Aristotle’s *Physics* VIII, Translated into Arabic
by Ishāq ibn Ḥunayn (9th c.)
Aristotle’s *Physics* VIII, Translated into Arabic by Ishāq ibn Hunayn (9th c.)

Edited with Introduction and Glossaries by Rüdiger Arnzen

With a Contribution by Pieter Sjoerd Hasper

De Gruyter
Preface

Let’s not sugar-coat it: Graeco-Arabic textual criticism is a weird passion, shared and cultivated by a small and marginalised obsessed group, which keeps causing furrowed brows among colleagues in neighbouring disciplines and blunt perplexity or xenophobia among those who—understandably—don’t give two figs about philology. I am afraid the present piece of philological microscopy will not ameliorate this situation: on the contrary!

Even so, Aristotle’s *Physics* and its Arabic and Latin versions is perhaps one of the most paradigmatic and typical challenges for Graeco-Arabic and Arabo-Latin Studies, embracing in a single stroke a multiplicity of exciting scholarly problems and questions. I cannot think of a better example for Harold Bloom’s oft-quoted dictum that “reading a text is necessarily the reading of a whole system of texts, and meaning is always wandering around between texts” (*Kabbalah and Criticism*, New York 1975, p. 107). To mention but four points: Barely any Aristotelian work is fraught with so many and so weighty uncertainties of the Greek wording and its redaction in general as the collection of treatises known as *Physica*. The only modern edition of the outstanding ninth century Arabic translation, one of the most accurate and congenial of all the medieval scientific translations from the Greek, is absolutely inadequate and unreliable. The Arabic manuscript preserving this translation is a precious treasure worthy of being unearthed even apart from the translation itself, because it contains thousands of 10th century scholia and comments of considerable evidence and value both in terms of textual criticism and for the history of philosophy. During the 12th and 13th centuries the Arabic version enjoyed (at least) three translations into Latin, only a very small portion of which is accessible in a modern critical edition, while none of them has yet been exploited systematically and completely with regard to the establishment of the Arabic or Greek texts.

The present book addresses those who appreciate and accept the above challenges as veritable scholarly desiderata, although it will probably make disappointing and stodgy reading to anybody else. Be that as it may, it is my pleasant duty to announce here that my work was supported by a research grant of the *Fritz Thyssen Stiftung für Wissenschaftsförderung* (Cologne, Germany). I wish to express my gratitude to this foundation and to the two anonymous referees who recommended the funding.
Equally essential and constitutive was the continuous cooperation of two learned colleagues: Pieter Sjoerd Hasper readily put at my disposal his complete collation of 14 Greek manuscripts of Aristotle’s *Physics* and the Latin *vetus translatio* and made me aware of important variant readings in the manuscripts of Simplicius’ commentary. Furthermore, he kindly accepted my invitation to contribute a chapter of the introduction below, which—for the first time since Ross’s 1936 edition—attempts to offer a fresh and more comprehensive systematic approach to the Greek manuscript tradition of the *Physics* (cf. below, chapter VI). Horst Schmieja collaborated at all stages of the project in two distinct ways, first on the technical side by adapting and consistently refining the *Tubingen System of Text Processing Tools* (TUSTEP) for the needs of the edition and glossaries below. Secondly, he kindly granted me access to his unpublished critical edition of Michael Scot’s Latin translation of Ibn Rušd’s “Long Commentary” on the *Physics* and was always willing to share his knowledge about the Latin manuscripts in general and difficult passages of this text in particular. The present study could not have been realised without the collaboration of these two scholars, to whom I am deeply indebted.

Furthermore, a number of colleagues and friends provided help and support in various ways. Geoffrey J. Moseley patiently took on the time-consuming task of correcting the English of my “Introduction” and made substantial suggestions for the improvement of its contents. Nicolás Bamballi offered keen and perspicacious comments and critique on matters of editorial technique and stemmatics, and shared his profound knowledge of Arabic Galenic. At the initial phase of the project, Gerhard Endress and Dimitri Gutas were so kind as to grant basic advice. Last but not least, Amos Bertolacci, Charles Burnett, Cristina D’Ancona, Gerhard Endress, and Paul Lettinck obligingly put digital and printed copies of various medieval manuscripts at my disposal. My sincere thanks go to them all.

Finally, a word on ʿAbdurraḥmān Badawī (1917—2002), the 1964 editor of the Arabic translation of Aristotle’s *Physics*. When I started working on the present study, almost six years ago, I hoped to finish it by 2017 and planned to dedicate its publication to the memory of Badawī’s contribution to Graeco-Arabic Studies on the occasion of his centenary. As things fell out, other obligations impeded me from meeting this self-imposed deadline. However, I wish to commemorate here the outstanding achievements of this, to say the least, controversial scholar, if only because without Badawī’s incredible industriousness and editorial zeal (more than 40 editions of medieval Arabic translations of Greek philosophical works), Graeco-Arabic Studies of the past 50 years would have been deprived of a large part of its working basis and could not have evolved into what it is today.

Ottersberg, Summer 2020  
R. A.
# Table of Contents

Preface ................................................................. V
Sigla and Abbreviations ........................................... IX

**INTRODUCTION**

I. “Aristotle’s Physics” and Aristotle’s Physics, the post-modern confusion of textual criticism and the aims of the present book . . . XIX

II. The Arabic manuscripts of Aristotle’s Physics .................. XXXVII
   II.1 Ms. Leiden Or. 583 ........................................... XXXVII
   II.2 The “prehistory” of ms. Leiden Or. 583 .............. XLV
   II.3 The marginal and interlinear notes and glosses in ms.
       Leiden Or. 583 .............................................. LV
       II.3.1 Excursion: Notes drawing on the commentary by
              Alexander of Aphrodisias ............................ LXXII
   II.4 Ms. Escorial ár. 896 ......................................... LXXVI

III. The author of the Arabic translation: Ishāq ibn Ḥunayn ...... LXXXI

IV. Contaminations of Ishāq ibn Ḥunayn’s translation in
    ms. Leiden Or. 583 ............................................ XCIV

V. Ishāq ibn Ḥunayn’s Greek exemplar(s) ........................ C

VI. The Greek manuscript tradition of Aristotle’s Physics
    *(by Pieter Sjoerd Hasper)* .................................... CXIII
   VI.1 Introduction .................................................. CXIII
   VI.2 The three main groups of manuscripts and their
        stemmatic relations ....................................... CXIX
   VI.3 The β group: Vat. Barb. gr. 136, Vat. gr. 1025 and Erlangen A 4 CXXVIII
   VI.4 The γ group: Vind. Phil. gr. 100, Vossius Q3, Laur. 87.07, Vat. gr.
       1027, Vat. gr. 241, Par. Suppl. gr. 643, the old Latin translation
       CXXXII
   VI.5 The δ group: Par. gr. 1859 and Vind. Phil. gr 64 ........ CXLV
   VI.6 Ms. Laur. gr. 87.24 ........................................ CLIII
### VIII Table of Contents

