By contrast, Saruk's acronym can be discerned in the last lines of a single page manuscript in the Second Firkowitsch Collection, EVR II A 2661, Russian National Library, St. Petersburg (IMHM Film No. F 67694), which purports to contain the original version of the preface. The authenticity of this manuscript is, however, not universally accepted; four or five lines appear to have been judiciously altered to produce Saruk's acronym. The manuscript is almost certainly a nineteenth

is couched in a diplomatic style (fols.12r-15v), Hasdai inquires about the kingdom's geography and the people's way of life and religious practices. The King's reply is to the point and answers most of Hasdai's questions.

Akrish's *Kol Mevasser* and the Christ Church codex contain the only known version of Hasdai's letter; it has no provenance other than Akrish's account of how it and the King's reply came into his hands. There exists, however, a slightly longer rendering of the King's reply.⁴⁰ It was first identified some three hundred years later by the Russian-Jewish historian and orientalist, Abraham Harkavy (1835-1919), among the manuscripts in the Second Firkowitsch Collection.⁴¹ It is not a self-contained document but the last of the six texts in a nondescript manuscript (pages 45 – 52), the first five of which are short midrashic homilies. The six texts are all in the same 'eastern' Hebrew script, presumably the work of the same copyist, and follow on from one another in an unbroken sequence. The King's reply starts on the fourth line of p.45, following on immediately from the last line of the fifth text. It has nothing in common with the five midrashic texts and its inclusion in the same manuscript is anomalous. In 1882, some twenty years after the manuscript first came to light, it was dated to the 13th century, an estimate that is perhaps now due for reassessment.⁴²

The two versions of the King's reply tell basically the same story but each does so in a different style of Hebrew: classical in *Kol Mevasser* and a more prosaic mode in the Firkowitsch manuscript.⁴³ This difference could, on the face of it, point to two distinct versions and sources but Harkavy insisted that the

century fabrication. See: Hillel Hankin, *Yehuda Halevi*, Nextbook Schocken, New York (2010). p.318ff.

⁴⁰ Approximately 1850 words as compared to the ~1550 in the *Kol Mevasser*/Christ Church version.

⁴¹ *Meassef Niddahim* No. 8, p.117 (תש"ל, ירושלים, "קדם", הוצאת נדחים הוצאת "קדם"); Russian National Library, St. Petersburg, EVR II A 157 (fols.45 to 52); IMHM Film No. F 10280. There is a transcript of the text in the same issue of *Meassef Niddahim*.

⁴² The manuscript came to light following Firkowitsch's second tour of the Middle East in search of ancient manuscripts in 1863 and was dated to the 13th century by D. Chwolson in 1882.

⁴³ In the *Kol Mevasser*/Christ Church version the past tense is expressed 37 times by the classical Hebrew construction of the *Waw* conversive with the Imperfect and 50 times by the Perfect and simple *Waw*. By contrast, the classical construction occurs just once, in the Firkowitsch version. the remaining 95 instances all being simple Perfect. The classical construction also predominates in the Schechter (Cambridge) Text: Dunlop, *Op. cit.* pp.151-153, 163.

longer version he had found in the Firkowitsch collection was the principal and true one:

If we compare the [longer] version of the letter in our manuscript with that published by Isaac Akrish in *Kol Mevasser*, every intelligent person will clearly see, that our version is the principal and true one and that Akrish's was shortened and changed by copyists.⁴⁴

Harkavy claimed that the version of the King's letter in *Kol Mevasser* "bears unmistakable traces of having been worked over and altered from the Long Version."⁴⁵ By whom, where, when and for what purpose, this was done he does not say. His principal concern seems to have been to establish the primacy of the longer Firkowitsch manuscript over that of the *Kol Mevasser*/Christ Church version, as well as that of his own findings. But what of Ḥasdai's letter to the King, of which there is no trace in any Firkowitsch manuscript,⁴⁶ and without which the correspondence is incomplete?

A second significant difference between the *Kol Mevasser*/Christ Church and Firkowitsch versions of the King's reply is how they end (Fig.193.5). Taking his cue from the eschatological vision at the end of the *Book of Daniel*, Ḥasdai had asked the King whether his people have any tradition about "when these portents will cease...and when our Exile...and powerlessness will come to an end."⁴⁷ The King's answer in the *Kol Mevasser*/Christ Church reads (in translation):

"And as for us, our eyes are to the Lord our God, and to the sages of Israel, and to the *Yeshivot* (Rabbinical Seminaries) in Jerusalem and

⁴⁴ *Meassef Niddaḥim* (מאסף נדחים) No. 10, p.147. Harkavy had received a copy of the Christ Church manuscript from Alfred Neubauer and made much of the minor differences between its text and that of *Kol Mevasser* in his arguments in favour of the Firkowitsch manuscript. His insistence on the primacy of the latter manuscript is ironic as he himself would later refute many of Firkowitsch's theories, question the authenticity of many of his other discoveries and even accuse him of having forged some of them.

In a recent (1999) palaeographic survey of the Firkowitsch manuscript, several previously unpublished erasures whose rationale is difficult to comprehend, have come to light: Artem Fedorchuk, New Findings Relating to Hebrew Epigraphic, *The World of the Khazars – New Perspectives*, ed. Peter B. Golden, Brill N.V., Leiden (2007), p.121-122.

⁴⁵ It has also been argued, that Ḥasdai's letter is written in yet a third Hebrew style which complicates matters still further: Dunlop *Op. cit.* p.152.

⁴⁶ Including his recently (2004) examined Personal Archive: Fedorchuk, *ibid.*

⁴⁷ *Daniel* 12 :6.

Babylon and we are a long way from Zion, though we have heard that they erred in most of the answers [to this question] and we know nothing...But the destruction of His Sanctuary, the cessation of its Service and the troubles we endure, cannot be a small matter to Him...and we have only the prophecies of Daniel...

And God, the God of Israel, will surely hasten the Redemption and gather up our scattered exiles in our lifetime...and in the lifetime of the whole House of Israel..."

This is followed by some flattering remarks about the "brilliance of Hasdai's wisdom" and the hope that they may some day meet when "you will be a father to me and I a son to you...and by your word shall I come and go and with your rightful advice. Shalom."

This entire passage is, however, missing from the Firkowitsch manuscript which ends in mid-sentence on the last line of p.52 with the words "As for us, our eyes are to..." (אנחנו עינינו אל...); there is no p.53. The absence of this passage from the Firkowitsch manuscript may be just happenstance, the last page of a codex lost over the centuries. But there may be a more sinister explanation. Its tone may have been too 'Rabbinical' for the Karaite Firkowitsch who had argued that the form of Judaism the Khazars had adopted was Karaism and not rabbinical Judaism.⁴⁸ Its warmth may also not have suited Firkowitsch's agenda.

The Khazar Correspondence is the second of the three texts in the ספר מבשר טוב (*Book of Good Tidings*) that Akrish included in the Hebrew miscellany he compiled and published in 1577 (Fig.193.6). The first is entitled מעשה בוסתנאי (*The Bustanai Affair*) or מעשה בית דוד בימי מלכות פרס (*The Story of the House of David in the Days of the Persian Kingdom*). Bustanai (בוסתנאי), who was the first Exilarch (ראש גלות) – Head of the Exile or Captivity⁴⁹ to serve under Arab rule

⁴⁸ Adele Berlin, *The Oxford Dictionary of the Jewish Religion*, Oxford University Press (2011), p.272.

⁴⁹ Hereditary heads of the Jewish community in Babylon, who traditionally traced their descent from the royal Davidic line, specifically from the penultimate king of Judah, Jehioachin, who was exiled to Babylon by Nebuhadnezzar in 597 BCE (*2Kings* 12:24ff.). Claims of Davidic descent were still being made by eminent Rabbis up to modern times. For example, the family of R. Solomon Hirschell (1762-1842), the first British Chief Rabbi, boasted a long genealogy of learned rabbis, tracing ten generations back to R. Myer of Padua who, in turn, speaks, in the preface to one of his works, of R. Hai Gaon being his progenitor: "This R. Hai was the last of the primates

following the Beduin-Muslim defeat of the Persians in the 7th century, is the subject of several often contradictory Hebrew and Arabic legends, preserved in both medieval rabbinic texts and the Cairo Genizah.⁵⁰ In the introduction to the version he published, Akrish writes:

Whilst searching for books, I found a written account of the dreadful Bustanai affair; one of the threats of extinction that we [the Jews] have experienced by reason of our iniquities...and his [Bustanai's] salvation was like that [of Queen Esther] in the Book of Esther. And I was surprised that it does not appear in the book *Shevet Yehudah* (Sceptre of Judah)⁵¹ and perhaps God left it for me to print it...to make known that though in every generation they rise up against us, He saves us from their clutches...⁵²

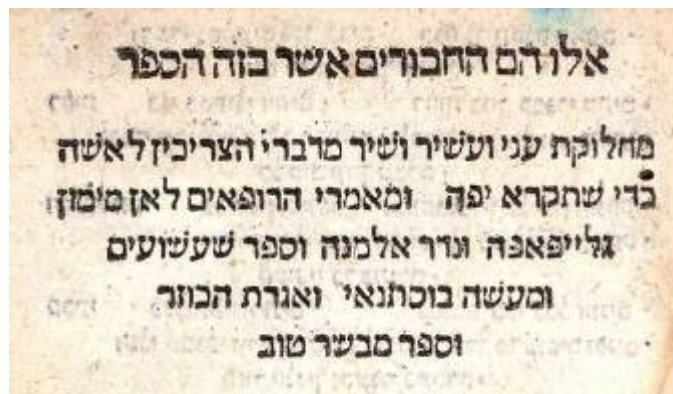


Fig.193.6: The heading on the first page of Akrish's miscellany: "These are the Compositions that are in this Book." The works listed in the fourth line are the "Bustanai Affair" and the "Khazar Correspondence;" that in the fifth line is "The Book of Good Tidings."

of the dispersed Israelites, who died in 1038; and all the primates and princes of the Captivity were deemed the genuine produce of King David's stock." See: "A Memoir of the Reverend Solomon Hirschell: Chief Rabbi of the German Jews, London," published in the *European Magazine and London Review* (March 1811).

⁵⁰ Moshe Gil, *The Babylonian Encounter and the Exilarchic House in the Light of Cairo Genizah Documents and Parallel Arab Sources*, *Judaeo Arabic Studies*, Ed. Norman Golb, Routledge (1997), p.135 ff.

⁵¹ By Solomon ibn Verga (c.1460-1554), a Marrano from Lisbon, where he witnessed the massacre in 1506 and from where he later escaped to Turkey. The book contains accounts of 64 persecutions of Jews in different countries and epochs.

⁵² Bodleian Opp. 8° 1098, pp. 59-63.

The version of the Bustanai legend published by Akrish has since become the best-known and most commonly cited.⁵³ Its salient points are as follows:

Inimical to the Jews, the last Persian king had determined to extinguish the royal house of David. The only person to escape the decree was a young woman, whose husband had been killed shortly after their marriage, and who was now about to give birth.

The king has dream in which he finds himself in a most beautiful garden but one that is not his own. Consumed with envy, he sets about uprooting its plants and is about to dig up the last of them when an elderly man of "ruddy and fair countenance" (1*Samuel* 17:42) appears and strikes him a blow that almost kills him: "Are you not satisfied with having destroyed the beautiful trees of my garden, that you now try to uproot even the very last sapling? Truly, you deserve that your memory perish from the earth." Taken aback, the king relents and leaves the last plant in place promising to tend it and allow the garden to grow back.

The elderly father of the young woman is the only person who succeeds in interpreting the dream: "The garden represents the house of David, all of whose descendants you have killed. The old man you saw in the dream was King David, to whom you promised that you would ensure that his line would survive. Now, the child my widowed daughter is carrying is the only one who can carry on the Davidic line." The king has the young woman brought to the palace where she gives birth to a boy, who is given the name "Bustanai," (from the Persian word *bustan*, meaning garden).

The lad grows up in the Royal palace and the king takes delight in him. One day when he was standing at attention before the king, a wasp stung the boy on his temple. Blood trickled down the face, yet he made no move. The king was astonished by this self control and the boy explained that in the house of David, from which he comes, they are taught neither to laugh nor to lift up a hand when standing before a king, but to remain motionless out of respect (*TB Sanhedrin* 93a). Moved by this display of respect, the king showers favours upon him and names him Exilarch, with the power to appoint judges over the Jews and nominate the heads of the three Talmud academies. To mark this in perpetuity, Bustanai introduced a wasp into the escutcheon of the exilarchate.

Bustanai was the Exilarch when Persia fell to the Arabians. When Ali ibn Abi Talib⁵⁴ came to Babylon he went out to meet him with a splendid

⁵³ See: *Seder HaDorot* (The Book of Generations), by Jehiel Heilprin (1660–1746); completed 1725, published 1768 and in several subsequent editions (in Hebrew).

retinue. Upon learning that Bustanai was thirty five years of age and still unmarried, Ali gave him Dara, the daughter of the defeated Persian king as his wife. She was, however, a pagan and as such Bustanai could not marry her. Ali gave permission, however, for her to become a Jewess according to Jewish law following which the couple were married. She bore him many children, but their legitimacy was assailed after their father's death by his other sons [he had taken other wives too] saying that they were the children of a slave-girl.⁵⁵

In a postscript to the story, Akrish writes:

I found [the texts] written on a parchment in Damascus with a *Messorah* (מסרה – colophon) that [stated] they were written in the year 3887AM [should be 4887, i.e., 1127CE] and that the book was written by so-and-so who bequeathed it to so-and-so, and so-and-so to so-and-so, up to ten generations.

There are nine or more extant fragmentary medieval sources of the Bustanai story and it has been suggested that what Akrish found in Damascus was a copy of the Arabic version composed by Nathan ben Abraham,⁵⁶ which he subsequently adapted, inserting elements from the gaonic *responsum* and adding elements of his own as he saw fit. This adapted version is what he then published in his miscellany of 'Good Tidings' texts.⁵⁷

The same could well be true of the "the letter sent to the Khazar king and his reply to it" that Akrish saw in Cairo. It too was a manuscript that he came upon during his travels, and the Christ Church manuscript in Codex 193 is a draft of the exchange of letters between Hasdai and the Khazar king that he prepared from it and which he subsequently published under the heading *Kol Mevasser*.

The third 'Good Tidings' text in the miscellany is entitled גם זה מבשר (This too is a Good Tiding). It is presented as being a report written by one

⁵⁴ Regarded by Sunnis as the fourth and last of the Rashidun (rightly guided) Caliphs, he is regarded by Shia as the first Imam after Muhammad. In other versions it is the Caliph Omar (583-644) whom Bustanai welcomed.

⁵⁵ The objection was that Bustanai had cohabited with her without marrying her and, being a prisoner of war, she was a slave and had been presented to Bustanai as such. Against this it was argued that Bustanai must surely have first freed her and then married her. Opinion was divided and it was finally decided that the sons from his other wives should grant letters of manumission to Dara and her son in order to endorse their emancipation. Nevertheless, the legitimacy of her descendants was still in dispute even 300 years later.

⁵⁶ Nathan Gaon, *av bet din* (President of the Rabbinical Court) a.k.a Nathan Av.

⁵⁷ Moshe Gil, *Op.cit.* p.135 ff.

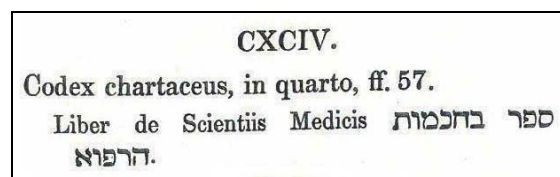
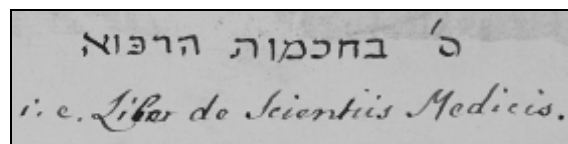
Moshe HaCohen Ashkenazi from the city of Candia (Heraklion) in Crete, of what he had heard in 1483 CE from an Arab named Ali, a former slave, who claimed to have first hand knowledge of the existence of a wondrous Jewish nation across the Sambatyon river, close by Prester John's kingdom. Anticipating his readers probable disbelief, Akrish adds that despite the said Arab's "astonishing words" (דברי תימה), seeing that they tally with those in Prester John's letter to the Pope,⁵⁸ he decided to print them as, above all, they may "give courage to the oppressed."