<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>VI.7 Pachymeres’ paraphrase of the <em>Physics</em></td>
<td>CLXI</td>
</tr>
<tr>
<td>VI.8 Some remarks on the stemmatic relation</td>
<td>CLXVI</td>
</tr>
<tr>
<td>between Simplicius and the direct tradition</td>
<td></td>
</tr>
<tr>
<td>VI.9 The α group: Par. gr. 1853 and the main exemplar</td>
<td>CLXXVII</td>
</tr>
<tr>
<td>of the Arabic translation</td>
<td></td>
</tr>
<tr>
<td>VI.10 Conclusion</td>
<td>CLXXXVI</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>VII. The indirect tradition of Ishāq ibn Ḥunayn’s translation</td>
<td>CLXXXVIII</td>
</tr>
<tr>
<td>VII.1 Quotations in Arabic sources</td>
<td>CLXXXVIII</td>
</tr>
<tr>
<td>VII.2 Arabo-Latin versions of Ishāq ibn Ḥunayn’s translation</td>
<td>CC</td>
</tr>
<tr>
<td>VII.3 The stemmatic relationship between the Latin translations,</td>
<td>CCIX</td>
</tr>
<tr>
<td>ms. Leiden Or. 583 and ms. Esc. ár. 896</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>VIII. Results and materials for a tentative stemma codicum</td>
<td>CCXXVII</td>
</tr>
<tr>
<td>IX. Quotations from Aristotle’s <em>Physics</em> in two treatises by</td>
<td>CCXXXI</td>
</tr>
<tr>
<td>Alexander of Aphrodisias</td>
<td></td>
</tr>
<tr>
<td>X. Principles of the present edition</td>
<td>CCXXXIV</td>
</tr>
<tr>
<td>X.1 Establishment of the Arabic text and documentation</td>
<td>CCXXXIV</td>
</tr>
<tr>
<td>of the underlying Greek readings</td>
<td></td>
</tr>
<tr>
<td>X.2 Structure, layout and apparatuses</td>
<td>CCXL</td>
</tr>
</tbody>
</table>

### CRITICAL EDITION OF PHYSICS BOOK VIII

#### GLOSSARIES

- Greek—Arabic glossary: 121
- Arabic—Greek glossary: 125

#### Bibliography

- 263

#### Indices

- 279
- Index nominum: 279
- Index locorum: 285
Sigla and Abbreviations

1. Greek manuscripts, editions, commentaries and translations of the Physics

α  Branch α represented by mss. E Ψ
A  Alexander’s Commentary as quoted by Simplicius
A$^a$ Fragments of Alexander’s Commentary (extant in the form of scholia), edited by M. Rashed, Alexandre d’Aphrodise: Commentaire perdu à la Physique d’Aristote, Berlin 2011
A$^e$ Quotations of the Physics in Alexander’s Radd ‘alā Ġālinūs fī-mā ṭa’ana bihī ‘alā Arīṣṭū fī anna kullā mā yataḥarrakū fa-lnma-mā yataḥarrakū ‘an muḥarrīk (Against Galen’s Eīs τό πρῶτον κινοῦν ἀκίνητον), edited by N. Rescher & M. E. Marmura, Islamabad 1965
β  Branch β represented by mss. L N R
b  ms. Parisinus gr. 1859, ca. 1300
γ  Branch γ represented by mss. F H I J Q w
Camotiana Johannes Baptista Camotius (Giovanni Battista Camozzi, ed.), Aristotelis De Physica Auscultatione, De Coelo, De Mundo [...] Tomus II, apud Aldi Filios, Venetiis 1551
Car Aristote, Physique. Texte établi et traduit par H. Carteron, 31961
δ  Branch δ represented by mss. b e
e  ms. Vindobonensis phil. gr. 64, middle of the 15th c.
E  ms. Parisinus 1853, beginning/middle of the 10th c.
E$^1$/E$^2$ ms. Parisinus 1853, first/second hand
F  ms. Laurentianus 87.7, 14th c.
H  ms. Vaticanus gr. 1027, end of the 12th / beginning of the 13th c.
H$^B$ H as read by Bekker
<table>
<thead>
<tr>
<th>Sigla and Abbreviations</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>I</strong></td>
</tr>
<tr>
<td><strong>J</strong></td>
</tr>
<tr>
<td><strong>K</strong></td>
</tr>
<tr>
<td><strong>Λ</strong></td>
</tr>
<tr>
<td><strong>L</strong></td>
</tr>
<tr>
<td><strong>M</strong></td>
</tr>
<tr>
<td><strong>N</strong></td>
</tr>
<tr>
<td><strong>Π</strong></td>
</tr>
<tr>
<td><strong>Pc</strong></td>
</tr>
<tr>
<td><strong>Pl</strong></td>
</tr>
<tr>
<td><strong>Pp</strong></td>
</tr>
<tr>
<td><strong>Pacius</strong></td>
</tr>
<tr>
<td><strong>Pel</strong></td>
</tr>
<tr>
<td><strong>Q</strong></td>
</tr>
<tr>
<td><strong>R</strong></td>
</tr>
<tr>
<td><strong>Ross</strong></td>
</tr>
<tr>
<td><strong>Sc</strong></td>
</tr>
<tr>
<td><strong>Sl</strong></td>
</tr>
<tr>
<td><strong>Sp</strong></td>
</tr>
</tbody>
</table>
2. Arabic manuscripts, readings and editions of the Physics and related commentaries

Ar.  Ishāq ibn Ḥunayn’s Arabic interpretation reflecting a certain disparity between the Greek and Arabic texts without implying necessarily a Greek Vorlage different from the received Greek text (cf. below, § 4)


c†  Copy of Ishāq ibn Ḥunayn’s translation used by Gerard of Cremona for his Latin translation (= C), before 1180 [not extant]

Ǧc  Citation of Ishāq ibn Ḥunayn’s translation in Ibn Bāġga’s Commentary (Shurūḥāt al-Samā‘ al-ṭabi‘i, ed. Mā‘n Ziyāda, Beirut 1398/1978)
XII Sigla and Abbreviations

Ǧp Paraphrase of Ishāq ibn Ḥunayn’s translation in Ibn Bāġga’s Commentary

Θ Copy of Ishāq ibn Ḥunayn’s translation that served as an exemplar of θ₁, θ₂, etc. and was a third generation ancestor of Φ, ca. 930 [not extant]

θ₁, θ₂ ... Copies of Θ prepared (and annotated) by scholars of the Aristotelian school in Baghdad between ca. 930 and 1000 [not extant]

Ibn ‘Adī Yaḥyā ibn ‘Adī’s comments on the Physics as edited in “Bad”

Ibn al-Ṭayyib Abū l-Farağ ibn al-Ṭayyib’s comments on the Physics as edited in “Bad”