The Christ Church manuscript and Akrish's *Kol Mevasser* are no more forgeries than are the first quartos of Shakespeare's historical plays. The protagonists in both were real people. Shakespeare's kings did once rule and Hasdai ibn Shaprut and Joseph, King of the Khazars, did once live and letters were actually exchanged, though perhaps not worded exactly as they are in any of the extant texts. But just as we would not teach English history from Shakespeare's historical plays which were written just to entertain, we should not seek to learn Jewish or world history from folktales, Akrish's or anyone else's, whose purpose was not to inform but only to console and give hope.

⁵⁸ A forged *Letter of Prester John* containing a wondrous description of his Christian kingdom, began spreading throughout Europe in the 12th century. Such was its impact, that Pope Alexander III even sent a reply back to him.

Codex 194: Notes on Avicenna's *Canon of Medicine*

The inscription on the inside of the front cover reads: ס' בחכמות הרפוא – *Liber de Scientiis Medicis* (A Book of Medical Science). The entry in Kitchin's catalogue is a copy of this.¹



The text is in an Italian-Ashkenazi script and comprises notes on Avicenna's monumental (14 volumes) *Canon of Medicine*, which was the standard textbook in many medieval schools of medicine and was still in use by some practitioners even in the 17th century.² The *Canon* was first translated into Hebrew in the thirteenth century by R. Nathan Hamati and his translation was published in Naples in 1491.³ It became the most popular book in the Jewish medical Library. This is but one of the more than one hundred extant Hebrew manuscripts containing extracts from or commentaries on the *Canon*.⁴

Paper (ff. 57) in quarto: Neubauer OX 2458; IMHM Film No. F 15583.

¹ A better Hebrew spelling might be: ס' בחוכמות הרפואה.

² Avicenna is the Latinate form of Ibn Sīnā, the Persian polymath whose full name is Abū Alī al-Ḥusayn ibn Abdallāh ibn Al-Hasan ibn Ali ibn Sīnā (980–1037). The author of over 400 works on a variety of subjects, he is one of the most famous Islamic scholars and has been called "The Father of Modern Medicine."

³ Available online: <http://www.hebrewbooks.org/22632>

⁴ Benjamin Richler, "Manuscripts of Avicenna's Kanon in Hebrew Translation; A Revised and Up-to-date List," *Koroth* 8 (1982), pp.145-168.

There is no colophon in the manuscript but the origin and date indicated by the script, Italian and 16th century, correspond with the partial watermark in folio 48 (Fig.194.1). This is not the only partial watermark in the manuscript; none of the others are, however, large or clear enough for even a limited identification.

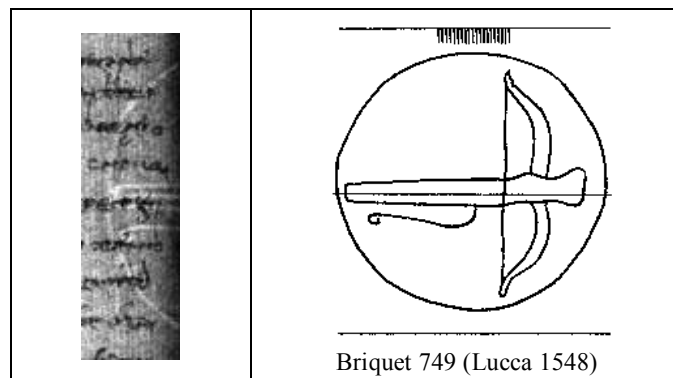


Fig.194.1: The partial watermark in folio 48 which matches a crossbow in circle mark like Briquet 749 (Lucca 1548) or one similar.

The partial watermark in the front endpaper is early 17th century Swiss, Berne or Basle (Fig.194.2).

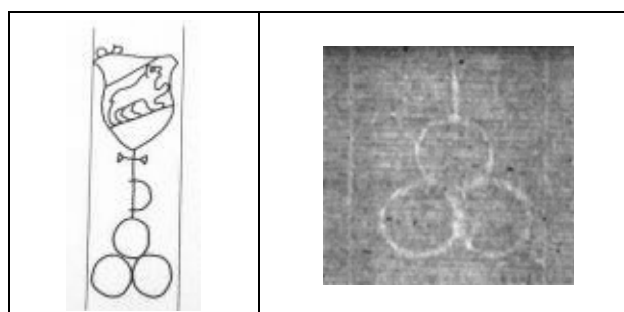


Fig.194.2: The partial watermark in the front endpaper of Codex 194. Three balls suspended from an escutcheon is a common feature in early 17th century Swiss watermarks.

Joseph Shatzmiller, *Jews, Medicine and Medieval Society*, University of California Press, 1994, pp. 48-54.

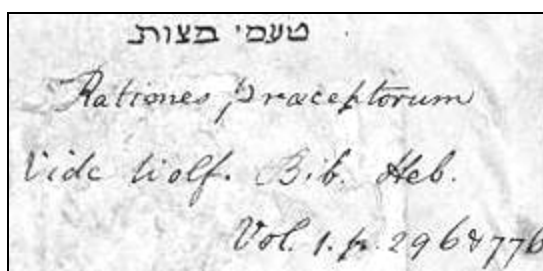
Moritz Steinschneider, *Die Hebräischen Übersetzungen des Mittelalters und die Juden als Dolmetscher*, pp. 686-695. Available online:

<https://archive.org/stream/diehebraeischen00steigoog#page/n733/mode/2up>

Gad Freudenthal & Mauro Zonta, *The Reception of Avicenna in Jewish Cultures, East and West, Interpreting Avicenna: Critical Essays*, Ed. Peter Adamson, Cambridge University Press, 2013, pp. 236-237.

Codex 195: Reasons for the *Mitzvot* – טעמי מצות

The inscription on the inside of the front cover reads: טעמי מצות – *Rationes Præceptorum* [Reasons for the Precepts]. Vide Wolf. Bib. Heb. Vol 1. 296 & 776.



CXCV.
Codex chartaceus, in quarto, ff.130, sæc. xvii.
vel xviii.; mutilus in initio.
Rationes Præceptorum טעמי מצות a Cabba-
listic work.
(Vide Wolf. Bib. Heb. I. pp. 296, 776.)

The search for the purpose or reason for the *Mitzvot* (the Torah based precepts or ordinances incumbent on Jews), derives from a desire to invest them with some intrinsic meaning beyond obedience to God and opinions have differed over the ages as to the merit of this endeavour. Notwithstanding, the rabbinical literature abounds with discourses on the religious significance and ethical justification of these ordinances.

The entry in Kitchin's catalogue correctly states that it is a "Cabbalistic work" but the date it gives, 17th or 18th century, is wrong; it is most probably a 15th century manuscript. As regards its physical condition, it is actually worse than *mutilus in initio* (damaged at the beginning); the extant text is just a small part of what was once a much larger opus.

The citation in the inscription is to two works, both entitled טעמי מצות, listed on pages 296 and 776, respectively, in Wolfius' *Bibliothecae Hebraicae*.

The former is attributed to R. David ben Solomon ibn (Avi) Zimra (c1479–c1573);¹ the latter to R. Menahem Recanati (c1250–c1310). These medieval rabbinical scholars did each compose a treatise with this title on the reasons underlying the *Mitzvot*, however, more recent scholarship has suggested that the reasons proffered in this codex are taken from an opus composed by R. Yosef of Shushan HaBirah, a 13th century contemporary of R. Menahem Recanati.²

Although its script is semi-cursive Sephardic throughout, there are subtle differences between the writing in folios 1 to 80 and that in folios 82 to 123. Evidently two copyists had a hand in the manuscript's production: Copyist 1 from fol.1 to fol.80; Copyist 2 from fol.82 to 123 (*Sfardata*, Key 0C756);³ folios 81 and 81* are blank. The watermarks in all the folios except for the two blank sheets are variants of the same 15th century Catalonian type: a hand/glove with a flower extending out from the middle finger (Fig.195.1).

According to rabbinic tradition, there are 613 *Mitzvot* in all: 248 positive ordinances (the do's) and 365 negative ones (the do not's). It was by reference to this classification that the two copyists divided their labour: Copyist 1 took the positive *Mitzvot* and Copyist 2 the negative ones. They may even have been working in tandem from the same source and the codex represents the surviving fragments of their joint endeavours. Partial of the same 17th century Dutch watermark were detected in the blank folios, 81 and 81*, that separate the two fragments; these were most probably inserted when the manuscripts were bound together to make the present codex (Fig.195.2).

The text on the first page (fol.1r) starts in mid-sentence; the positive *Mitzvah*, whose reasons are being considered, is levirate marriage. An aspect of this ancient institution is also the subject of the next *Mitzvah* which starts on fol.2v and is numbered 62 in the text. The numerical sequence of positive *Mitzvot* continues unbroken, as do the catch words at the bottom of the pages, up to No. 94 on fol.80v, where the text ends abruptly in mid-sentence on the last

¹ Also called Radbaz (רדב"ז), an acronym of his name.

² א. אלטמן, קרית ספר, מ, עמ' 256 ואילך ו-405 ואילך.
Suggestions made in the past that they may be from a work by R. Isaac ben Moses, (Estori) Ha-Parchi (1280–c.1355) or R. Joseph ben Abraham Gikatilla (1248–c.1305) are no longer regarded likely.

³ The Codicological Data-Base of the Hebrew Palaeography Project:
<http://sfardata.nli.org.il/sfardatanew/home.aspx>

line of the page. Overall, reasons for only 32 of the traditionally designated 248 positive *Mitzvot* have survived; there were undoubtedly more in the original source.

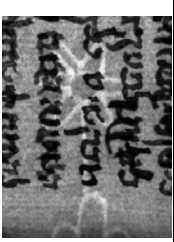


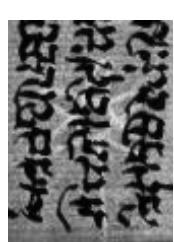

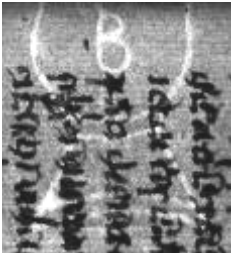

				
fol.13	fol.27	fol.89	fol.123	
				
fol.18	fol.104			
Copyist 1	Copyist 2			Catalonia 1458

Fig.195.1: The watermarks in various folios of Codex 195. The sketch on the right with the letter B is from Watermark No.1663 in *Paper and Watermarks in Catalonia* by Oriol Vallis I. Subira, Paper Publications Society, Amsterdam (1970). The actual watermarks all appear to be variants of this earlier form.

The reasons offered for the negative *Mitzvot* start in the semi-cursive script of Copyist 2 on fol.82r, under the bold heading “This is the Book of Reasons for the Negative *Mitzvot* of which there are 365,” but the following folios contain only 22; albeit, here too the sequence of catch words is unbroken (Fig.195.3).

In many instances, more than one “reason” is offered for a particular *Mitzvah*, each derived from a different mode of exegesis. For example: By Way of the Plain Meaning (בדרך פשט); By Way of Wisdom (בדרך החכמה); By way of Kabbalah (בדרך הקבלה); By Way of Esoteric Kabbalah (בדרך הקבלה הפנימית); By Way of the Truth (בדרך האמת); And Behold, I Open the Gates of Enlightenment for You (והנני פותח לך שערי אורה).




		
Watermark fol.81	Watermark fol.81*	Holland 1627

Fig.195.2: The watermarks in the blank separator folios , 81 and 81*. The image on the right, No.610 in *Watermarks by Edward Heawood MA*, The Paper Publication Society, Hilversum (1950), is one of a group of 17th century Coat of Arms watermarks with the IB feature.



Fig.195.3: Fol.82r. The heading reads: "This is the Book of Reasons for the Negative *Mitzvot* of which there are 365."

The semi-cursive script of copyist 2 ends two-thirds of the way down fol.123v (Fig.195.4) and is immediately followed by a colophon in a cursive

script which reads: "Finished and completed, praised be the Creator, the year five thousand two hundred and seventy one *Anno Mundi* (=1511CE) at Bnei Tzovach (בני צובח)...."⁴ A cryptic note in the cropped margin to the right of the colophon reads (in translation): "[Thus far], I found [] in this formulation"⁵. It is in the semi-cursive script of Copyist 2 and may refer to the colophon.



Fig.195.4: Fol.123v.
The colophon and
cryptic marginal note
to its right.

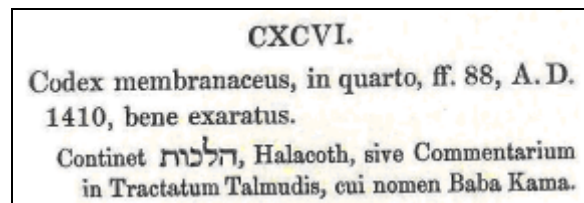
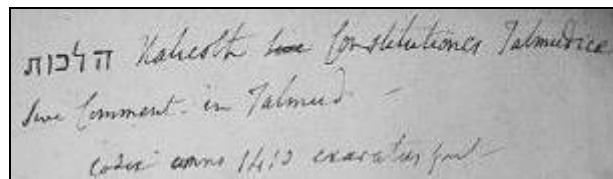
Written in a variety of cursive scripts and thoughtlessly cropped, the last four folios (nos.124 to 127), contain *inter alia* an instruction, said to be based on the *Zohar*, of which Psalms should be read on each day of the week by those who religiously complete a weekly reading of all 150 Psalms, as well as templates of some legal documents, neither of which has anything to do with the reasons for the *Mitzvot*; they were probably included in the binding here for convenience.

⁴ Attempts to identify this location have been unsuccessful.

⁵ [ע"כ מצאתי [] בנוסחה זו]

Codex 196: *Mordekhai HaKatan* – מרדכי הקטן

The inscription on the front endpaper reads: הלכות *Halacoth Constitutiones Talmudice*; *Sive Comment in Talmud*; *codex anno 1410 exaratus* (Talmudic Regulations; or Comments on the Talmud – a codex written in the year 1410). The manuscript is wholly parchment and the script is Ashkenazi.



The entry in Kitchin's catalogue is a transcript of this inscription with the addition of the words...*cui nomen Baba Kama* (named *Baba Kama*). His source for these extra words is an entry at the top of fol.1r (Fig.196.1), in the same hand-writing as the contents inscription, which reads: *Ordo Nezikin Mesecheth Baba Kama* (The Order of Torts; Tractate *Baba Kama*).¹ The entry is, however, misleading: the manuscript's actual contents are given in the colophon on fol.89r (Fig.196.2) which reads (in translation):

"Bravo to you, O reader! The *Mordekhai* which my teacher R. Samuel Schlettstadt² abridged comes to an end here along with the *Halakhot* regarding the writing of Scrolls of the Law, Phylacteries and Mezuzot. And I, Yehuda ben Yitzhak, finished it on Friday of the Weekly Portion *Nitzavim* (נצבים) in the year (5)170 AM (1410CE)..."³

Parchment (ff. 88), in quarto: Neubauer OX 2444; IMHM Film No. F 15588.

¹ *Baba Kama* is the first tractate in the Order of Torts which is the fourth of the Talmud's six Orders.

² A town in Alsace from which he took the name.

³ Another manuscript by this same copyist is in the Biblioteca Palatina, Parma, Italy: Cod. Parm. 2848: Catalogue De-Rossi Parma Italy 774 (IMHM Film No. F 12299).



Fig.196.1: Folio 1r with the handwritten entry *Ordo Nezikin Mesecheth Baba Kama* in the top margin.

The text is a copy of the *Mordekhai HaKatan* (*The Little Mordekhai*), the abridgement composed c.1376 by R. Samuel ben Aaron Schlettstadt (ר' שמואל), of the monumental compendium of *Halakhah* entitled *Sefer HaMordekhai*, (always referred to as “*The Mordekhai*”) compiled c.1280 by R. Mordekhai ben Hillel (c1240-1298).⁴ Schlettstadt was one of the first to edit and condense parts of ben Hillel’s opus, at the same time adding some of his own

⁴ Mordekhai and his family were killed in the general slaughter of the Jews of Nuremberg – the Rintfleisch massacres – in 1298.

opinions and glosses. In this version, the laws regarding the writing of Scrolls of the Law, Phylacteries and Mezuzot have been added at the end of the text.

The order and arrangement of *The Mordekhai* follows that of the *Sefer HaHalakhot* written by R. Isaac Alfasi,⁵ but its text has been corrupted by the many revisors and copyists through whose hands it has passed and no critical text has yet been published.⁶ Notwithstanding, it has become one of the most authoritative and influential sources of medieval Ashkenazi *Halakhah*.



Fig.196.2: The colophon on fol.89r of Codex 196.

Schlettstadt was himself a controversial personality. While serving as Rabbi of the Strasburg community, he secretly convened a court in 1370 which condemned to death two members of the community who had been accused of involvement in a conspiracy with the knights of Andlau against other members of the community. The sentence was carried out on one of them but the second escaped, and, having embraced Christianity, he returned to Strasburg where he came under the protection of the knights of Andlau. In the meantime, with the help of some friends, Schlettstadt had taken refuge in the castle of Hohelandsberg, near Colmar,

⁵ Isaac ben Jacob Alfasi ha-Cohen (1013 - 1103): Moroccan talmudist from the city of Fez, hence the name Alfasi.

⁶ Many manuscripts are extant, but no two are identical. The history of the spread of *Sefer Ha Mordekhai* and of its many versions in manuscript and in print, is one of the most complicated in all of rabbinic literature.

from where he petitioned the leaders of the Strasburg community to intervene on his behalf, but to no avail. He remained confined there for six years.

Tired of waiting, in 1376 Schlettstadt travelled East, where he brought a complaint against the heads of the Strasburg community before the *Nasi* (Head or Chief Justice) of the Jewish Babylonian community. Supported by the rabbinate of Jerusalem, the *Nasi* issued a ban (*Herem*) against the Strasburg community, invoking curses on its members should they persist in their refusal to intervene on his behalf. Eventually they complied and permission was granted for Schlettstadt's return to Strasburg. But he and his family might have been better off had he not gone back, for just a few years later (c.1380) the Jews of Strasburg were all massacred.⁷

The same distinctive ornamental pot watermark with a crescent atop appears in both the front and back endpapers (Fig.196.3).

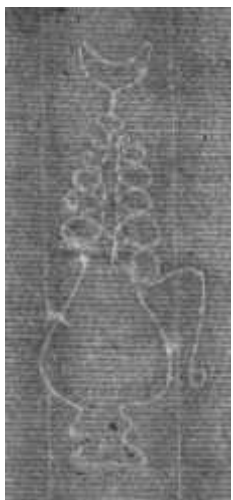
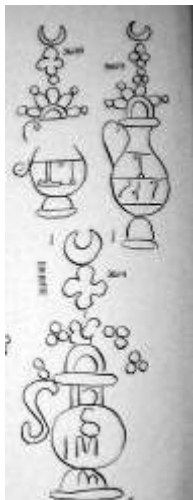
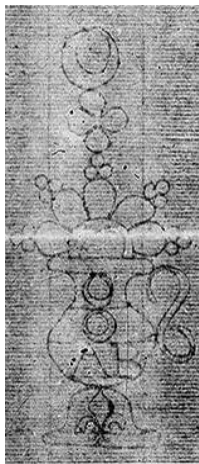
		
The pot watermark with crescent atop in the endpapers of Codex 196.	Heawood 3608, 3609 & 3614 (London, mid 17 th Century)	Gravell Pot 225.1 (Cornwall 1652)

Fig.196.3: The ornate English pot watermarks in the front and back endpapers of Codex 196 and examples from Heawood's Watermarks mainly of the 17th and 18th centuries and the on line Gravell archive. Exceptionally, there are no initials in the watermark in Codex 196.

⁷ 1906 Jewish Encyclopedia (www.Jewishencyclopedia.com)

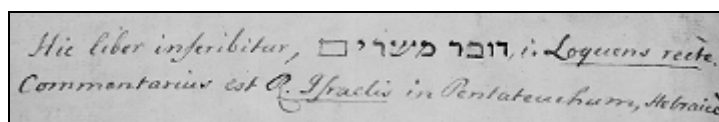
Such elaborate pot watermarks are not found before the late 16th century but became very common in English papers of the 17th century. The Gravell Watermark Archive⁸ and Heawood's *Watermarks mainly of the 17th and 18th centuries*⁹ each have over one hundred examples; the characteristic feature is the crescent at the top of the fruit or flowers. Unfortunately, despite the many examples in these catalogues, an identical match to the mark in Codex 196 has not been found; exceptionally, it does not include any initials. Nevertheless, it may be surmised that the codex was bound into its present covers in England at some time during the 17th century.

⁸ <http://www.gravell.org/>

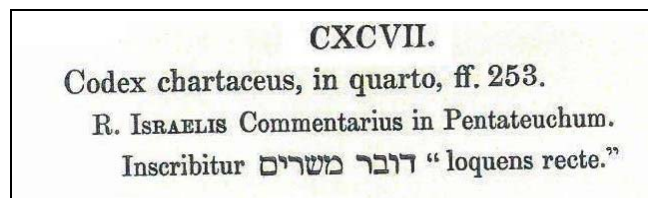
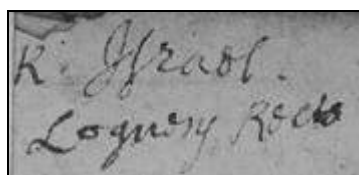
⁹ E. Heawood, *Watermarks mainly of the 17th and 18th centuries*, Hilversum (The Paper Publications Society) 1950 (*Monumenta Chartae Papyraceae*, vol. I)

דובר משרים – Codex 197: A Forthright Speaker

There are two inscriptions in this codex. The larger is on a note stuck to the inside of the front cover which reads: *Hic liber inscribitur, דובר משרים, Loquens recte. Commentarius est R. Israelis in Pentateuchum Hebraice.* (This Book is Entitled *A Forthright Speaker*, A Commentary by R. Israel on the Hebrew Pentateuch).¹



The smaller of the two is an older inscription in the top right hand corner of the inside cover that reads: *R. Israel. Loquens Recte.*



There is no colophon in the codex and it is only from an index on fol.127v, in a different Sephardi script from that of the texts, that we know by whom the discourses were given. Although the top of the page has been badly cropped, the words הנקרא דובר משרים לר' ישראל (Called *A Forthright Speaker* by R. Israel) can just be made out (Fig.197.1).

Paper (ff.244), in quarto: OX 2447; IMHM Film No. F 155850.

¹ *Proverbs* 1:3. לקחת מוסר השכל צדק ומשפט ומשרים – To take the instruction of wisdom; justice and law and equity.

The mentor, R. Israel, describes himself on fol.137v as “Bereaved since the Castilian Exile and forlorn in the Portuguese Captivity” which suggests the discourses were given in the late 15th or early 16th century (Fig.197.2). And as if to emphasise the Spanish connection, a paragraph at the beginning of the discourse on fol.89r is in Spanish but written in a Sephardi Hebrew script (Fig.197.3).

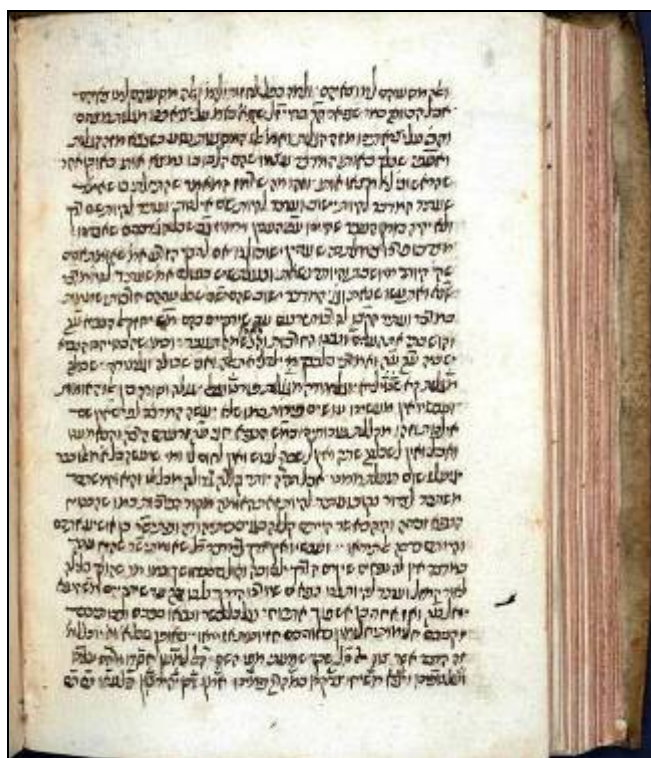


Fig.197.2: Fol.137v. R. Israel’s lament starts from the words ואני שכולה וגלמודה in the thirteenth line, “And I am bereaved and forlorn; bereaved since the Castilian Exile and forlorn in the Portuguese Captivity.”

The several discernible foliations in the codex are just one of the indications of the manuscript’s troubled history (Fig.197.3). Each gives a different figure for the total number of pages that there once were. According to the entry in Kitchin’s 1863 catalogue, there should be 253 folios in the codex. The pencilled foliation, which reflects the present state of the codex, runs unbroken from 1 to just 244, which suggests that 9 folios (253 – 244) have gone missing since the catalogue was prepared.

But the situation is actually much worse. The older foliation in corresponding Hebrew and Arabic numerals, as exemplified by the 89 and 91 on fol.89r (according to the pencilled foliation) runs from 1 to 283, albeit with gaps in the sequence. This suggests that 30 folios (283 – 253) were already missing by Kitchin's time. By reference to the index, however, the loss is even greater. The highest page number it lists is 298, which implies that there were once a further 15 folios (298 – 283), making a grand total of 45 missing folios (298 – 253).



Fig.197.3: Fol.89r. From the fifth word in the fourth line to the end of the paragraph, the text is in Spanish written in a Sephardi Hebrew script. Note the foliations in the top left-hand corner, in particular the pencilled 89 and the Hebrew number 91, in Arabic numerals, to its left. The import of the abbreviations above is not clear.

According to the Hebrew/Arabic foliation, just ten of the missing folios were between folios 1 and 204. The Hebrew/Arabic and pencilled foliations concur from folio 1 up to folio 55, at which point the correspondence breaks down. Whereas the pencilled foliation continues with the next number, 56, the Hebrew/Arabic jumps to 58; folios 56 and 57 are missing. The disparity between the catch-word at the base of the verso page and the first word in the top line of the recto page in Fig.197.4 confirms that pages are missing here.

The difference of 2 units between the Hebrew/Arabic and pencilled foliations continues up to the folios numbered 102 and 100, respectively, from which point the pencilled foliation continues with the number 101, while the Hebrew/Arabic foliation jumps from 102 to 105; folios 103 & 104 are missing. Similar considerations point to the loss of a further six folios, 131 to 136 according the Hebrew/Arabic foliation, making a total of 10 missing folios: 56 & 57, 103 & 104 and 131 to 136.



Fig.197.4. The recto page is numbered נח (= 58) according to the Hebrew/Arabic page numbers but 56 according to the sequence of pencilled page numbers. Note too that the first word in the top line of the recto page does not match the catchword at the base of the verso page.

The Index is not part of the original text and was evidently inserted in the codex at a later date in the gap created by the loss of folios 131 to 136. As such, it makes up for one of the ten missing folios, leaving a net difference of 9 between the two foliations from this point on. Unless the pencilled numbers were entered before 1863, this raises the worrying possibility that the nine missing folios have gone astray since Kitchin prepared his catalogue.

The folio immediately following the Index is numbered 137 (128 according to the pencilled foliation) and from this point and until we reach folio 204 (195 according to the pencilled foliation), there are no more missing folios. Thus, apart from the said ten missing folios and the two discourses that they would have contained, this section of the manuscript appears to be intact. The almost unbroken sequence of catchwords in this section also attests to its integrity.

By contrast, the text from this point on is in a distressing state. According to the index, a group of ten more discourses should follow, starting on folio 205, and continue unbroken up to folio 230. There is, however, no trace of them. The discourse that actually follows (תולדות נח) is the one that the Index places on folio 234, but there is no sign of that number on the page (Fig.197.5). All there is, apart from the pencilled 196 in its top left-hand corner, is a figure 8 and the number 239 in a awkward angular script. The next three folios, on which the discourse continues, have the numbers 9, 10 and 11 in their top left-hand corner.

The origin of all these numbers is a mystery. The four folios are possibly from a different manuscript and were inserted here, and the incorrect folio number 239 was added later.



Fig.197.5: Fol.196. There are two extraneous page numbers, 8 and 269, in addition to the pencilled page number 196, in the top left-hand corner. The figure 8 is in a script similar to that of the Hebrew/Arabic foliation whereas the 239 is in a very different angular script.

The discourses that should have appeared on folios 239, 241, 243 and 248 according to the Index are, however, not missing. They now appear on fols.208r, 210r, 200r and 204v, respectively, (according to the pencilled foliation). However, there is no trace of the two discourses that should have been on folios 252 and 273, which gives a running total of fourteen missing discourses. Adding to this the ten discourses listed in the index but without a designated page number, gives a final total of twenty four missing discourses.

Table 1 lists the sixty two discourses in the Index by the page/folio numbers in which they appear according to the three different systems of

foliation: 33 in the section from fol.1 to fol.204, 19 from fol.205 to the end and 10 with no designated page/folio number.

Table 1: The sixty two Torah Discourses and the pages/folios on which they appear according to the three foliations: Pencilled, the older Hebrew/Arabic numerals and the Index.

From Index fol.1 to fol.204.				From Index fol.205 to end.			
Pencil	Old	Index	Torah portion	Pencil	Old	Index	Torah portion
1r	1	1	וזאת הברכה			205	ויקרא
8r	8	8	לך לך למת שנהרג			206	צו
13v	13	13	בשלח			208	שמיני
15r	15	15	ויצא			209	תזריע
19r	19	19	ויצא למת			211	מס?
21r	21	21	וישב			212	מצורע
33r	33	33	שמות לחתן			215	ויקרא לאדם כשר שמת והיה עשיר ר' עני
39v	39	39	שמות			218	בראשית
48r	48	48	יתרו			221	וזאת הברכה
Missing		57	ויחי			230	בראשית לחתן
62r	64	64	תצוה	196r	239?	234	תולדות נח
70v	70	70	צו	208r		239	וירא
77r	79	79	יתרו לפסח ולשבועות	210r		241	וירא
78r	80	80	ויקרא זכר עמלק	200r		243	לך לך
82v	82	82	וזאת הברכה	204v		248	לך לך
81r	83	83	שבת הגדול			252	ויצא לת"ח שמת
83r	85	85	בראשית לחופה			273	יתרו לחופה
85r	87	87	שמיני	231r	284	284	חיי שרה למת
86v	88	88	שופטים	239r	?	298	חיי שרה למת
87r	89	89	וירא				תולדות
89r	91	91	כי תשא				מקץ
Missing		103	משפטים למת בקצרות שנים				ויגש
101r	105	105	במדבר				וארא
109r	113	113	קורח				בא
121r	125	125	פנחס				תרומה
128r	137	137	מטות ומסעי				ויקרא
138r	147	147	ואתחנן				פקודי
?	153	153	שופטים				אחרי מות
154r	163	163	ראה				קדושים
166r	175	175	אתם ניצבים אמור ליום א'				
174r	183	183	של סוכות בד' מינים				
181v	190	190	לך לך למת שנהרג				
188v	197	197	וישלח				

The last thirty four folios of the codex are a confused jumble (Fig.197.6) and it is quite possible that fragments of the missing discourses could be pieced together from their contents. Such a task is, however, beyond the remit of this project.



Fig.197.6: Folios 229v-230r. An illustration of the chaotic condition of the last thirty four folios of Codex 197.

The partial watermark and close chain-lines in the endpaper are reminiscent of the Dutch papers used in the endpapers of codices 198 and 200, suggesting that this codex was also rebound in Holland during the 17th century (Fig.197.7).



Fig.197.7: The partial watermark in the front endpaper of Codex 187.

Most of the watermarks in the folios of text are variants of the familiar hand/glove design (Fig.197.8). The mark in folio 204 is an exception (Fig.197.9).

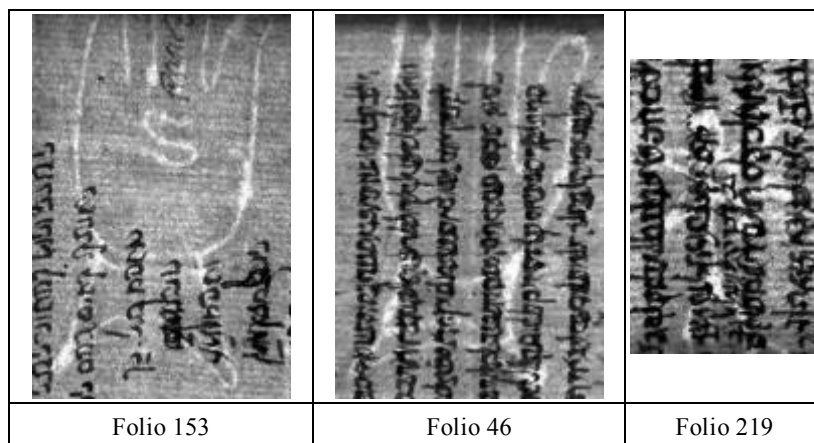


Fig.197.8: Hand/glove watermarks in Codex 197.