Σ Common ancestor of θ₁, vz₁ (and other copies of Ishāq ibn Ḥunayn’s translation circulating in 12th and 13th c. Andalusia), probably late 11th / early 12th c. [not extant]

vz₁ Copy of Ishāq ibn Ḥunayn’s translation quoted in Ibn Ruṣd’s “Long Commentary”, before ca. 1185 [not extant]

Y Copy of Ishāq ibn Ḥunayn’s translation prepared and/or owned by Yaḥyā ibn ‘Adī (d. 974) [not extant]

Φ ms. Leidensis or. 583, dated 540/1129-30, reproducing the copy of Abū l-Ḥusayn al-Ṭabī, dated 395/1004

Φ₁/Φ₂ Readings in Φ ante correctionem and post correctionem (probably by one and the same the hand)

Ω Common ancestor of Θ, Σ, Φ and ms. Escorial ár. 896, ca. 920—930 [not extant]

3. Latin manuscripts and witnesses of the Arabo-Latin translations of the Physics

C Arabo-Latin version by Gerard of Cremona (consensus of C*, Cᵖ and Cv) based on the Arabic ms. c₁, preserved in:

C* ms. Aosta, Biblioteca del Seminario Maggiore 71, late 12th / early 13th c.

Cᵖ ms. Parisinus lat. 16141, 13th c.

Cᵥ ms. Vindobonensis lat. 234A, 13th c.

V Arabo-Latin version by Michael Scot as transmitted in the lemmata of Ibn Ruṣd’s “Long Commentary”, based on a descendant of vz₁ (unpublished critical ed. by Horst Schmieja, Thomas Institute Cologne)
Anonymous Arabo-Latin version (by Hermannus Alemannus?) of Book VIII, 265a27-b16 and 266b6-267b26, as transmitted in the lemmata of Ibn Rušd’s “Long Commentary”, based on a descendant of vz" (unpublished critical ed. by Horst Schmieja, Thomas Institute Cologne)

4. Abbreviations used in the apparatuses

acc. accusative
add. addition, added by
adnot. annotation(s), footnote(s) or commentary (by modern scholar[s])
Alex. Alexander of Aphrodisias
App. 1 the first critical apparatus (recording Greek variant readings)
App. 2 the second critical apparatus (informing about the constitution of the Arabic text)
App. 3 the third apparatus (dealing with scholia and annotations in Φ)
c. cum; used together with
comm. commentary (both ancient Greek and Arabic comments in Φ)
corr. correction, corrected by the scribe
γρ. “γράφεται”, variant reading mentioned in one of the ancient commentaries
del. deletion, deleted by erasure or crossing out
dittogr. dittography
err. typ. typographical error
exp. expunxit; deleted by use of superscript points by
fort. fortasse; perhaps
gen. genitive
gloss marginal or interlinear gloss or scholium next to Ishāq ibn Ḥunayn’s translation in Φ
haplogr. haplography
i.l. infra lineam; below the line
i.m. in margine; in the margin
illeg. illegible
ind. indicating, indicated by
<table>
<thead>
<tr>
<th>Sigla</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>intell. Ar.</td>
<td>Indicates a disparity between the received Greek text and Ishāq ibn Ḥunayn’s translation which may originate from an elaboration or addition by Ishāq ibn Ḥunayn and cannot be attributed unambiguously to Ψ.</td>
</tr>
<tr>
<td>intell. C/V/Z</td>
<td>Indicates a disparity between the edited Arabic text and the translation by Gerard of Cremona/Michael Scot/Anonymous which may originate from an elaboration or addition by the Latin translator and cannot be attributed unambiguously to his Arabic exemplar.</td>
</tr>
<tr>
<td>interpol.</td>
<td>Interpolation, interpolated by.</td>
</tr>
<tr>
<td>interpr. Ar.</td>
<td>Indicates a disparity between the received Greek text and the Ar. translation caused by the fact that Ishāq ibn Ḥunayn’s Greek exemplar —although basically consistent with the received Greek text (or one of its branches)— was crabbed, ambiguous (e.g. missing accents) or slightly damaged, thus requiring some interpretative decision.</td>
</tr>
<tr>
<td>interpr. C/V/Z</td>
<td>Indicates a disparity between the edited Arabic text and the translation by Gerard of Cremona/Michael Scot/Anonymous caused by the fact that an Arabic word —although basically consistent with Φ (viz. Ω)— appeared in the latter’s Arabic exemplar in an ambiguous way (e.g. missing diacritics) requiring some interpretative decision.</td>
</tr>
<tr>
<td>inv.</td>
<td>Inverted, (two words) written in reverse order by.</td>
</tr>
<tr>
<td>i’punxit Ar.</td>
<td>Indicates a disparity between the received Greek text and Ishāq ibn Ḥunayn’s translation caused by the latter’s idiosyncratic parsing or punctuation of the Greek text without necessarily implying a problem or variant reading in Ψ.</td>
</tr>
<tr>
<td>iter.</td>
<td>Iterated by.</td>
</tr>
<tr>
<td>l.</td>
<td>Line.</td>
</tr>
<tr>
<td>lac.</td>
<td>Lacuna.</td>
</tr>
<tr>
<td>leg.</td>
<td>Legendum; to be read.</td>
</tr>
<tr>
<td>litt.</td>
<td>Litterae; letters.</td>
</tr>
<tr>
<td>loc.</td>
<td>Locus; the place in question.</td>
</tr>
<tr>
<td>marg.</td>
<td>Margin.</td>
</tr>
<tr>
<td>non vert. Ar.</td>
<td>Indicates the absence of an Arabic equivalent of a Greek word in Ishāq ibn Ḥunayn’s translation which does not necessarily imply its omission in Ψ, but may have been caused otherwise.</td>
</tr>
</tbody>
</table>
non vert. C/V/Z *Indicates the absence of a Latin equivalent of an Arabic word in the translation by Gerard of Cremona/Michael Scot/Anonymous which does not necessarily imply its omission in the translator’s Arabic exemplar, but may have been caused otherwise*

om. omitted by or not present in

om. hom. omitted due to homoioteleuton by

Philop. John Philoponus

propos. proposed by

ras. in rasura; written over an erasure by

s.l. supra lineam; above the line

s.p. sine punctatione; without diacritical points

s.r. sub radice; *(listed)* under the root

s.v. sub voce; *(listed)* under the word

scil. scilicet; i. e.

scr. scripsit; as read/modified by the modern editor

sec. secundum; according to

secl. secluded or bracketed by

sim. similar(ly)

Simpl. Simplicius

suppl. supplied by

Them. Themistius

tit. title, subheading

transl. translation(s), translated by

transp. transposed to *(the place indicated)* by

vid. ut videtur; as appearing in the manuscript

v. vide; see

5. Modern works referred to in the apparatuses


XVI

Sigla and Abbreviations

Diels


Dozy


Freytag


GALex I/II


Giannakis


Glossary

The Greek—Arabic and Arabic—Greek glossaries at the end of the present book.

Gutas Theophr.

Dimitri Gutas, Theophrastus On First Principles (known as his Metaphysics). Greek Text and Medieval Arabic Translation, Edited and Translated with Introduction, Commentaries and Glossaries, as Well as the Medieval Latin Translation, and with an Excursus on Graeco-Arabic Editorial Technique. (Philosophia Antiqua; vol. 119), Leiden 2010.

Hayduck

Michael Hayduck, Bemerkungen zur Physik des Aristoteles, Greifswald 1871.

Lane


Rashed


Rashed 2016

<table>
<thead>
<tr>
<th>Author</th>
<th>Work</th>
</tr>
</thead>
</table>
INTRODUCTION

I. “Aristotle’s Physics” and Aristotle’s *Physics*, the post-modern confusion of textual criticism and the aims of the present book

This book is not about Aristotelian doctrines or their history, no matter whether relating to what is known as Aristotle’s “Physics” in general or its most influential part, the eighth and last book of this work. Nonetheless, it has been written for those interested in these doctrines or their transmission and reception in view of the fact that such philosophical studies are faced—often unnoticed by their protagonists—by obscurities and problems of their textual substratum. Rather, this book is about signs conveying meaning and (mis-)carriers of doctrines: to be more precise, about Greek, Arabic and Latin *words* and *texts* of “Aristotle’s Physics”, and their interrelation. It contains a critical edition of a 9th c. Arabic translation, which serves, among other purposes, to remove some of these problems. By implication, its main methods, concepts and tools are those commonly used in the fields of literary and textual criticism, which in some way or another proved to be beneficial for the investigation of a cluster of texts demonstrably interrelated by a certain historical kinship or genealogical dependence, rather than the techniques of philosophical analysis or descriptive history of philosophy.

The main dilemma of genealogical-reconstructive textual criticism, which simultaneously constitutes in a way its programme, has been aptly encapsulated by Richard Tarrant in his recently published, enchanting overview of the history, methods and problems of textual criticism as follows:

---

1 It goes without saying that this translation—by itself and through its medieval Latin and Hebrew translations— is of crucial interest for the history of medieval and early modern philosophical doctrines among Arabic, Latin or Hebrew-writing philosophers, which is not among the topics of the present book.

2 In view of the numerous modern translations of the Aristotelian text and the fact that the extant Arabic translation is very close to the Greek text, I also refrained from providing a translation of the Arabic text.
Editors of classical texts have no difficulty in defining their aim as that of reconstructing the author’s original version, while at the same time recognizing that, given the evidence available, that aim can never be fully achieved. However, pellucid this statement may sound from one perspective, almost each of its conceptual components is fraught with ambiguities and endless scholarly debates from another, which indeed may cause difficulties in defining one’s aim as a critical editor. To name but a few, in the order of the above quotation: (i) To what extent do “classical texts” differ with respect to the editor’s aim from non-classical texts? Is the category of “classical texts” defined by a certain timeless quality, or by the (objective and culturally independent?) limits of a particular period of time, or else by a specific group of original languages? In latter case, are translations of “classical texts” classical texts? If time is the main criterion and “classical” means something like pre-medieval, is a literary work composed in ancient times, the oldest extant testimony (physical document) of which dates from medieval or early modern times, still a classical text? More specifically: “Aristotle’s Physics” is commonly ranked among the “classics” of ancient Greek literature. The present book deals with its medieval Arabic translation. So, does it deal with a “classical text”, and if so, does it deal with the same classical text? On the other hand, if we banish the Arabic translation for linguistic or historico-cultural reasons from our list of classics, how can we appropriately account for the fact that the meaning conveyed in it often seems to be closer to what Tarrant calls “the author’s original version” than that transmitted in many Greek manuscripts?

(ii) The definition of the editor’s aim as a process of “reconstruction” is a matter of perennial dispute, and this on two distinct levels. On a first, fundamental level, the idea of reconstruction, which is not self-explanatory and in its strict sense always implies a genealogical approach to the witnesses of a work, was and is repudiated wholesale by many philologists and textual critics. Among the most influential trends of this kind was Joseph Bédier’s critique, which reproached Lachmannian reconstruction for fostering subjectivity and arbitrariness due to the fact that the overwhelming majority of genealogical recensions of the witnesses result in two-branched stemmata, thus allegedly leaving the editor with an arbitrary or subjective 50/50 chance of choosing the correct

---


reading⁵. Another attack came from the so-called New Philology. Bernard Cerquiglini, one of its protagonists, rejects the “desire for reconstruction” as an idea based on a “hygienist system of thought about the family” and a literary “theory of the genius”, which “by magnifying a transcendent author [...] tied an authoritarian theory of the subject (the master of the sense as well as of the signifier expressing it) to the notions of origin and textual stability”⁶ that ought to be replaced by appropriately appreciating the divergence of versions and accepting variance as a veritable object of research and documentation in its own right⁷. Still another recent trend that challenges in general “reconstruction” in the above sense is formed by the so-called Material Philology, which focuses on individual synchronic aspects rather than diachronic elements of a textual tradition, such as the interrelation between textual and paratextual features or the question how individual material characteristics of a manuscript or printed book interact with social and cultural circumstances of its production⁸.

On another, less fundamental level, we are faced with the enduring controversy over the correct method of reconstruction held by all those who generally would (have) accept(ed) Tarrant’s above-quoted dictum. Recurrent points of disagreement include the notions “error / innovation / variant reading” and

---


“archetype”, the role and/or effectiveness of stemmatics, the (ir)relevance of codices descripti for the reconstruction, the criterion of lectio difficilior, the question whether recentiores non deteriores, and many other issues⁹.

(iii) The concept of “the author’s original version” and the closely related notion of “authorial intention”, the final aim of reconstruction, are likewise highly controversial. Issues up for debate are, for example, the relationship between the (reconstructible) archetype and the “original version”¹⁰, the lack of any objective or mechanical criterion for the determination of the original reading¹¹, the problem of authorial variants (or changing authorial intentions)¹² and cases of multiple authorial versions as well as versions the attribution of which is uncertain¹³, or, more generally, the questionable hypothesis of the original as a perfect and flawless version¹⁴. Another fundamental objection against the concept of “authorial intentions” as a methodically sound criterion of textual criticism is based on the idea that the final product of literary composition is always a social event determined not only by authorial intention but also by non-authorial (e.g., editorial, audience-related, contextual, historical, local, and —typically, but not exclusively, in modern literature— institutional) factors¹⁵.

(iv) Finally, Tarrant’s equally true and bitter observation that “that aim can never be fully achieved” leaves the critical editor with the unsettling and unsettled question which editorial method to choose, once the recensio has been completed. The answers to this question provided throughout the history of textual criticism are no less manifold and controversial than the above broached subjects; they even seem to have moved further apart in recent times since editors of “classical texts” have begun to provide digital editions and, for that purpose,
adapt their critical methodology to the capability of the software and tools at hand.