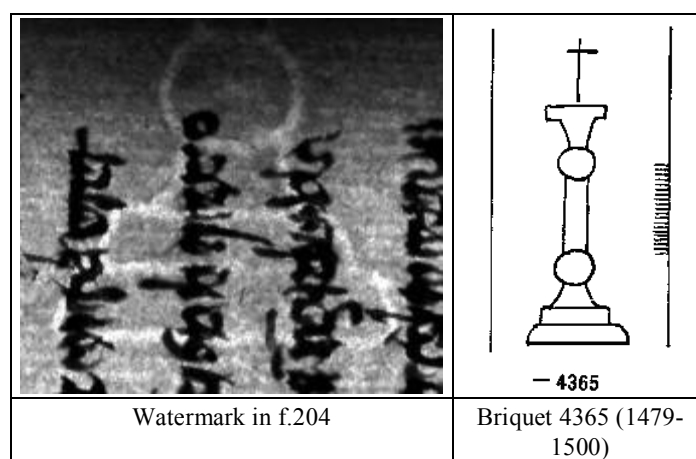


Fig.197.9: The partial watermark in fol.204.

Codex 198: R. Jacob Lagarto's Collection of Kabbalah and Hekhalot Texts

This codex comprises a collection of esoteric Kabbalah and Hekhalot texts that were transcribed by R. Jacob Lagarto in 1635 on the eve of his departure from Holland for the newly acquired Dutch settlement in Recife, Brazil. The titles of twelve of the texts are listed on fol.1v in Hebrew and Latin under the heading *Collectanea Cabbalistica* (Fig.198.1). The texts themselves are all in a cursive Sephardi script.

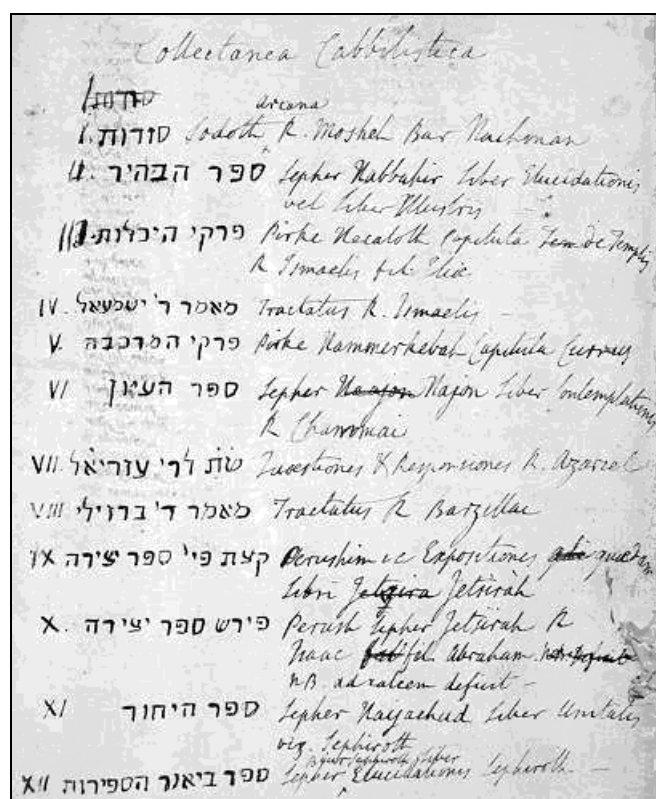


Fig.198.1: Fol.1v. The list of twelve esoteric texts under the heading *Collectanea Cabbalistica* (A Kabbalistic Collection).

The entries in Kitchin's catalogue are English translations of these Latin inscriptions; the Hebrew wordings are included in a number of instances (Fig.198.2).

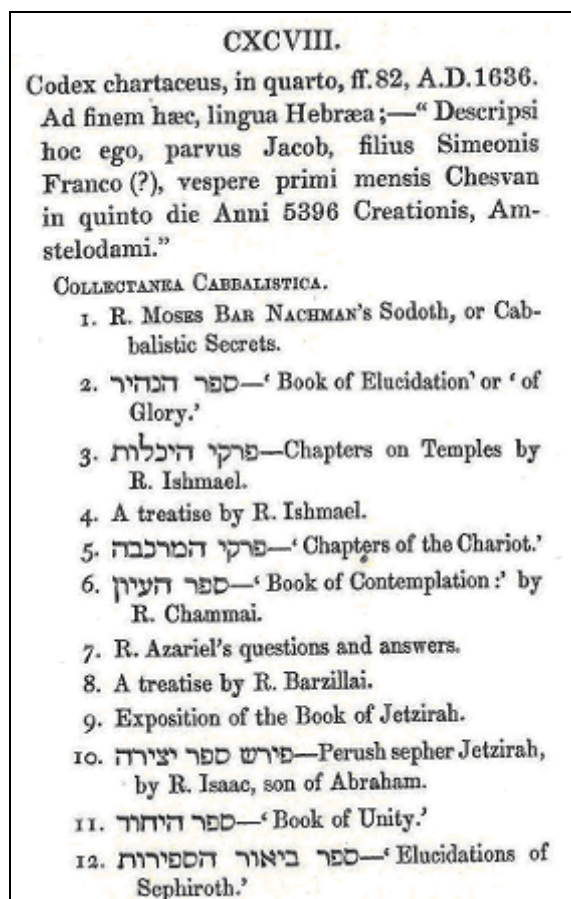


Fig.198.2: The entry for
Codex 198 in the
catalogue of the Library's
manuscripts prepared by
G.W.Kitchin in 1863:
*Catalogus codicum MSS
qui in bibliotheca Aedis
Christi.*

Eleven of the texts have the following colophon (in translation):

"I, the youngster¹ Jacob ben Simon Franco, copied it [on] Thursday, eve
of the New Moon of the month of Heshvan 5397 (1635), here in
Amsterdam."

A copy of the colophon in Hebrew block letters, together with a Latin translation,
is inscribed at the foot of fol. 83v (Fig.198.3).

¹ A self-deprecating euphemism that is a common feature of rabbinical signatures. This
entry and the inscription on fol. 1v are in the same handwriting.

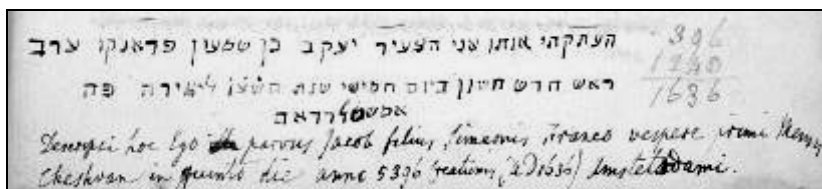


Fig.198.3: The copy of the colophon in Hebrew block letters and the Latin translation at the foot of fol.83v from which Kitchin evidently took the Latin version that appears in the catalogue entry.

The only watermark is in the back endpaper. It dates from 1635 which matches that in the colophons (Fig.198.4).

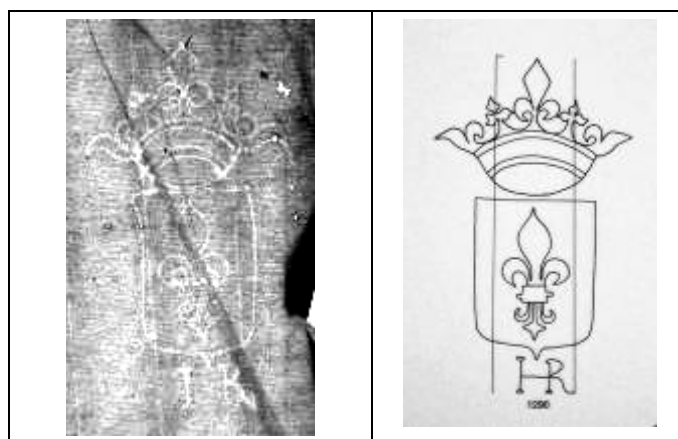


Fig.198.4. The watermark in the crumpled back endpaper of Codex 198: Piccard 1290 (Nyköping 1635).²

According to the catalogue of the Institute of Microfilmed Hebrew Manuscripts, the codex actually contains the following sixteen esoteric texts and not just the twelve listed on fol.1v and in Kitchin's catalogue:

1. 1r–25v: Selections from Provencal and Gerona Kabbalah. Kitchin's entry, "R. Moses bar Nachman's Sodoth or Cabbalistic Secrets," is taken from a handwritten note in the top left-hand corner of fol.1r. The text, however, also includes remarks by R. Azriel (see below) and R. Abraham Ḥazan, both of Gerona.

² Gerhard Piccard, *Wasserzeichen Lilie*, W. Kohlhammer, Stuttgart (1983).

2. 26r–39v: *Sefer HaBahir* (*The Book of Brightness*), one of the oldest Kabbalistic texts. An anthology of midrashic dialogues on the first chapters of Genesis attributed by traditional Kabbalists to the 1st century sage R. Nehunya ben Ha-Kanah, but thought by modern scholars to be of medieval origin.
3. 40r–50v: *Hekhalot Rabati* (*The Greater Palaces*), an account of the ascent of R. Ishmael into the heavenly palaces. The *Hekhalot* literature is a genre of Jewish esoteric texts produced between late antiquity and the early Middle Ages.
4. 52r–56v: *Shiur Komah* ((Divine Dimensions). An account in anthropomorphic terms of the secret names and measurements of God's supposed corporeal limbs and parts. The text is in the form of sayings or teachings revealed by the angel Metatron to Rabbi Yishmael. Doubts have been expressed as to its origins and authenticity: Maimonides considered it a Byzantine forgery. There is no agreement amongst scholars regarding the date of its composition.
5. 57r–57v: *Harugei Malkhut* (*Martyrs of the Realm*), a version of the account found in various *Midrashim* of the martyrdom of ten eminent Talmudic Sages.
6. 57v: *Tzaluta DeEliyahu* (*Elijah's Prayer*), a short piece of *Hekhalot* literature that features the two biblical immortals: Elijah the prophet and Enoch the son of Jared (Metatron), neither of whom died: Enoch was "taken away by God" (*Genesis* 5:24) and Elijah "went up to heaven in a whirlwind (*2Kings* 2:1)."
7. 58r–59v: *Pirkei HaMerkabah* (*Chapters of the Chariot*).
8. 60r–67v: *Sha'ar Shamaim* (*Heaven's Gate*) by Yaacov ben Sheshet Gerondi.
9. 68v–69r: *Sefer Haiyun* (*The Book of Contemplation*) attributed to Ḥammai Gaon.
10. 70r–73r: *Shaar HaShoel* (*Gate of the Questioner*), theological queries put to R. Azriel ben Shlomo of Gerona, a pupil of Isaac the Blind (R. Yitzhak Saggi Nehor), and his replies.

11. 73v–75v: *Perush Esser Sefirot* (An Interpretation of the Ten Sefirot).
The text attributes the work to a Rabbi Barzilai, possibly the 12th century Talmudist and Kabbalist R. Judah ben Barzilai Albegeloni.
12. 76r–77v: *Ketzat Perush Sefer Yetzirah* (A Brief Commentary on *Sefer Yetzirah*) by R. Moshe ben Naḥman (Naḥmanides).
13. 77r–79v: *Perush Sefer Yetzirah* (A Commentary on *Sefer Yetzirah*) by the Provençal R. Yitzhak Saggi Nehor, also known as Isaac the Blind (c.1160–1235).³
14. 80r–82r: *Sefer HaYiḥud* (An Interpretation of the Ten Sefirot).
15. 82v–83v: *Sefer Biur HaSefirot* (A Book on the Elucidation of the Sefirot) by Yaacov ben Yaacov HaCohen.
16. 83v: *Perush Esser Sfirot* (An Interpretation of the Ten Sefirot)

An entry dated 1 Adar 5387 (17 February 1627) in the annals of the Jewish community held by the Stadsarchief in Amsterdam,⁴ records the admission of Simão Franco, alias Simão Fernandez Lagarto, into the Dotar Society.⁵ A later entry, dated 30 Shevat 5397 (27 December 1636), records the admission of his son Jacob into the Society.⁶ A third entry, this time in the records of the Beth Haim cemetery in Ouderkerk, states that a woman named Ester Franco Lagarto was buried there in 1698 and that she was the wife of Ḥaham (Chief Rabbi) Jacob Franco Lagarto, who died in 1667 and was buried in Middelburg.

R. Jacob Lagarto's keen interest in Kabbalah and Hekhalot literature is evinced by the forty one titles listed in the two columns on fol.1r (Fig.198.5). The one from last in the left-hand column is *Sefer Shefa Tal*, an esoteric work by

³ The Aramaic epithet *Saggi Nehor* (Lit. a bright light) is an ironic euphemism for one who is blind.

⁴ Archive 334; Inv. no. 1142, p. 90.

⁵ A Jewish charity that collected and distributed dowries for orphan girls.

⁶ At a meeting with the Parnassim (Community Wardens), he stated that he had an older brother living in Spain of whom nothing had been heard for a long time. The Parnassim agreed, nevertheless, to admit Jacob on condition that should his brother reconvert to Judaism, he would be admitted instead, a rider that Jacob accepted (Archive 334; Inv. no. 1142; fol.115/p.229).

R. Shabtai Sheftel Horowitz of Prague (1565-1619); it was first printed in Hannau in 1612. The copy of this edition in the Yosef Goldman collection in New York has a handwritten note of Lagarto's ownership in the same handwriting as the manuscripts in Codex 198 (Fig.198.6).

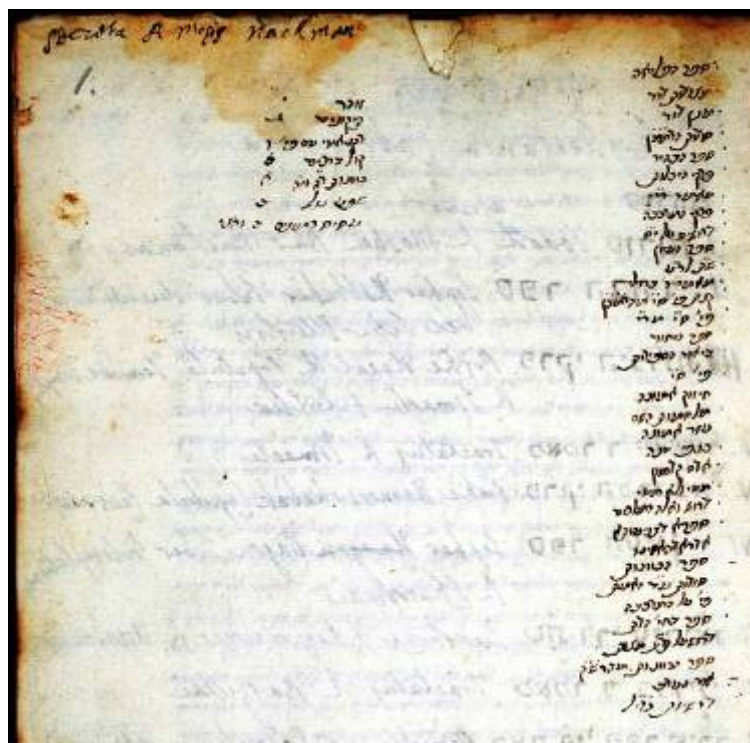


Fig.198.5: Folio 1r with the list of forty one titles.

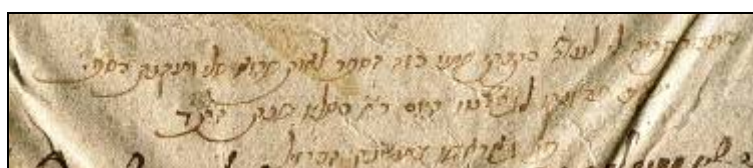


Fig.198.6: The Hebrew ownership note written by Jacob Franco Lagarto in a copy of *Sefer Shefa Tal* by R. Shabtai Sheftel Horowitz. It reads (in translation): "As proof of my ownership and that it was purchased with my money, I have written my name in this book, Jacob Franco Lagarto Rosh Hodesh Kislev 5404 (November 12, 1643) here in Garasho(?) of the State of Brazil" (Fig.198.4).