To sum up, there is not much of a firm and well-established ground to build on. Defining one’s aim as a critical editor emerges as a complex process determined by a variety of conceptual and methodical issues, their individual compatibility with and effectiveness for the particular circumstances of the text in question and its unique ways of transmission, and the editor’s degree of willingness to interrogate theoretical assumptions and to consider and incorporate—if not as general rules, at least as tactics—insights from various subfields of text linguistics and literary criticism. On that note, the threefold aim of the present book might be described as follows\textsuperscript{16}:

(1) A critical edition and, if needed, reconstruction (to the extent possible) of the Linguistic Text of Ishāq ibn Ḥunayn’s Arabic translation of what he conceived as the meanings of the Greek text of a particular Version of the work known as “Aristotle’s Physics” in due consideration of the fact that these meanings were in large part generated from an individual physical instantiation of this work\textsuperscript{17}, one (or more) Greek manuscript(s) accessible to the translator (but no longer extant), but also modelled on or imported from epistemic entities other than the individual text itself, such as the translator’s prior knowledge about Aristotle’s philosophy or his preconceptions about the work in question.

(2) (a) A minute comparison of this reconstructed Arabic text with the extant Greek copies of “Aristotle’s Physics”, in order to derive as much information as possible about the non-extant Greek manuscript(s) used by the translator. (b) Inferring from this derived information clues to the genealogical relationship of the extant Greek copies of “Aristotle’s Physics” and possible consequences for the reconstruction of the Greek text.

(3) A (con)text-based contribution to Graeco-Arabic lexicography and by extension to early Arabic lexicography in general by means of Greek-Arabic and Arabic-Greek glossaries\textsuperscript{18}.

\textsuperscript{16} Here and in what follows I borrow shamelessly a number of notions from the disciplines of text linguistics and literary criticism (more on that in the course of the subsequent explanations).

\textsuperscript{17} Or, in post-structuralist terminology, the meanings created in the translator’s interaction with the text.

\textsuperscript{18} The need for bilingual word indices as a reference tool for the establishment of the text is obvious. For the Arabic reception of the language of scientific and philosophical translations from the Greek and the benefits of more elaborate glossaries for Arabic lexicography in general, cf. Manfred Ullmann, \textit{Wörterbuch der Klassischen Arabischen Sprache}. 
In section (1), the term Linguistic Text refers to the series of signs (words and marks) the translator intended to note down as a result of his efforts to translate the Greek text into Arabic. The Linguistic Text must be distinguished from the text of the translator’s autograph. Whether the translator ever produced a “final” fair-copy, we don’t know. Judging from the high quality and completeness of the preserved text of his translation, his activities must have been very close to that stage. However, the autograph possibly (if not even very likely) contained certain touches of revision, additions, deletions, etc., and (taking the length of the text into consideration) presumably also this or that slip of the pen by the translator himself. More important, it was a Material Text the meaning of which was not solely determined by the translator’s intention, but also by other, formal and physical aspects (cf. below). The Linguistic Text is also distinct from the reading-translating-text in the translator’s mind, which I call Conceptual Text. The latter —being the cognitive interface between comprehending the source text and re-thinking it in the language of the (still to be formulated) target text— is a sort of polyglot or interlingual proto-text made up of Graeco-Arabic approximations and equivalences (probably accompanied by provisional alternative phrasings) and certainly also non-verbal units such as mental symbols or codes representing words or phrases of the Greek text which are immediately clear to the translator and thus not (yet) in need of precise formulation. The Linguistic Text, on the other hand, is a self-contained entity composed of Arabic
words and thus finally abstracts or breaks away from this intrinsic Graeco-
Arabic matching of the Conceptual Text\textsuperscript{21}. Furthermore, the Linguistic Text is
a text created by the translator for readers unfamiliar with the Greek language. It is, so to speak, exoteric and, thus, may contain elements “added” to the
(“esoteric”) Conceptual Text for the sake of clarity with an eye toward this
audience. Both Linguistic and Conceptual Texts differ again from their physical
manifestation, the Material Text, in at least two respects: First, the meaning
conveyed through the Material Text is directed, in some cases even manipulated,
by material aspects such as the writing surface, (colours of) ink, page layout, the
segmentation of the text into paragraphs, and many other things. It thus may
differ from the meaning the author of the Linguistic Text originally intended to
convey, although the signs proper are more or less the same\textsuperscript{22}. Secondly, the
Material Text may misrepresent the Linguistic Text or preserve it in an
ambiguous manner due to codicological damages, scribal errors or modifications
etc., most conspicuously in later copies, but as indicated above even in its first
physical manifestation, the translator’s autograph.

While the translator’s Conceptual Text is not accessible to us, the Linguistic
Text is preserved in the form of its (deficient) individual material instantiations
and their indirect tradition (cf. below, chapters II, VII). For the most part, there
is no reason to assume that the signs of this Material Text differ from those of
the Linguistic Text; hence no “reconstruction” is required (as mentioned above,
this identity of the signs does not necessarily entail the identity of meanings). In
all other cases, my editorial approach was guided by the idea or principle of an
anterior superiority of the Linguistic Text, the restoration or reconstruction of
which has priority over respecting and visualising the dynamics and variance of
the Material Text\textsuperscript{23}. Although this variance is concededly of undeniable and
crucial importance for the historiography of Arabic philosophy and Begriffs-
geschichte (especially for the reception of Ishāq ibn Ḥunayn’s translation in the
Aristotelian school of Baghdad), this methodology is justifiable for the following
three reasons. First, any attempt to accomplish goals (2) and (3) summarized above
presupposes a thoroughly established wording of the translator’s Linguistic

\textsuperscript{21} For a collection of recent studies of the cognitive aspects of translation processes cf.
\textsuperscript{22} Needless to add, the same disparity may be caused by socio-cultural, regional and/or
historical remoteness between the author of the Linguistic Text and the user of the
Material Text.
\textsuperscript{23} For a contrary approach cf. Cerquiglini, \textit{In Praise of the Variant}, p. 33—45, and Gabler’s
“Introduction” in Hans Walter Gabler, George Bornstein, Gillian Borland Pierce (eds.),
Text. However interesting a textual intervention (e.g. a brief explanatory addition or the replacement of a *terminus technicus*) by a tenth century scholar from Baghdad may be for the history of physical doctrines in medieval Arabic philosophy, it is absolutely irrelevant (even misleading) for making inferences from the text of the translation about the text of the Greek manuscript used by the translator (unless we assume that this later textual intervention was prompted by a collation with the same Greek manuscript) as well as for text-based studies of the influence of Graeco-Arabic translations on the medieval Arabic lexicon. Secondly, this methodology is by no means suffused with a hidden or vague intentionalist approach to the Linguistic Text. Rather each reconstructive intervention is substantiated and verified through the comparison of the Material Text ready at hand with the extant Greek manuscripts and the Arabic and Latin indirect traditions. Thirdly, variance is neither disregarded nor suppressed by this approach, but appreciated and recorded in as much detail as possible in the critical apparatuses of the edition below.

It goes without saying that anyone attempting a reconstructive intervention must keep in mind that despite the valid and reasonable assumption that between the meaning of the translator’s Linguistic Text and the meaning of the Greek text there is a relation of convergence, ideally one of coincidence, this intended convergence is not universal. Apart from blunt misinterpretations or variant readings, the semantic relationship may appear odd or implausible to us, because we ascribe to the *same* Greek or Arabic word or phrase today another meaning than the translator in 9th c. Baghdad did, just as the meaning conveyed by the Greek text to Aristotle’s contemporaries certainly differed from the meaning inferred almost one thousand years later by its famous commentators John Philoponus and Simplicius.

As mentioned above, the process of translation is to a certain extent modelled by the translator’s preconceptions about the text/work and its author. Whether the creator of the below edited translation conceived the individual Greek text which formed the object of his translation activity as a complete self-contained literary unit or “work”, is not quite clear, but very likely24. Such a conception of the Aristotelian text(s) is ascertainable in scholarly Syriac literature from the second half of the eighth century on and in Arabic literature from the early ninth century25 and had already, at that time, a long Greek tradition. I refer to this

---

24 The preserved text of the translation contains no title or author’s name from the translator’s hand. However, neither the transmission of his translation nor the extant bibliographical references to it provide any support for the assumption that the translator conceived the object of his translation as a collection of separate treatises.

25 Cf. Yury Arzhanov & Rüdiger Arnzen, “Die Glossen in Ms. Leyden Or. 583 und die syrische Rezeption der aristotelischen Physik”, in Elisa Coda, Cecilia Martini Bonadeo
concept by the phrase “Aristotle’s Physics” and to the group of texts conceived today (but probably not as early as Aristotle’s time) as a physical manifestation of this concept by the phrase Aristotle’s Physics. The conception itself is a universal mental construct which occupies an indifferent position as regards the meaning or meanings ascribed to or conveyed by the text (e.g., although Alexander of Aphrodisias, Thomas Aquinas and Martin Heidegger certainly differed substantially as regards the meanings of the text, they applied the term “Aristotle’s Physics” unanimously to a mental entity characterised by a certain diachronic identity the ongoing validity of which enables us to understand what they were talking about). It is even possible to use this concept in a meaningful manner without any knowledge or opinion about these meanings (if you ask a well-trained bookseller for a copy of “Aristotle’s Physics”, she or he will immediately understand what you are looking for without ever having read a single line of the work)\textsuperscript{26}. It is a universal concept in so far as it retains a certain sameness or stability while admitting a variety of features and manifestations, more precisely (a) multiple spatial and temporal instantiations of the same text (e.g., several copies of Aristotle’s Physics, revised edition by W. D. Ross, Oxford 1936, in different libraries or exactly the same text in this edition and its reprint Oxford 1998), (b) a variety of versions (e.g., “Aristotle’s Physics” containing the seventh book in version $\alpha$ and “Aristotle’s Physics” containing this book in version $\beta$), (c) variance of the actual wording (e.g., different readings in two medieval manuscripts or two different editions), (d) instantiations in different languages and with different signs or letters, (e) a great variety of physical media of instantiation (e.g., manuscript, printed book, audio book, internet, etc.), and (f) even the aggregation of all above features and dispositions\textsuperscript{27}. Thus, the translator’s Linguistic Text, the main subject of the present book, is based on the translator’s interpretation of an individual physical manifestation of a particular version of what he conceived universally as “Aristotle’s Physics”. The term “versions” refers here and below to multiple sets of meaningful units (rang-

\footnotesize{\textsuperscript{26} Which raises the question addressed by Jacques Brunschwig: “quand on entre dans une librairie et qu’on achète la Physique d’Aristote, qu’est-ce qu’on achète exactement?”, cf. J. Brunschwig, “Qu’est-ce que ‘la Physique’ d’Aristote”, in François De Gandt, Pierre Souffrin (eds.), La Physique d’Aristote et les conditions d’une science de la nature (Bibliothèque d’histoire de la philosophie; Nouvelle Série), Paris 1991, p. 11—40.}

\footnotesize{\textsuperscript{27} Here and in what follows I draw on Jorge Gracia’s reflections on the nature of texts; cf. Jorge J. E. Gracia, Texts. Ontological Status, Identity, Author, Audience (SUNY Series in Philosophy), Albany 1996.}
ing from clauses or syntagmata over paragraphs up to whole chapters, independ-
et from the languages or signs of transmission) each whole of which resembles
any other whole of sets to such a degree that it is recognised as a particular
instantiation of the universal concept of one and the same work. Versions differ
from one another in that one or several meaningful units of one version have
been modified or replaced through revised or newly composed meaningful units,
or in that such meaningful units have been deleted from an earlier version or
originally added or interpolated from another source, or in that a certain series
of meaningful units has been arranged in another order (while preserving the
contents of each unit as such) in the other version in such way that the modi-
fication, revision, deletion, addition or re-structuring is the result of an intentio-
nal editorial intervention rather than of “infelicities” of the transmission.28 Such
editorial interventions may be performed by the original author (authorial versions/
revisions), editors, scholarly scribes of manuscripts or translators.

So far, we have moved away quite a distance from the genealogical editorial
ideal of “reconstructing the author’s original version” (Tarrant). Not only has
the term “original version” turned out to be inappropriate and in need of further
scrutinising, but also our subject is a translation, and the translator is not the
author of “Aristotle’s Physics”, but, if anything, the author (i.e. creator) of its
Arabic translation (he is not even the author of a peculiar version in the above
specified sense of “version”, as he did not introduce any substantial intentional
modification of the meaning, but faithfully reproduced one of the known and
otherwise attested versions of the text).29 However, matters get further com-
plicated by the following two facts:

28 It goes without saying that the boundaries between versions and texts differing from
one another through mere unintentional modifications in the transmission or what seem
to be insignificant variations are fluid and often indeterminate. For a discussion of how
“versions” relate to authority and the different stages in the process of publishing cf.
Shillingsburg, Text as Matter, p. 49—53, 65—72. For other views which bring “versions”
close to “copies” cf. Greg, The Calculus of Variants; Gracia, Texts, p. 101f., Cerquiglini,
In Praise of the Variant, p. 37—40.