A comprehensive analysis of the esoteric texts in Lagarto's collection is far beyond the remit of this note but there is one item on fol.75v which, by virtue of its enigmatic references to London and Toulouse, cannot be passed over. It purports to be the contents of a letter on the subject of the Seven Canopies that await the souls of the righteous in the Hereafter (Paradise),⁷ sent by "the great Rabbi Yekuti'el from the town of London (לונדר"ש)...to his pupil Rabbi Yedidyah from the town of Toulouse (טולוש"ה) (Fig.198.7).

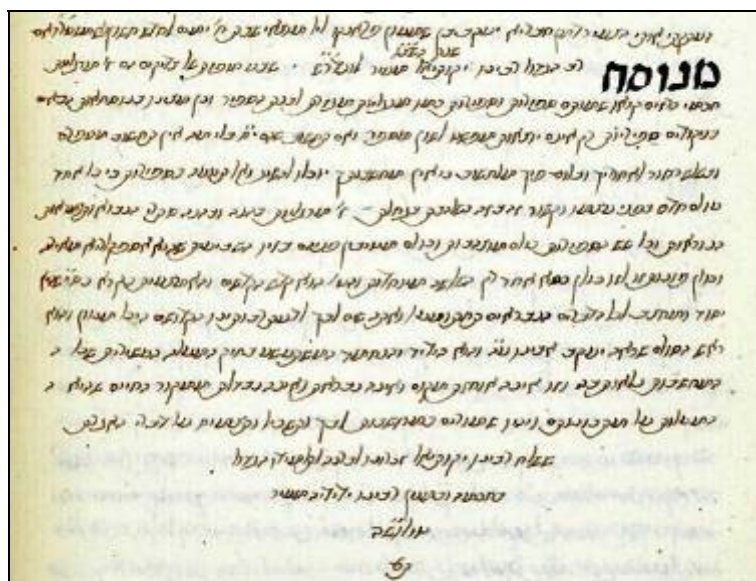


Fig.198.7: The account of the letter sent by Rabbi Yekuti'el of London (לונדר"ש) to his pupil Rabbi Yedidyah of Toulouse (טולוש"ה) in the paragraph that starts with the word מנוסה. The line above is the colophon at the end of the previous item, one of the eleven such entries in the codex.

A text attributed to a Rabbi Yekuti'el and which is identical to that above appears in *Sefer HaEmunot* (The Book of Beliefs) by Shem Tov ibn Shem Tov (c.1390-c.1440)⁸ first printed in Ferrara in 1556.⁹ There is, however, no reference there to London or to a Rabbi Yedidyah from Toulouse; it is simply referred to as "the responsum of R. Yekuti'el." Lagarto's source for the addenda in his copy of the text is a mystery. If there ever was a Rabbi Yekuti'el in London with a pupil

⁷ TB Baba Batra 75a

⁸ A Spanish Kabbalist and fierce critic of rationalist Jewish philosophy.

⁹ The particular passage is on fol.100r. See: www.hebrewbooks.org/45915

in Toulouse, it must have been before the expulsion of the Jews from England in 1290 and the wiping out of the Jewish community in Toulouse, but there is no independent historical record of either of these persons.

R. Jacob Lagarto played a part in the early history of Latin American Jewry. In 1630, the Dutch West India Company captured the Brazilian city of Recife from the Portuguese and the religious freedoms enjoyed in Holland were extended to the colony; Jews could now openly practice their religion there and Jewish settlers started arriving from Holland. The community formed at Tamarica (Itamarica), an island not far from Recife, appointed R. Jacob Lagarto as its own Ḥaham.¹⁰ But the settlement was short-lived. In a bitter war, the Portuguese took back Recife in 1654 and expelled the Jews. Those who did not return to Holland made their way to Curacao, Barbados and Jamaica, taking their capital and the technology for sugar production with them; the first Jews to settle in New York in 1654 (New Amsterdam as it was then) also came from Brazil.

¹⁰ Graetz, Heinrich, *History of the Jews*, Vol.4, (1894) p.693.
See also: *Publications of the American Jewish Historical Society No. 3*, Papers presented at the Third Annual Meeting, held at Washington, Dec. 26 and 27, 1894. Published by the Society 1895 [Second edition, 1915] pp.16-17.

Codex 199: A Controversy in the Amsterdam Jewish Community in 1650

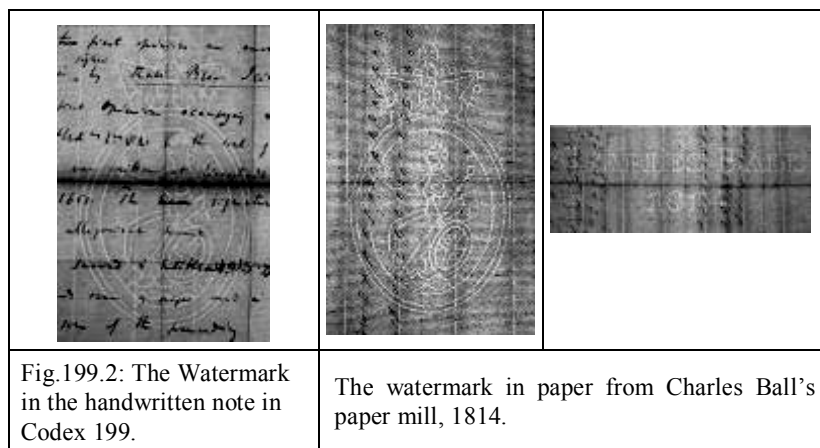
An unsigned and undated handwritten note on early 19th century paper (Figs.199.1 & 199.2), attached to the inside of the front cover of the codex, reads:

This book contains three opinions on the question: 'Whether the children of the secret Jews in Portugal [Cristiano Nuevos, Conversos, Marranos or, in Hebrew, Anussim] born of Christian women have the same rights in the Jewish world, as the Jews themselves?' The question is answered in the affirmative. The two first opinions are anonymous; the third is signed by Rabi Beer Jeiteles.

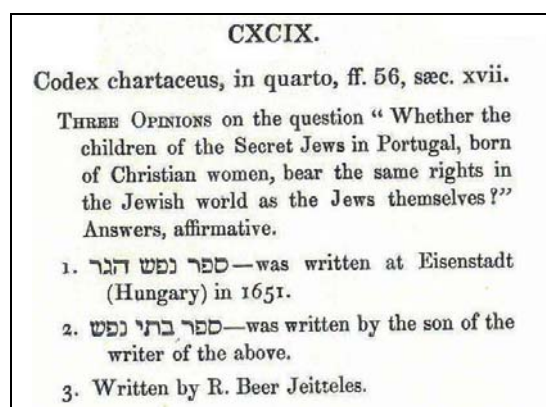
The first opinion occupying 41 folios is entitled נפש הגר (The Soul of the Stranger) and was written at Eisenstadt in Hungary in 1651. The signature is only an allegorical name. The second is entitled בתי הנפש (Houses of the Soul); it extends over 9 folios and is written by the son of the preceding. The third is signed by Beer Jeiteles.



Fig.199.1: The handwritten note in Codex 199.



The entry in Kitchin's catalogue is a summary of this handwritten note.



There are two Christ Church Library bookplates in the codex: the usual 18th century plate found in all the other items in the collection and another, dated 1904, on the inside of the back cover. The covers are also modern and it would appear that the codex was rebound at around that time.

The codex comprises a total of fifty five leaves, all well preserved. Its Hebrew script is quite legible and is typical of central European Ashkenazi manuscripts of the middle and late seventeenth century. It is also clearly the product of a single scribe. Many of the page borders are delicately decorated with line patterns that issue from letters at the edges of the text (Fig.199.3).

The wording of the handwritten note is a little misleading. Only the first and third texts can really be described as opinions (*responsa*); the second is not a legal document but more of a polemic about the unwelcoming way in which *Anussim* were sometimes received by their host communities. Secondly, they

were not actually replies to a general enquiry about the rights of the children of the secret Jews in Portugal born of Christian women, but to a request for guidance regarding a specific incident at the Amsterdam Jewish community in 1650. The question asked was whether one of its members, a *Ger* (proselyte) who was the son of a Portuguese secret Jew (*Anuss*) and a gentile woman, could hold a senior communal position.



Fig.199.3: Folios 3v and 4r of Codex 199

The issue of the personal status of the *Anussim* had no clear precedents in Jewish Law (*Halakha*). On the one hand, the accepted rule was that a Jew remains a member of the Jewish people whether or not he abides by the precepts of Judaism. Even if a person converts (or reverts) to another faith, he or she remains a Jew. Thus, in principle, the *Anussim* remained Jews, their adoption to Christianity notwithstanding. As such, they were still subject to the tenets of Judaism, a central teaching of which is endogamy. On the other hand, fear of the Inquisition, whose primary target they were, had made secrecy and charade a matter of life and death for them, which inevitably resulted, over time, in a blurring of their Jewish credentials. The often heartrending situations to which this led, especially in matters of matrimonial law and succession, is a recurring subject in the halakhic literature of the sixteenth and seventeenth centuries. The

status of the Iberian *Anussim* and their children was, thus, a very complex issue and it was generally dealt with on a case by case basis.¹

There are few more contentious issues in public affairs than the selection of appointees to positions of power and authority and never is it more divisive than when the candidate is an outsider; such was the controversy that prompted the request for guidance sent out by the recently established and “upwardly mobile” Amsterdam Jewish community. The position to be filled was that of *Parnass* (lay head of the community), the most senior honorary office in the community, and the eligibility of the leading candidate, an otherwise impeccable nominee, was challenged at the meeting of the membership convened to confirm his appointment.

The following account of the affair appears in the preamble to the first opinion (2r-3v):

“A man of the seed of Israel, one of the *Anussim* [*Cristianos Nuevos*, *Conversos* or *Marranos*] in Portugal, profaned himself with a gentile woman who bore him a son; the man subsequently died...The lad remained with his mother until he grew up and learned wisdom, and ‘the spirit of the Lord began to stir in him’...And he chose well and did not follow the ways of her idolatry and went in search of the Lord. And he came to Holland...and became a Jew...And they appointed him to a position of authority and made him Charity Warden in the Rotterdam community...and he was later appointed a warden in the Amsterdam community...And it was on the day the leaders of the community were assembled...and they proposed to appoint him *Parnass* and head of the community or *Gabai* [treasurer] of the community chest for the redemption of prisoners, and [one of those present] objected...calling out “he is disqualified by the Torah [from holding the positions]”...but many stood up for him.”

The challenge to his eligibility was on the grounds that he was a *Ger* (a proselyte) and hence prohibited by the Torah from occupying any position of coercive authority over the community.

*From amongst your brethren shall you set a king over you; you may not place a foreigner over you, [one] who is not your brother.*²

¹ Simha Assaf, *In Jacob's Tents* (באהלי יעקב), Mossad HaRav Kook, Jerusalem 1943, pp.145-180 (in Hebrew).

² *Deuteronomy* 17:15

On the face of it, the objection was well founded. Maimonides had formulated the *Halakha* in this matter as follows:

A king should not be appointed from amongst the *Gerim* [מקהל גרים] even after a number of generations, until his mother is an Israelite, as it says: *You may not place a foreigner over you, who is not your brother.* This does not apply to the monarchy alone, but to all positions of authority within Israel...All appointments you make shall be none other than *from amongst your brethren*.³

It would appear, therefore, that *Gerim* (proselytes), as a class, are excluded from holding any senior office in a Jewish community. This ruling was of real concern for the Amsterdam community, many of whom were themselves *Anussim* or descendants of *Anussim* and whose Jewish credentials might not be impeccable.⁴

The proposed candidate was the son of an *Anuss* (*Cristiano Nuevo*, *Converso* or *Marrano*) and a Christian woman and, as such, he was not a Jew from birth.⁵ His father had died and he had made his way from Iberia to Amsterdam where he underwent *Giur*, the procedure by which a gentile becomes a Jew and which included circumcision.⁶ He had meanwhile become a respected member of the community, a “brother” Jew in the collective sense, but did that make him a “brother” in the sense required for his appointment to a position of coercive authority?⁷ Unsure how to proceed without slighting the candidate or going against Maimonides’ ruling, the community had appealed for outside guidance. Codex 199 contains three of the replies they received.

³ *Mishne Torah, Hilhot Melaḥim*, 1:4

⁴ The flow of Iberian Jews and *Anussim* into the newly independent Northern Dutch Provinces, that had begun after 1593, continued well into the seventeenth century. As loyal supporters of the House of Orange, they prospered in their new home by dint of their skills and hard work. Notwithstanding, as often occurs in immigrant societies, tensions had begun to surface between the earlier and later arrivals, and between those whose Jewish credentials were above reproach and those whose weren’t.

⁵ By traditional rabbinic law, Jewish nationality is matrilineal.

⁶ Non-Jews are not ‘converted’ to Judaism; they become Jews (or Hebrews or Israelites). Becoming a Jew involves more than just changing one’s religious affiliation. To be a Jew means to belong to the nation of Israel (עם ישראל) and when a gentile becomes a Jew, he joins that nation. However, in Jewish law, the only way of joining the nation of Israel is by accepting the *Torah* of Israel (תורת ישראל) and it is this which gives the process its religious connotations.

⁷ The word “brother” or a declension of it (אחי) occurs some 250 times in the Torah, its import depending on the particular context.

The titles of the replies written supposedly by a father and son, together with their allegorical names and accreditations as well as short abstracts of their respective replies, are all displayed on the first page of the codex (fol.1r). There is no mention, however, of the reply by R. Ber Jeiteless (Fig.199.4).



Fig.199.4: Fol.1r. The cover page of the first two works in Codex 199: ספר נפש הגר (*Sefer Nefesh Ha-Ger*) and ספר בתי הנפש (*Sefer Batei Ha-Nefesh*).

The author of first opus, *Sefer Nefesh Ha-Ger* (The Book of the Soul of the Ger) is given as כמורה"ר כלכל בכמורה"ר פנחס אל קנאה – His Honour, our Teacher, Rabbi Calcal son of His Honour, our Teacher, Rabbi Phineas El Kanah; this is the allegorical name referred to in the handwritten note. By far the longest of the three works, it comprises 80% of the codex (fols.2r to 44v). More than just a *responsum* (a rabbinical legal opinion), it is an halakhic *tour de force* which goes far beyond the immediate question of the eligibility of the said son of an *Anuss* to the position of *Parnass*. Written in rabbinic Hebrew, it surveys the legal

standing of *Gerim*, whatever their origin, over a whole range of matters, including their filial and levirate obligations, inheritance rights and kinships. It also emphasises the moral imperative of showing consideration towards *Gerim* and reviews the biblical and post-biblical precedents of *Gerim* occupying positions of authority.

The second work (45r-54r) is entitled ספר בתי הנפש – *Sefer Batei Ha-Nefesh* (The Book of the Houses of the Soul) and according to the cover page was composed by the son of Rabbi Calcal, whose name is given as כמוהר"ר כלאב – His Honour, our Teacher, Rabbi Kilav. In contrast to the other two works, it is not so much an opinion as a lyrical paean in praise of *Gerim* and a passionate outpouring against those who are unwelcoming of them. In a preamble written partly in rhyming Hebrew couplets and triplets, the author explains that he was driven to write the piece by the grudging manner in which *Gerim* were often accepted by their host communities.

The body of the work comprises twenty-two paragraphs, composed and ordered such that their initial letters give the sequence of letters in the Hebrew alphabet, from *Aleph* through to *Tav*. In the first nine paragraphs, the author berates the Jewish burghers of Amsterdam for their attitude towards the *Gerim* amongst them; at one point even comparing their inhospitality to that of the biblical Sodomites. The next ten paragraphs are in the first person as the son of the *Anuss* tells his own story. He recounts how his father had been beguiled by a gentile woman (his mother) and had died shortly afterwards; how he himself had come to reject the religion of the land in which he had grown up (Portugal) and his decision to escape and make for Amsterdam; his feelings and anxieties during the circumcision and ritual immersion he had undergone in becoming a Jew; and, finally, his dismay at the unfriendliness of his new coreligionists. Taking up the narrative again in the last three paragraphs, the narrator presents no decisive halakhic opinion, though it is clear where his sympathies lie. He simply concludes with the call that "...[the welcoming of *Gerim*], this is charity; this is love, kinship, peace and friendship; this is the solicitude ordained by the Torah in the thirty six places the text refers to *Gerim*."