29 For the debate about the author-translator relationship cf. Anthony Pym, “The Trans-
lator as Non-Author, and I Am Sorry about That”, in Claudia Buffagni, Beatrice Gar-
zelli, Serenella Zanotti (eds.), The Translator as Author. Perspectives on Literary Translation
(Proceedings of the International Conference, Università per Stranieri of Siena, 28-29
May 2009), Münster 2011, p. 31—44; on the distinction between author and translator
also Gracia, Texts, p. 108, 114. (N.B.: A translator may be called “author” in the sense
that she or he creates through the dissemination of the translation new meanings of
particular words or expressions in the lexicon of the language of the target text or enriches
it with neologisms. However, this is not the meaning of “author” we are concerned with here.)
(1) The main textual witness at our disposal is not a separate copy of Ishāq ibn Ḥunayn’s translation, but a copy of an 11th c. “edition”, which includes apart from the translation marginal and interlinear glosses and notes as well as commentary sections proper (cf. below, chapter II). Evidently, the creator of this “edition” had access not only to different copies of Ishāq ibn Ḥunayn’s translation, but also to (partial) translations of “Aristotle’s Physics” prepared by other translators. Thus, the task of the present day critical editor of Ishāq’s translation includes two procedures that must be carefully kept apart. On the one hand, one must determine the mode and degree of potential editorial interventions into the text of the translation on the part of this 11th c. editor and decide how to deal with them appropriately in terms of editorial technique. On the other hand, one must remove errors and clarify other problems that occurred in the manuscript tradition of this 11th c. “edition” itself (cf. below, chapter IV).

(2) Furthermore, the commonly accepted meaning of “author” is not only unsuitable for the creator of the Arabic translation, but even questionable with respect to the universal concept of “Aristotle’s Physics” as a self-contained literary work. The latter is a conventional term applied from Late Antiquity onwards to a cluster of texts marked by certain inconsistencies and occasionally vague coherence. Although there can be little doubt that each of these texts (or at least one version of them) was composed by Aristotle, it is rather unlikely that he intended them to be combined or united as a self-contained work. On the contrary, internal references within Aristotle’s Physics as well as cross-references in other works by Aristotle point to the fact that Aristotle drafted the single books of the Physics or groups of several books as separate treatises to which he referred by different titles. Both the chronological order of these (groups of) treatises and the question whether the intervals of time (hence, the concomitant philosophical development of Aristotle) between their composition were long or short are matters of dispute.


Our knowledge about the history of these texts in the Peripatetic school and the Hellenistic period is rather vague. Aristotle's disciple Eudemus of Rhodes composed his own *Physics*, the structure of which —judging from the surviving fragments— resembled more or less that of “Aristotle’s Physics”\(^{33}\). However, this does by no means prove that he actually conceived the cluster of texts that he took as a model as a complete self-contained writing, because we do not know in which way he embedded its structure in his overall conception of Aristotle’s natural philosophy and its branches. Furthermore, both Eudemus and his younger colleague Theophrastus apparently referred to the first four books of what would later be known as “Aristotle’s Physics” by the title “Physics” (Τὰ φυσικά) and to the second group of texts as “On Motion” (Περὶ κινήσεως), which does not suggest a holistic conception of “Aristotle’s Physics” in the Peripatetic school\(^{34}\).

In any case, we are relatively safe in assuming that the unitary “work” conception does not trace back to Andronicus of Rhodes (fl. end of the first c. BC\(^{35}\)), who apparently conceived of the two groups of books I—V and books VI—VIII as connected, yet discrete parts and did not think of what is known today as “Aristotle’s Physics” as a self-contained single whole\(^{36}\). Although Andronicus is often referred to as the one who produced a kind of canonical edition of the Aristotelian corpus, his role in the construction of such a self-contained

---


Aristotelian writing entitled *Physics* remains dubious and was in all likelihood rather insignificant. The earliest vague evidence for a conception of “Aristotle's Physics” qua self-contained work composed of eight books traces back to Adrastus of Aphrodisias (middle of the second c. CE). According to Simplicius, Adrastus reports in his (lost) work *On the Order of Aristotle's Writings* (Περὶ τῆς τάξεως τῶν Ἀριστοτέλους συγγραμμάτων) that some refer to Aristotle’s “discourse” (πραγματεία) by the title “On Principles” (Περὶ ἀρχῶν), others by “Lecture on Physics” (Φυσική ἀκρόασις), while yet others call the first five books (τὰ πρώτα πέντε) “On Principles” and the remaining three ones (τὰ λοιπὰ τρία) “On Motion” (Περὶ κινήσεως). Provided the terms “the first five” and “the remaining three books” indeed originate from Adrastus (or one of his sources) and are not owed to Simplicius’ own conception of “Aristotle’s Physics”, Adrastus must have regarded Aristotle’s πραγματεία as a complete work in its own right composed of eight books. However, the strength of this evidence is weakened by the fact that Simplicius uses almost the same terminology when referring to Aristotle himself: τὰ μὲν πρῶτα πέντε Περὶ ἀρχῶν εἴωθε καλεῖν ο Ἀριστοτέλης, τὰ δὲ ἐφεξῆς Περὶ κινήσεως (“Aristotle usually calls the first five [books] ‘On Principles’ and the following ones ‘On Motion’”).

Thus, the first irrefutable evidence for a unitary literary conception of “Aristotle’s Physics” is the commentary by Alexander of Aphrodisias which,
by the mere fact of commenting on the contents of these eight books in the form
of a continuous self-contained literal commentary, attributes implicitly to what
had been conceived either as a patchwork of separate treatises or as a bipartite
composite the same formal rank and literary genre as to other, undoubtedly self-
contained Aristotelian writings that formed the object of separate commentaries
in the Peripatetic school of Athens or the school of Alexandria. Strictly speak-
ing, it is here (or perhaps slightly earlier) where the history of “Aristotle’s Physics”
as an integral piece of literature begins and where the “archetype” of this tradi-
tion must be sought. Of course, this does not preclude any serious research on
the wording of the Aristotelian texts prior to this turning point. However,
whenever this research is faced with questions involving or presupposing a
unitary holistic view of these texts (such as the wording of introductions and
conclusions of particular books or of the transition from one book to another,
subtitles, the numbering of the books, etc.), it comes here to its limits.

Evidently, this applies also to the second aim of the present book. As the
Greek manuscript(s) used by the translator stood in the tradition of this “arche-
type”, we cannot expect to gain from our reconstruction on the basis of the
Arabic text insights about any particular conception of “Aristotle’s Physics” (no
matter whether conglomerate or unitary) antedating this tradition. In general,
this second aim, which consists of (a) deriving as much information as possible
about the non-extant Greek manuscript(s) used by the translator and (b) infer-
ing from this information ideally substantial clues for the establishment of the
Greek text, is marked by a certain imbalance between the incontestable evidence
that it is justified or desirable for the sake of scholarship and the inherent
uncertainty that whatever results are achieved will indeed be useful for these
purposes.

---

taria in Aristotelem Graeca et Byzantina. Quellen und Studien; vol. 1.) Berlin 2011;
Golitsis, Les Commentaires, p. 58f.