The third text in the codex, to which there is no reference on the cover page, is a short *responsum* that occupies just the last two folios (54v-55r). Although undated, it bears the signature of a member of one of the most distinguished Jewish families in Prague: יששכר הנקרא בער בהח"ר יאודה לייב – Issachar called Ber, the son of Reb Yehuda Leib Jeiteless, Dayan

(Jewish ecclesiastical judge). The author's father, Yehuda Leib Jeiteles (d.1666), was a warden of the famous Altneuschul (the Old-New Synagogue) in Prague.⁸

As is usual in the writing of *responsa*, both Calcal and Jeiteless begin by restating the question to which they were replying. In neither case, however, are we told who the questioner actually was: Calcal just states that "[the question] was apparently written by a great man, one of the wise men of the Portuguese [Jews]". Furthermore, whereas the question is formulated concisely and to the point in Jeiteless' *responsum*, as is his reply, in Calcal's it takes up four full pages of the manuscript (2r-3v) and goes into some detail about the background and circumstances of the *Anussim* and Jews of Amsterdam. Thus we learn (i) that unions between an *Anuss* and a gentile woman, such as that between the said *Ger*'s father and mother, were rare "for it was not usual for *Anussim* to cohabit with gentile women ...and moreover, the gentiles distanced themselves from them ...for they are זרע מוכר"חיים – the seed of forced converts [to Christianity];" (ii) that the authority of the officers of the Jewish community over its members was limited by deference towards them (they were not to be publicly embarrassed), by the volatility of their financial circumstances (they were not to be pressed when behind in their dues) and by the restrictions imposed by civil law; (iii) that financial disputes between Jews were not brought before the *Bet Din* (the Jewish court of law) but before the civil courts; and (iv) that the *Ger* in question was held in high regard in the community by virtue of his great Torah learning, wealth and generosity.

Both Calcal and Jeiteless conclude that this *Ger* can be elevated to any position to which the Amsterdam Jewish community chooses to appoint him. The former posits that when he underwent *Giur*, his relationship with his gentile mother was dissolved, leaving only that with his Jewish father. Furthermore, the

⁸ There are links to three in depth studies of this manuscript by this writer at: <http://www.chch.ox.ac.uk/library-and-archives/hebrew-manuscripts>

(i) Tracing Two Lost Works by Delmedigo, *Christ Church Library Newsletter*, Volume 6, Issue 3;

(ii) From Eisenstadt to Oxford: The Provenance of MS 199 in the Hebrew Collection of Christ Church Library, *Christ Church Library Newsletter*, Volume 9, Issues 1, 2 & 3.

(iii) A Controversy in the Amsterdam Community in 1650: Can a *Ger Tzedek* be Appointed Parnass? *Hakirah, The Flatbush Journal of Jewish Law and Thought*: Vol. 19, Winter 2015, p.117.

Parnass does not exercise sole or absolute authority over the community; his powers are limited and are only exercised in conjunction with others whose eligibility is not in question.⁹ The latter comes to his conclusion through a novel argument driven by considerations of the rights of *Gerim* to their father's inheritance and title. In addition to their legal arguments, both scholars found support for their conclusions in biblical precedents such as that of Rehoboam, who succeeded his father King Solomon on the throne, even though his mother, Naamah, was not an Israelite but an Ammonite (*IKings* 14:21).

A recurring motif in both *Sefer Nefesh Ha-Ger* and *Sefer Batei Ha-Nefesh* is the moral imperative of *כבוד הבריות* – showing consideration for the feelings of others, which the Talmud teaches can take preference over many otherwise binding religious ordinances. Neither of these works reads like a typical *responsum*. Instead of the detached tone one would expect of a legal opinion, the writing is passionate. The authors, father and son, appear to have had a personal involvement with the issue. Furthermore, reading the eighty odd pages of *Sefer Nefesh Ha-Ger*, one cannot avoid the impression that its author, Calcal, deliberately chose to widen the scope of his reply in order to exhibit and prove his mastery of Jewish law and sources. The problem is that Calcal is not the name of any identifiable rabbinical personage. It is not even a recognized Hebrew name. So just who was he?

Compositions entitled *Sefer Nefesh Ha-Ger* and *Sefer Batei Ha-Nefesh* appear in the long list of his writings that Joseph Solomon Delmedigo appended to the missive, *Iggeret* (or *Mikhtav*) *Ahuz*, that he sent to the Karaite scholar Zerah of Troki.¹⁰ Like most of the other works listed, these two were also presumed lost. If,

⁹ The incident in Amsterdam was not unique. At around the same time, an almost identical controversy, the appointment of a *Ger*, the son of a Jewish man and a gentile woman, to the position of *Parnass* of a community, arose in one of the Jewish communities in the Ottoman Empire, to where Iberian Jews had been invited by Sultan Beyazit II after hearing of their expulsion by the Catholic King Ferdinand and Queen Isabella in 1492. The source for this is the halakhic compendium *Knesset Ha-Gedolah* composed by Rabbi Chaim Benveniste (1603–1673) of Izmir who also ruled that since the position of *Parnass* was one of only limited authority, the community being subject to the paramount sovereign rule of the Sultan, the said candidate could be appointed *Parnass* if he was acceptable to the community: *כנסת הגדולה, חושן משפט, הלכות דיינים, סעיף ז*.

¹⁰ A critical edition of this missive, which is extant in several manuscripts, was published by Abraham Geiger in 1840 in his compendium *Melo Chofnaim*.

however, Codex 199 does indeed contain these two works, why, in this instance, did Delmedigo choose to conceal his authorship and adopt the pseudonym or *nom de plume* Calcal?

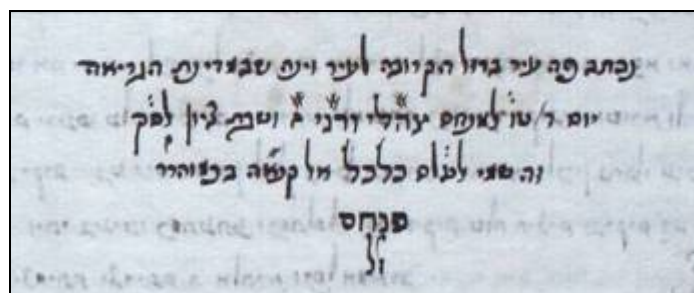


Fig.199.5: The colophon at the end of *Sefer Nefesh Ha-Ger*.

That Calcal was in fact a pseudonym is hinted at in the colophon of *Sefer Nefesh Ha-Ger*: זה שמי לעלם כלכל אל קנאה בכמהרה"ר פנחס ז"ל. Depending on how the Hebrew word לעלם is understood, this can be translated either as “This is my name in eternity, Calcal El Kanah, son of His Honour, our Teacher, Rabbi Phinehas from blessed memory” or “This is my hidden name, Calcal El Kanah...” (Fig.199.5).

Joseph Solomon Delmedigo (1591-1655), also known as YaShaR of Candia (Heraklion)—an acronym of his Hebrew name, Yosef Shlomo Rofe—was a scion of a distinguished Ashkenazi family of rabbis and physicians that had settled in Crete during the fourteenth century. His father, Elijah Delmedigo, was the rabbi of the Jewish community in Candia having succeeded his father in the post. After receiving a thorough Jewish education at home, Joseph was sent at the age of fifteen to study medicine in Padua where one of his teachers was Galileo Galilei. Returning home seven years later, he had intended to practice medicine but soon found Candia too confining. Just into his twenties but already a polyglot and bibliophile, he had perhaps been over-stimulated by the new secular learning he had discovered in Padua. Leaving, never to return, he would spend the next dozen or so years visiting Jewish communities as far afield as Cairo, Constantinople, Romania, Poland and Germany, availing them of his rabbinical erudition as he added to his own wealth of knowledge and spread his scientific learning amongst them, finally reaching Amsterdam in 1627. Just thirty six years of age when he arrived in Holland, he had encountered much antagonism during his wanderings. “Whoever holds his soul dear must remove

himself from these secular sciences,” he was told, “for they are contrary to the true Jewish nature.”

The Thirty Years War was raging and there was little more tolerance of difference amongst Jews than there was amongst Christians; and Joseph Solomon Delmedigo was very different. At once a rabbinical scholar, mystic and mathematical scientist who counted Karaites among his friends, a proponent of the Copernican heliocentric model and the first Jew to use logarithms, he could not be other than controversial. Like many such polymath geniuses before and after him, he would end his life a bitter and lonely person. Delmedigo had already composed thirty or more Hebrew books and essays (on astronomy, mathematics, medicine, logic, alchemy, astrology and the Kabbalah, not to mention Judaica) by the time he arrived in Amsterdam. All were still in manuscript and despite the appeals of his alter egos, Moses Metz and a certain Samuel Ashkenazi, he refused to have them printed claiming that they were still unfinished, though more likely for fear of denunciation. Notwithstanding, two compilations of his correspondence and essays on a range of scientific and mathematical topics, *Sefer Elim* and *Sefer Ma'ayan Gannim*, were published in Amsterdam by Menasseh ben Israel in 1629, evidently with his agreement.

By contrast, three further collections of his correspondence and writings on philosophy, theology and Kabbalah, *Ta'alumot Hokhmah*, *Mazref la-Hokhmah* and *Novelot Hokhmah*, were published in Basle, apparently against Delmedigo's wishes, at the initiative of his pupil Samuel Ashkenazi in 1629 and 1631.¹¹ The Introductions to the latter works are the main source of information about Delmedigo's life between 1620 and 1630. All his other writings remained in manuscript and with the single exception of the *Iggeret* (or *Mikhtav*) *Ahuz* sent to the Karaite scholar Zerah of Troki, all were presumed lost.

Although it is not a recognized Hebrew name, Calcal is a proper Hebrew word that has the meaning “provide.” It appears in the *Midrash*¹² as an epithet of Joseph, the “provider” during the years of famine in Egypt. Likewise, Phineas, who with a single spear impaled the fornicating Zimri and princess of Moab (*Numbers* 25:7-8), is identified by the *Midrash* with the prophet Elijah,¹³ both of whom were “jealous for the Lord.”¹⁴ And in case we still don't catch on, the

¹¹ Barzilai, Isaac, *Yosef Shlomo Delmedigo*, E.J.Brill, Leiden (1974): Ch. 6

¹² *Midrash Rabbah* on *Leviticus* 1:9

¹³ *Midrash Ha-Gadol* on *Numbers* 28:22

¹⁴ *Numbers* 25:11 and *1Kings* 19:14

signature adds 'El Kanah', which means 'jealous [for] God', a trait that the Bible ascribes to both Phineas and Elijah. All of which suggests that Calcal's actual Hebrew name was **יוסף בן אליהו** – Yosef ben Eliyahu, the same as that of Joseph (Solomon) the son of Eliahu Delmedigo.

But what of the person named Kilav, the supposed author of *Sefer Batei Ha-Nefesh* who, according to the cover page, was the son of rabbi Calcal? Unlike Calcal, the name Kilav does appear in the Bible. He was the son of David and Abigail, the erstwhile wife of Nabal the Carmelite whom David had killed (*1Samuel* 25:2ff). David subsequently married Abigail and according to the *Midrash Tanhuma*, wags had scoffed that the child she was later seen to be carrying was really Nabal's and not David's. However, by Divine intervention, the child was born a spitting image of David, and everyone who saw him had to acknowledge that David was his father; he was 'altogether his father', or in Hebrew **כלו אב**, and so he was given the name **כלאב** – Kilav. Once again, in case we don't take the hint, the Hebrew name **כלאב** on the title page is directly followed by the words **כלו אב** as they appear in the said *Midrash*.¹⁵

Whilst there is good evidence that Delmedigo had at least one daughter, the existence of any sons is doubtful. Indeed in a letter to Samuel Ashkenazi written around 1629 he states "I am unfortunate as far as sons and other possessions are concerned." His choice of Kilav for the pseudonym of the author of *Sefer Batei Ha-Nefesh* may have been Delmedigo's way of compensating himself for this. Though he himself had actually written the piece, he attributed it to a son he never had. Delmedigo's penchant for assumed names has been noticed by previous researchers.¹⁶ It has even been suggested that his disciple Samuel Ashkenazi never actually existed but was a fiction invented by Delmedigo as a cover for his radical views.¹⁷

Those were not easy times. His erstwhile teacher, Galileo, had been forced to recant and the returning *Anuss*, Uriel da Costa, who, in 1624, had published a controversial book, *An Examination of the Traditions of the Pharisees*, which questioned the fundamental idea of the immortality of the soul, had been excommunicated and humiliated by the Amsterdam community. Delmedigo may

¹⁵ *Midrash Tanhuma, Parashat Toldot*, 6.

¹⁶ Zinberg, Israel, *A History of Jewish Literature; Vol 4: Italian Jewry in the Renaissance Era*. Translated and edited by Bernhard Martin, Ktav Publishing House (1974). Ch. 6.

¹⁷ פרידמן ד.א., *יוסף שלמה דילמדיגו*, עלי עין, תל אביב (1951).
Barzilai, Isaac, *Yosef Shlomo Delmedigo*, E.J.Brill, Leiden (1974): Ch. 7.

well have felt himself in a similar danger for some of the unconventional notions he expressed in his writings. Just how close he may have felt himself to be is hinted at in the final paragraph of his treatise on the mysteries of Kabbalah, *Mazref la-Hokhmah*, published in Basle in 1629.

I began to write this apologetic treatise in the city of Hamburg, but a plague ravaged my neighbourhood, so I was forced to flee and came to the town of Gluckstadt ("Luck City") but found there neither luck nor blessing...Whereupon I resolved to journey to Amsterdam...And although it had been my intention to develop and embellish [my treatise] further still, "I put an end to my words"¹⁸ satisfied that they were pleasing to the gentleman at whose request I had composed them, even though philosophical beginners may mock me and declare that Rabbi Yosef of Candia has turned his back on wisdom or that he has forgotten his learning, a foolish spirit having possessed him...And even if their charges against me increase and they say of me that I have still not gotten to be a shepherd (שעדיין לא הגעתי לרועה צאן), I will declare to them, as the [Talmud Sage] Akavya ben Mahalalel did to his colleagues: 'It is better for me to be called a fool all my days than that I should be a wicked person for even one hour in the sight of God.'¹⁹

Delmedigo's reference to Akavya ben Mahalalel is telling. The Mishna portrays Akavya as a man who fearlessly and persistently maintained his opinions, even when different traditions were held by the majority of his colleagues, and even after it was intimated to him that if he withdrew them, he would be elevated to the position of *Av Bet Din* (Head of the Religious Court). The declaration cited by Delmedigo was just the first half of Akavya's reply to this offer; the text in the Mishna continues: "That people not say he withdrew his opinions for the sake of a position of authority." Too proud or too stubborn to compromise or concede a point, Akavya was eventually excommunicated.

What prompted his outburst against the "philosophical beginners" in Amsterdam is undocumented but it is clear that their taunts hurt him deeply; they might well also have had an impact on his employment prospects. He never found permanent employment in the Amsterdam community and so in 1632, after serving the Amsterdam community as a part-time rabbi for a short time, Delmedigo left to take up the position of physician in the Jewish ghetto of Frankfurt-on-Main; not the post he would have aspired to when he first arrived in

¹⁸ The Hebrew phrase he uses, ושמתי קנצי למילין, is a paraphrase from *Job* 18:2.

¹⁹ *Mishna Eduyot* 5:6-7

Amsterdam. Little is known of his life during the next twenty years except that at some time or other he must have moved on to Prague, for it is there that he was buried in 1655. It was also where Issachar Ber Jeiteless, his pupil and the author of the third work in the codex, lived and is not far from the city of Eisenstadt, where, as the colophon states, *Sefer Nefesh Ha-Ger* was written.

In the last paragraph of *Sefer Nefesh Ha-Ger*, Delmedigo turns from the legal arguments and historical precedents that had occupied him up to that point, to his own miserable circumstances.

To-day I am frail and my heart spins. Oh that I could go out and move myself as I once did, but my strength has left me. I fret like the evildoers, for the Lord has departed from me. I am exiled from my city, from my palace on high, my mansion ...The light of my eyes, my books, they too are not with me ...And I dwell in a foreign land with the children of the Diaspora, and there is neither food nor fine clothes in my home ...For I have killed a man with my book,²⁰ as with a sharp threshing-sledge...and my wound should silence every foul-speaking mouth.

The man he had killed was himself, for he had spoken of things that were perhaps best left unsaid. Ostracised since leaving Amsterdam some twenty years earlier, he had been unable to obtain a rabbinical appointment anywhere. The irony of this could not have escaped him. He had just completed a *responsum* which showed that the son of an *Anuss*, a *Ger*, could be appointed to any position a Jewish community chose, whilst he himself still remained an outsider.

Delmedigo would never forget his rebuff at the hands of the Amsterdam community and their request, some twenty years later, for guidance in the matter of the *Ger* son of an *Anuss*, was an opportunity for him to settle accounts. Accordingly, his *responsum* in *Sefer Nefesh Ha-Ger* concludes with this riposte to the “philosophical beginners” in Amsterdam:

And if this treatise of mine should appear before one of the elite, the brilliant jewels who sit in the first row with royalty, I will not be touched even if a whole host, a hundred thousand ignoramuses—dumb animals, creepy crawlies and beasts of the earth, may black darkness envelop them—condemn it; even should these mud hut dwellers, whose very lowest foundations are dust, mock me and declare that I remain an outcast and have exerted myself for nothing, for I have still not even become a shepherd.

²⁰ The Hebrew phrase, כי איש הרגתי בספרי, is a play on the verse *Genesis* 4:23.

R. Issachar Ber Jeiteless (d.1685) was a pupil of Delmedigo but unlike his mentor, he had no personal axe to grind; nor did he have any prior connection with the Amsterdam community.²¹ His sole concern was with the specific question of whether a person such as this *Ger Tzedek* (righteous proselyte), the son of an *Anuss* and a gentile woman, may be appointed to a position of coercive authority. His *responsum* is accordingly concise and to the point.

A *Ger Tzedek* [righteous *Ger*], learned in Torah, God fearing and His servant, whose deeds are chaste and honest; and he is the son of an Israelite *Anuss* and his mother is a gentile. What is [the legal position] regarding his appointment to a position of coercive authority over Israel? Whether it was with regard to such [persons] that the Talmudic Sages stated: “*You should appoint a king over yourselves* (that all appointments you make, shall be) *from amongst your brethren*”²² and not from the *Gerim*.²³

The question, as phrased by Jeiteless, is whether the Sages intended their ruling that *Gerim* may not be appointed to positions of coercive authority (שררה) to apply to *Gerei Tzedek* (righteous *Gerim* – גרי צדק) such as this son of an *Anuss*? Jeiteless contends that they did not. They were only addressing the appointment of a *Ger Stam*, namely of a gentile who had become a Jew but whose reasons for doing so may have been for some ulterior motive.²⁴ The

²¹ We learn this from an inscription on the title-page of a copy of David Ibn Yachya’s book *Lashon Limudim* (Eliezer Soncino, Constantinople: 1542) which came up for auction in January 2013 at Kestenbaum & Co. New York (Auction No. 57: Lot 120). It states that the volume was given to Issachar-Ber Jeiteless by his teacher Joseph Solomon Delmedigo.

This Issachar Ber should not be confused with another pupil of Delmedigo, the physician Issachar Ber Teller son of Yehudah Stein, whose Yiddish medical self-help book, באר מים חיים (The Wellspring of Living Waters), was published in Prague around 1650 and which has survived in only one complete copy held by the Bodleian Library. A Facsimile edition was published by Joshua O. Leibowitz in 1968.

²² *Devarim* 17:15

²³ *TB Yevamot* 45b; *TB Kiddushin* 76b.

²⁴ The notion of two classes of *Gerim* – *Ger Tzedek* and *Ger Stam* – has its origin with Maimonides, who differentiated between those whose *Giur* had been authorized by a properly constituted *Bet Din* of three learned rabbis or scholars (*Dayanim*), and those whose *Giur* was by an *ad hoc*, though legitimate, *Bet Din* of three observant but not necessarily learned Jews. *Giurim* carried out by the latter are valid and confer all the obligations and privileges of being a Jew upon the *Ger*, even though his or her motives may not have been totally forthright. Such a *Ger* is termed a *Ger Stam* (an ordinary proselyte). *Mishne Torah, Hilhot Issurey Biah*, 13:15 & 17.

person in the present case was, however, “chaste and honest” and so was surely a *Ger Tzedek*.

But what of his parentage? In principle, Jewish Law determines the status of a child by reference to his or her natural (biological) parents, irrespective of whether or not they were legally married at the time of its birth. There is no such thing as an *illegitimate* child or *filius nilius* (nobody’s child) in Jewish Law. On the other hand, the child of an Israelite man and a gentile woman has no legal father: the child’s genitor is not his or her legal father. Even if the child subsequently undergoes *Giur*, he or she will still not be known as the Israelite genitor’s child but rather as the child of “our father Abraham.”²⁵ This being so, what weight, if any, can be given to the Israelite father in the case before us?

Jeiteless argues that the combination of a sincere *Giur* and Israelite paternal descent is sufficient for the child of a gentile mother and an Israelite father to be appointed to a position of authority.

But when he has undergone *Giur* and we know that he is following in the ways of his father, it cannot be right for us not to consider him to be his son. For at all events, he has a father, and he is his son as regards the yoke of *Torah* and *Mitzvot*. Accordingly, he should also be eligible for a position of authority (שררה) just like his father and should be designated *from amongst your brethren*.

He finds support for this in the biblical accounts of the Royals of the kingdoms of Judah and Israel, in particular those kings whose mothers were gentiles. How could their sons have been raised to the throne? It is here that Jeiteless exhibits his most creative thinking. The Talmud had determined that the Torah injunction *nor curse a ruler of your people*²⁶ applies only to one who “practices the proper usages of your people (עושה מעשה עמך).”²⁷ Turning this statement around, Jeiteless applies it to the question of who may be appointed king.

²⁵ This exception to the rule that parentage is determined by Nature has troubled Jewish scholars and *Poskim* (arbiters) throughout the ages, and it underlies the issue of the status of the said son of an *Anuss*. Notwithstanding, in recognition of the natural affinity of the child and its genitor, various expedients have been adopted over the ages in order to soften its impact. For example, such persons are often referred to as זרע ישראל (*Zera Yisrael* - Seed of Israel).

²⁶ *Exodus* 22:27

²⁷ This proviso occurs in a number of different contexts in the Talmud, not all relating to rulers: *TB Yevamot* 22b; *TB Baba Kama* 94b; *TB Baba Mezhiah* 48b, 62a; *Baba Batra* 4a; *TB Sanhedrin* 85a; *TB Makkot* 8b.

One ‘who practices the proper usages of his people’ [behaves as an Israelite should] may be *a ruler of your people*, and such a person is even fit to be king.

A gentile who sincerely undertakes *Giur* may be said to have adopted the “the proper usages [*Mitzvot*] of your people.” Thus, if the royal sons born to gentile mothers undergo *Giur*, they can become kings.

Behold, Rehoboam [Solomon’s son who succeeded him as king] was the son of an Ammonite woman and there is no mention in Scripture that his mother became a *Gioret*. And even if [the son] follows his mother’s [idolatrous] ways, if he becomes a *Ger* he may succeed to the throne. And the proof for this is from the sons of Ahab, Ahaziah and Jehoram, the sons of the accursed Jezebel, daughter of the king of the Zidonians, who caused both her husband and sons to sin, as Scripture testifies.²⁸

And what of the many other gentile wives of Solomon and of Samson’s wife Delilah? Maimonides had asserted that they underwent *Giur*²⁹ but Jeiteless points out that Scripture gives no hint of this. For his purposes, however, it was not what Maimonides said that was important, but what he did not say.

And take note, he [Maimonides] did not state that the son of an Israelite man and a gentile woman may not be appointed, which [the case of] Rehoboam proves.³⁰ ...For when he follows the proper usages of his father, he is not called her son but his son.³¹

Hence he concludes that a *Ger* who is the son of an Israelite genitor can be considered *from amongst your brethren* for the purpose of public appointments, whether or not his gentile mother ever underwent *Giur*.

The notion that one who “practices the proper usages of your people” may be eligible to occupy a position of authority did not originate with Jeiteless.

²⁸ 2Kings 3-8. The question of how these two could be considered sons of Ahab in light of the Talmud ruling (*TB Kiddushin* 68b) that the child of gentile woman and an Israelite genitor is called her child and not his, was raised in an early 13th century work – *Sefer Tannaim VeAmoraim* – by R. Yehudah ben Kalonymous of Worms (d.1217).

²⁹ *Mishne Torah, Issurei Biah*, 13:14

³⁰ The legality of Rehoboam’s ascent to the Davidic throne is no small matter. Upon it depends the legitimacy of the succession of the House of David down to that of the Messiah.

³¹ This is essentially the same rationale as that brought by Delmedigo in the second of the two reasons he gave as to why the said *Ger* could be appointed to any position the Amsterdam community decided.

According to Tosfot, before the Rabbinical Sages ruled otherwise, the Torah could be understood to permit a liberated slave or a *Ger* to become king so long as he was “your brother in *Mitzvot*” (אחיך במצות); the intent of the ruling that the king must be *from amongst your brethren* having been only to exclude gentiles.³² The Sages amended this, however, and decreed that henceforth a king could only be appointed from “amongst the unequivocal of your brethren” (הברורין שבאחיך), which was taken to mean only a person both of whose parents were Israelites at the time of his birth.³³

This new ruling had an immediate negative impact on the legitimacy of King Herod’s rule. According to the Talmud, his parents were Idumeans and he himself had once been a slave in the house of the Hasmoneans.³⁴ As such, he did not have any true Israelite credentials and like most usurpers and autocrats, he was fearful of his hold on the throne. Whether the Sages’ motives for changing the law were political and directed against him or not, Herod thought they were and reacted by ordering the slaughter of the Sages who had instituted the change. According to the account in the Talmud, a certain Baba ben Buta, who was a confidant of Herod and whose advice he valued, was spared. In what might be described as a confessional exchange, ben Buta told Herod that the slaughter he had ordered was unwarranted; he had nothing to fear from the Sages since they were traditionally supportive of whoever was in power. Whereupon, to make amends, Herod was persuaded to undertake the construction of a new and finer Temple building.³⁵

Jeiteless finds support for his contention that a *Ger*’s affinity to his Israelite father can override that, by which he is ineligible for a position of authority, to his gentile mother, from the *Halakha* regarding the prohibition on slaughtering an animal and its young on the same day.

³² Tosfot *Baba Batra* 3b. “Tosfot and other Rishonim explained that were it not for the Sages’ elucidation, the Torah text could be construed to mean that although a person who is not an Israelite is prohibited from being appointed king, anyone who ‘belongs with the *Mitzvot*’ (שייך במצוות) was fit to be king.” (Adin Steinsaltz, *in situ*)

³³ Tosfot *Sotah* 41b. Subsequently this rule was applied to all positions of communal authority, not just to the king (*TJ Kiddushin* 4:5; *TB Yevamot* 45b.)

³⁴ The Talmud states that he had killed all but one of the members of the household, a maiden he wanted to marry, but she subsequently committed suicide by throwing herself off a roof. According to Josephus, she was Mariamne I, the daughter of Alexander, a son of Aristobulus II, and she was put to death by Herod after several years of marriage to him (*TB Baba Batra* 3b).

³⁵ *TB Baba Batra* 4a

And the Torah spoke in the way the world does, [namely] that a child clings to its mother, for she encourages it with her words. And as [the Talmud] states in the matter of *it and its young* [the prohibition on slaughtering an animal and its progeny on the same day],³⁶ that this means ‘it and its mother’, for it is to the females that [the offspring] instinctively cling.³⁷ And out of concern that this same instinct may also exist towards males, [the same day slaughter of the young] and its father is also prohibited, if it is known for certain that he is its father.³⁸

And it is likewise in the laws of the nations, for they call the son of a concubine/mistress ‘a natural son,’ and a true son born in wedlock is called ‘a legitimate son.’ But it cannot be denied that the former is his natural son and, should he take his place, he will be the heir to his authority...

The fact of the *Ger*’s natural Israelite paternity cannot be ignored if he cherishes it. And so, Jeiteless boldly summarises his ruling thus:

And when the issues are correctly understood, no scholar or *Posek* can dissent from this. And this *Ger Tzedek*, whose father was one of the *Anussim*, should certainly be regarded as his son and has the status of *Zera Yisrael* (זרע ישראל)...and as regards all matters of authority or sitting in judgment, he is a fit person. For [his standing] is above that of one whose mother in an Israelite and father a gentile. And reliance should be put on this principle, for everything else that has been said is irrelevant. And there is no need for Talmudic casuistry, or to cite the *Gemara* and the *Poskim*, for the Sages only spoke about a *Ger Stam*...³⁹

This is my opinion and I am not bothered should anyone stiffen his neck or be stone faced in dissent. These are the words of the frail youngster, Issachar called Ber, the son of R. Yehudah Leib Jeiteless, Dayan.⁴⁰

³⁶ *Leviticus* 22:28

³⁷ *TB Hullin* 78a. The Torah ordinance is stated in the masculine – אוֹתוֹ וְאֵת בְּנוֹ – but it was taken to apply to a cow or ewe and her young; whether it also applies to a bull or ram and its young is discussed in the *Gemara*.

³⁸ *Tur, Yore Deah* 16.

³⁹ In the eighteenth century, the influential authority R. Yehezkel Landau stated that a king's lineage should be questioned only at the start of a dynasty when the monarch is first “appointed”. Once the dynasty has been established, a descendant who inherits the throne may do so even if his mother is a *Giorat* (*Noda B'Yehudah, Hoshen Mishpat*, Responsum 1).

⁴⁰ For a detailed elucidation of Jeiteless’ responsum see: A Controversy in the Amsterdam Community in 1650: Can a *Ger Tzedek* be Appointed *Parnass*? *Hakirah*, Vol.19 (Summer 2015), p.117-142.

When the *responsa* from Delmedigo and Issachar Ber were received by the Amsterdam community is undocumented, however, on 6 November 1651, three months after the date of the colophon in *Sefer Nefesh Ha-Ger*, the son of an *Anuss*, a *Ger* by the name of Moseh Roiz da Costa, was declared by Menasseh ben Israel and David Prado “fit to be appointed to any post the congregation might give him...without exception.”⁴¹

The text of the decree makes it clear that this was an exceptional case and would not become a precedent.⁴² This rider may have been added by reason of a dissenting opinion that had been received in Amsterdam from a third scholar, R. Jacob Sasportas (the first rabbi to officiate in London after the resettlement in 1656). Sasportas, who is known for his conservatism (he was one of the few rabbis who vigorously opposed the Sabbatean movement at the time) had been asked by the Amsterdam physician Samuel de Mercado: “Can a *Ger* whose mother is not an Israelite hold a position of authority over the community?” His reply was that the *Ger* could only be appointed to a position of trust, such as treasurer, not to one of coercive authority.⁴³

A search of the Stadsarchief in Amsterdam has uncovered additional information about Moseh Roiz da Costa. Perhaps most importantly, it has provided further confirmation that he was indeed the person whose appointment to the position of *Parnass* was at issue.⁴⁴

There may also be a London connection in the extant records of the London community of Spanish and Portuguese Jews. In 1664, this new community, made up almost entirely of immigrants from Amsterdam, drew up its first set of regulations known as *Ascamos*. One of the seventeen signatories to this founding charter was a certain Abraham Roiz da Costa. And when these *Ascamos* were

⁴¹ There is a hint in the last lines of Delmedigo’s piece that he actually knew the identity of the son of the *Anuss*, for he writes: “And the man Moses is also great ...and all Israel shall know, for he is faithful to the house of the Lord...” The letters of the Hebrew name ‘משה’ (Moses) are writ large in the manuscript with an asterisk above the word. Quite possibly, Delmedigo knew that the person in question was the said Moseh Roiz da Costa.

⁴² *Menasseh ben Israel and his World*, ed. Y. Kaplan, H. Mechoulam & R.H. Popkin, E.J. Brill, Leiden (1989) p.58


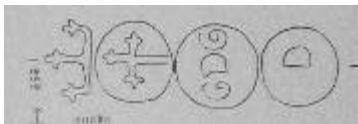
⁴³ R. Jacob Sasportas, *Sepher Ohel Yaacov*, (Amsterdam 1737), Responsum No. 4

⁴⁴ A full account of these searches can be found in the article: From Eisenstadt to Oxford: The Provenance of MS 199 in the Hebrew Collection of Christ Church Library, *Christ Church Library Newsletter*, Volume 9, Issues 1, 2 & 3.

amended in 1677, following changes in the community's circumstances, the signature of Abraham Roiz da Costa appears on this new instrument too.⁴⁵

Furthermore, the tombstones of an Abraham Roiz da Costa (d.16(7)9) and a Yitzhak Roiz da Costa (d.1679) were among those identified by the Royal Commission on Historical Monuments of England survey (1930), in the "Burial Ground of the Sephardi Jews in Stepney...founded in the middle of the 17th century."⁴⁶ Although no documents have been uncovered proving that Moseh, Abraham and Yithak Roiz da Costa were related, considering the small size of the Amsterdam and London Sephardi communities at the time – the former numbered only about 2000 souls and the latter no more than a few hundred – and the uniqueness of their family names, the probability that there was more than one Jewish family called Roiz da Costa is low.

There are a number of different watermarks in Codex 199. The partial in the title page of *Sefer Batei Ha-Nefesh*, was identified and dated c.1650 from the familiar West European catalogues (Fig.199.6).

	
<p>Fig.199.6: The partial watermark in the title page of ספר בתי הנפש (<i>Sefer Batei Ha-Nefesh</i>)</p>	<p>Heawood No. 252 c.1650; 253 & 254 are similar</p>

By contrast, the elaborate watermarks in the text folios (Fig.199.7), which are amongst the most intricate and artistic in the Christ Church collection, do not appear in the usual European catalogues.⁴⁷ The paper is Italian, made especially

⁴⁵ Gaster, Moses, *History of the Ancient Synagogue of the Spanish and Portuguese Jews – The Cathedral Synagogue of the Jews in England Situate in Bevis Marks*, London (1901), p.11.

⁴⁶ Row 3, Nos. 14 and 15. 'Stepney', *An Inventory of the Historical Monuments in London, Volume 5*: East London (1930), pp. 69-101: www.british-history.ac.uk/report.aspx?compid=123527.

⁴⁷ Their identification was only achieved with the help of Prof. Neil Anthony Harris of Udine University, Italy.

for export to the Islamic world.⁴⁸ Italian papermakers developed suitable watermarks for paper intended for this market, usually three crescent moons or, alternatively, a single crescent moon worked into other varieties of watermark, for instance a crown. Such papers are rare in Western collections and are generally absent from the catalogues of Western watermarks (Appendix 2) but abound in those of the former Ottoman empire (Fig.199.8).

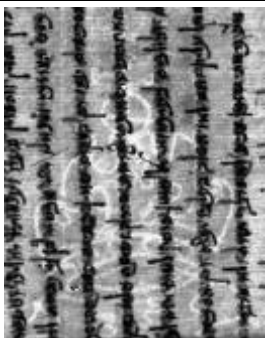
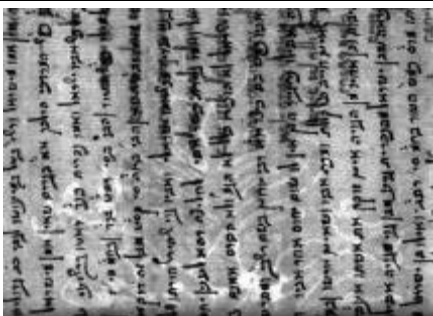
	
Folio 2: A crown with an orb and a crescent moon above.	Folio 13: An eagle with a crescent moon above.

Fig.199.7: The partial watermarks in fols.2 and 13 in Codex 199.



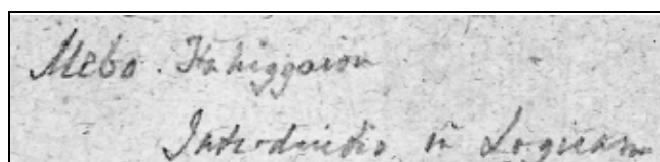
	
Folio 2: A crown with an star and a crescent moon above: No. 203 (1651).	Folio 13: An eagle with a crown above: No.21. (1656).

Fig.199.8: Sketches from the catalogue *Watermarks of the medieval Ottoman documents in Bulgarian libraries, Vol. 1*, by Vsevolod Nikolaev. Bulgarian Academy of Sciences, (Sofia, 1954).

⁴⁸ Eisenstadt and Vienna fall into this definition for marketing purposes.

Codex 200: *Mebo Higgaion*: Introduction to Logic

The faint inscription on the front endpaper reads: *Mebo Hahiggaion; Introductis in Logicam*. The entry in Kitchin's catalogue reads: "Mebo Higgaion: Introduction to Logic." *Mebo Hahiggaion* is a transliteration of the Hebrew מבוא ההגיון. The catalogue entry wrongly ascribes the work to the 18th century; it is actually a 15th century manuscript.



CC.

Codex chartaceus, in quarto, ff. 79, sæc. xviii.

MEBO HIGGAION: Introduction to Logic.

The text is a supercommentary attributed to Eli Ḥabillo (עלי בן יוסף) (חבילי)¹ "on Averroes' *Middle Commentary* on Porphyry's *Isagoge* and Aristotle's *Categories*, *De Interpretatione* and *Prior Analytics*, according to Jacob Anatoli's² medieval Hebrew translation." There is no colophon in this codex. There is a second copy of this work in the Bodleian Library (Neubauer 1364; IMHM Film No. F 22389); it too has no colophon but has been dated to 1467-1469.³

Partials of at least five different watermarks can be made out in the folios of Codex 200. However, the complete form of only two could be determined with any degree

Paper (ff. 79), in quarto: Neubauer OX 2451; IMHM Film No. F 15589.

¹ The translator of the Library's Codex 187.

² Jacob ben Abba Mari ben Simson Anatoli (c.1194–1256). A translator of Arabic texts into Hebrew and a relative by marriage of Moses ibn Tibbon, the translator of the treatise by al-Hassar in MS 189.

³ Zonta, Mauro, *Hebrew Scholasticism in the Fifteenth Century*, Springer, Dordrecht, (2006) p. 170.

of certainty: (i) a balance and (ii) an ox head.

The former was revealed by placing the partial watermarks from adjacent folios one above the other (Fig.200.1). This produced a mark in the form of a balance inscribed in a circle similar to Briquet 2446. The online Briquet catalogue has five examples of similar watermarks dating from 1441 to 1485.

An ox head is the most common motif in 15th, 16th and 17th century watermarks; Briquet's catalogue has more than a thousand variants of this basic form. Unambiguous identifications can usually only be made where there is some additional feature such as a cross, flower, star etc. An exact match for the partial ox head watermark in this codex could not be found. Briquet 14179 (Arkel, Holland 1434) is one of the closest examples (Fig.200.2).

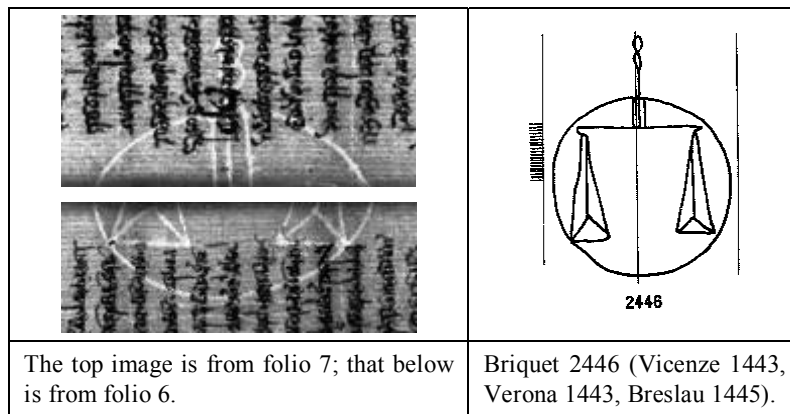


Fig.200.1: The watermark in the shape of a balance obtained by joining the partial marks in folios 6 and 7.

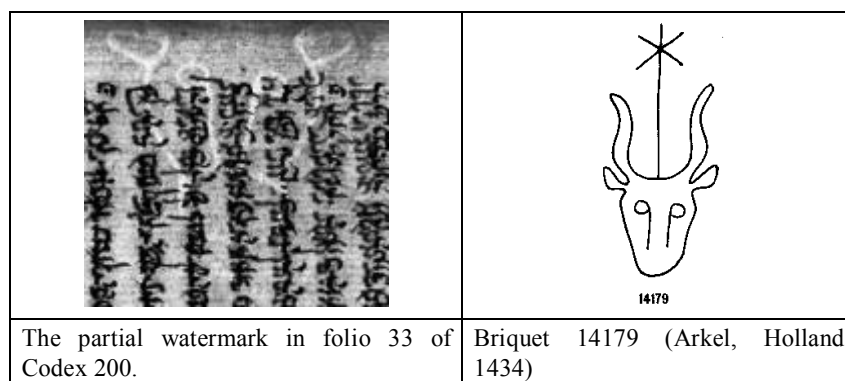


Fig.200.2: The partial ox head watermark in Codex 200.

Folios 60 and 61 are both blank and the back endpaper has a mid-17th century Dutch watermark; this was presumably added when the codex was bound into its present covers (Fig.200.3).

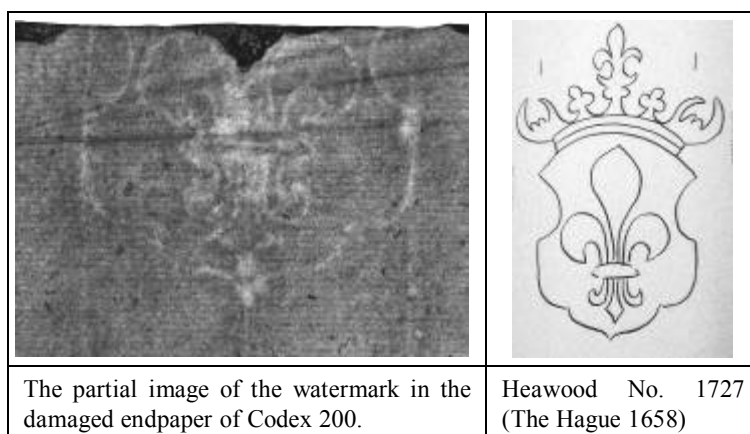
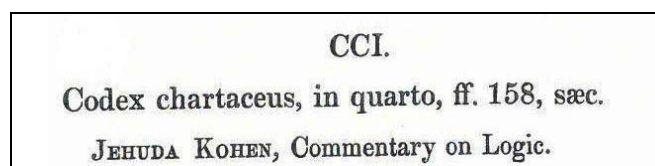
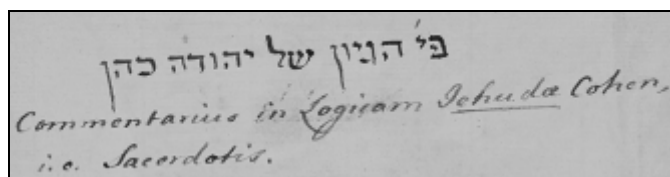


Fig.200.3: The watermark in the back endpaper of Codex 200.

Codex 201: Jehuda Kohen's Commentary on Logic

A note with the inscription פ"י הגיון של יהודה כהן – *Commentarius in Logiam, Jehuda Cohen i.e. Sacerdotis* (A Commentary on Logic by Yehudah Cohen, i.e., Priest) is stuck onto the inside of the front cover. The entry in Kitchin's catalogue has: "Jehuda Kohen, Commentary on Logic."

Sacerdotis (Priest) is a Latin translation of the author's Hebrew designation *Cohen* (כהן). However, since the destruction of the Temple in Jerusalem and the cessation of the rituals associated with it, there have been no Jewish priests as such and it has become the patronymic of persons of Aaronide descent, i.e., those whose ancestors may have been priests.



An inscription across the head of the codex reads: "פ"י הגיון של יהודה כהן"; Commentary on Logic of Yeudah Cohen, of Blessed Memory."¹



The text is a supercommentary on Averroes' *Middle Commentary on Aristotle's Prior Analytics*.² The author's full name is given on fol. 1r (Fig. 201.1):

Paper (ff. 159) in quarto: Neubauer OX 2452; IMHM Film No. F 15590.

¹ Early 16th century books did not have their title on the spine.

יהודה בן יצחק בן אדני משה בן יהודה בן מורנו הרב ר' שמואל הכהן (Judah son of Isaac, son of my master Moses, son of Judah, son of our Teacher R. Samuel HaCohen). The codex has tooled leather boards (Fig.201.2).



Fig.201.1 : Fol.1r with the author's name, יהודה בן יצחק בן אדני משה בן יהודה בן מורנו הרב ר' שמואל הכהן, in the first two lines.

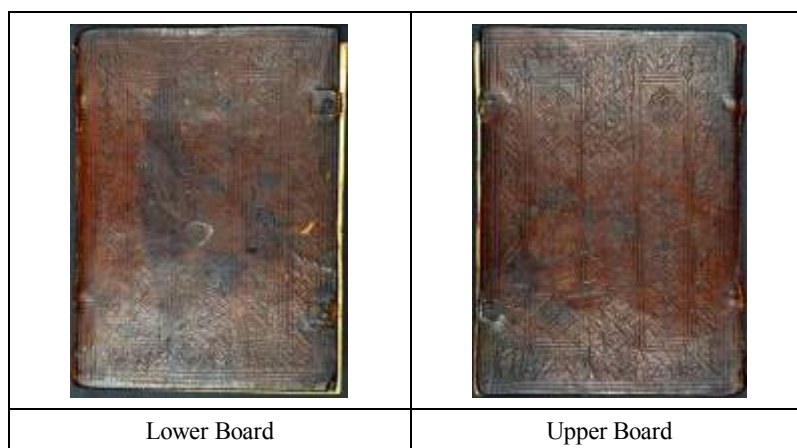


Fig.201.2: The tooled boards of Codex 201

² Averroes is the Latinate form of the Andalusian polymath Abū l-Walīd Muḥammad ibn Aḥmad ibn Ruṣd (1126–1198).

The manuscript is *in quarto* and so only partial watermarks are visible. Nevertheless, by linking pairs of these partials two different marks can be made out, indicating that the copyist used paper from two different sources. The first pair are the partial cardinal's hat watermark in folio 136 and its countermark in folio 105 which, taken together, correspond to Briquet 3509 (Treviso 1517). The second pair is the serpent winding around a pole (cross?) in folio 26 and the bull's head on folio 27 which, when taken together, make up the Briquet watermark 15366 (Brescia 1474) or one very similar to it (Figs.201.3 & 201.4).

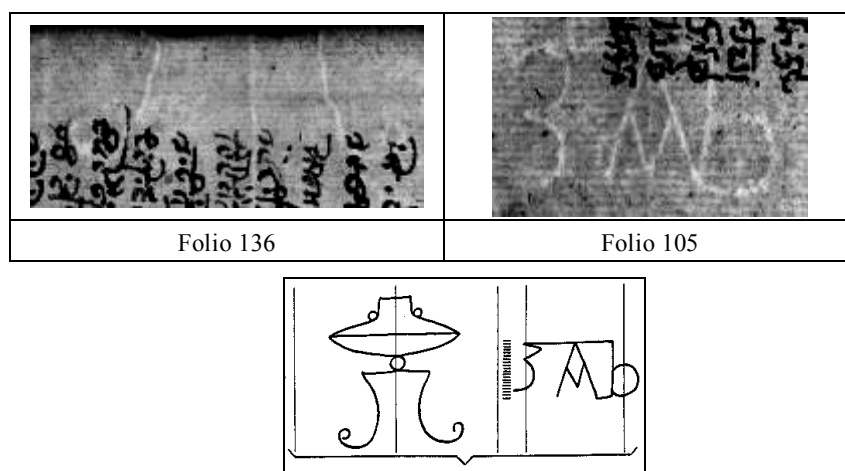


Fig.201.3: The partial watermark in folio 136 and its countermark in folio 105 which together give Briquet 3509 (Treviso 1517).

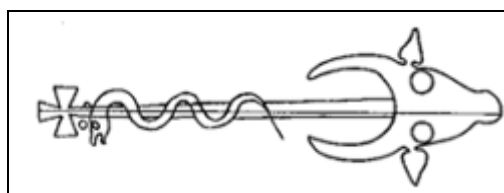
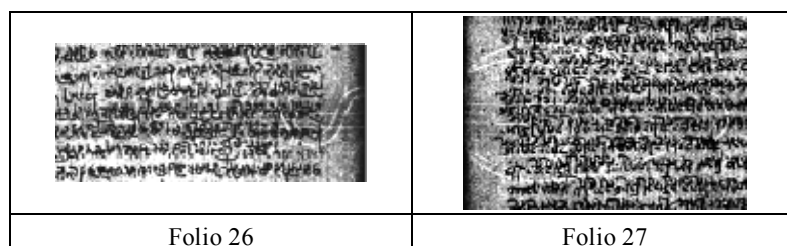


Fig.201.4: The partials on folios 26 and 27 which together make Briquet 15366 (Brescia 1474) or one of the many similar examples.

One of the manuscript's previous owners listed on fol.159v is the 16th century resident of Constantinople, R. Solomon Almoli (הרב שלמה אלמולי), best known for his treatise on the interpretation of dreams, *Pitron Ḥalomot*. A second entry on the same page states that the manuscript was subsequently sold to Eliahu ben Yehudah Ravitzi (אליהו בן יהודה רביצי) and the name of a third owner, Shemtov ben Tsuriah (שם טוב בן צוריה), appears on the endpaper.