43 Alexander is followed in this respect by John Philoponus; cf. Barnes, Roman Aristotle,
p. 34, note 155.

44 “Archetype” means here the first manifestation of a particular literary form assigned
to the cluster of texts known as “Aristotle’s Physics” rather than a particular manuscript
from which all extant and reconstructable witnesses derived or the author’s final version
intended for publication. For the different meanings of “archetype” in textual criticism
la génération, p. ccix—ccx, points to the role of Aphrodisias (in the historic region of
Caria, western Anatolia) in the formation of the “Aristotelian corpus” in the second half
of the second c. CE. We may add the observation that it was exactly in that period
that our two earliest witnesses for a conception of “Aristotle’s Physics” as a unitary
work, Adrastus and Alexander, were active in that place (as Alexander’s teacher,
Herminus, likely also was).
As for its justification, it doesn’t take a genius of classical philology to become immediately aware of the fact that we are still far from a reliable standard edition of the Greek text. Not only is the 1936 edition by Sir David Ross at hundreds of places in conflict with the preceding editions by Immanuel Bekker, Carl Prantl, Philip H. Wicksteed and Henri Carteron, but also the more recent translators and revisors of the text such as Francis Cornford, Hans Wagner or Pierre Pellegrin in turn often felt urged to follow selectively and inconsistently this or that edition or even ventured to propose again different modifications or alternative readings, partly with scanty support from the Greek manuscripts. Furthermore, the need for a new edition of the Greek text is plainly shown by a couple of severe shortcomings from which all available editions suffer. Perhaps the most conspicuous one is the blunt disregard of a number of important independent manuscripts or manuscript families. Another serious problem is raised by the over-simplified conception of the stemmatic relationship of the manuscripts underlying all editions. As shown by Marwan Rashed’s study on the transmission of Aristotle’s *De generatione et corruptione*, which is closely related to that of the *Physics*, we are not faced with a clear-cut bifurcation, but with a much more complicated structure including important witnesses which occupy certain middle positions between what were previously treated as the two main branches.

During the past two decades, Aristotle’s natural philosophy in general as well as its key text, the *Physics*, in particular attracted —after a period of rather limited activity during the second half of the 20th century— a constantly increasing attention among historians of philosophy and historians of science. Apart from hundreds of recent monographs and articles, which deal with almost all major doctrines and conceptions of Aristotle’s *Physics*, both in terms of philosophical historiography and in pursuit of leading questions of contemporary physics, aspects of methodology and didactic purposes, the medieval or modern reception of Aristotle’s natural philosophy and other issues, a remarkable number of new translations into western languages have been published and international research projects have been launched. However, all translators relied more or

---

45 Marwan Rashed, *Die Überlieferungsgeschichte der aristotelischen Schrift De generatione et corruptione* (Serta Graeca. Beiträge zur Erforschung griechischer Texte, vol. 12), Wiesbaden 2001. For more details, see P. S. Hasper’s contribution below, chapter VI.

46 To mention but the most recent translations in chronological order: *Aristóteles. Física. Introducción, traducción y notas de Guillermo R. de Echandía*, Madrid 1995; *Aristóteles. Física, libros III—IV*. Traducción, introducción y comentario de Alejandro Vigo, Buenos Aires 1995; *Aristotele. Fisica, libri I e II*. Traduzione e cura di Ferruccio Franco Repellini, Milano 1996; *Aristóteles. Física*. Texto revisado y traducido por José Luis Calvo Mar-
less on the previous editions; and none of these studies addresses the pending philological questions\(^{47}\). Only the 1996 edition of the Greek text by J. L. Calvo Martínez tries to push the process a step forward by taking into consideration three manuscripts ignored by the previous editors. However, as Calvo Martínez himself has to admit in his introduction, this attempt was rather fruitless in so far as these manuscripts, the *Escorialenses* Σ.II.15, Σ.III.2 and Φ.III.9, turned out to be (partly rather late) descendants of ms. Vat. gr. 241 (I), which of course had been considered by Ross\(^{48}\). Their sole benefit thus consists in providing a corrective for individual readings, errors and innovations, in the famous ms. *Vindobonensis* 100 (J).

That the consideration of medieval Graeco-Arabic translations may contribute—to a lesser or greater degree— both to recovering otherwise lost readings and to determining in a more reliable way the relationship of the extant Greek manuscripts has been illustrated in general by a number of recent studies. It will suffice here to point exemplarily to Uwe Vagelpohl’s study on Aristotle’s *Rheto-

---


\(^{48}\) Cf. Calvo Martínez (ed.), *Aristóteles. Física*, p. lxxiii—lxvvi. As a consequence, the critical apparatus of Calvo Martínez’ edition does not register a single variant reading of the three *Escorialenses*.
ric⁴⁹, Dimitri Gutas’ edition and study of Theophrastus’ *Metaphysics*⁵⁰, the edition and study of Aristotle’s *Poetics* by Leonardo Tarán and Dimitri Gutas⁵¹, the study of the Arabic translation of Aristotle’s *Nicomachean Ethics* by Ernst A. Schmidt and Manfred Ullmann⁵², Oliver Overwien’s edition of Hippocrates’ *De humoribus*⁵³, not to mention the “Index of Variant Greek Passages” covering more than (!) fifty ancient Greek texts (with hundreds of variant readings reconstructed from the Arabic translations) published in the *Greek and Arabic Lexicon* (GALex)⁵⁴. As in most of the above cases, the Arabic translation of the *Physics* antedates the oldest extant Greek manuscripts, thus presupposing a still earlier date of the translator’s Greek exemplar(s). It gains an even greater importance through the fact that the latter evidently formed part of the so-called α-branch of the tradition (cf. above), which is otherwise attested by only one, and at that rather faulty, witness, the famous *Parisinus gr. 1853* (E).

Neither the textual nor the lexicographic Graeco-Arabic significance of the translation has been taken into consideration by its previous editors⁵⁵. That

---


being said, one must realise —without intending to belittle Badawī’s enormous achievements for (past and future) research on the Graeco-Arabic translation movement— that the edition by ʿAbd ar-Raḥmān Badawī, the most relevant one for the present study, has so many other severe deficiencies that a new edition is certainly in order. To name but a few such shortcomings: Badawī misread (or misreproduced) the text of the Arabic codex unicus at numerous places (roughly 2-3 cases per page). At hundreds of places, he modified the text (added, deleted or altered words) without indicating this in the printed text. His edition omits many marginal and interlinear glosses and variant readings or relates them to wrong sections of the main text. At numerous places, Badawī reproduced evident errors of the manuscript, although they could have been corrected easily by a comparison with the Greek text. Finally, Badawī made no use of the extensive Arabo-Latin indirect tradition, which is of crucial importance for the establishment of the text.

Hence, the present edition also aims at replacing Badawī’s publication. However, for lack of time this could be realised, if at all, only for book VIII of Ishāq ibn Ḥunayn’s translation of Aristotle’s Physics. The following considerations seem to justify a separate edition of this book: (i) Although Aristotelian scholars disagree about the chronology of the single books of the Physics, there is a broad consensus that book VIII forms within the whole a self-contained module, which may even have been conceived of by Aristotle as a separate treatise in its own right56. (ii) Book VIII is distinctive in its content. Aristotle turns here from sublunar physics and cosmology to two central issues of the whole universe: the prime mover and the eternity, continuity and unity of supralunar motion, issues, that is, with fundamental metaphysical and theological implications. Hardly surprising this book attracted an immense attention in medieval Arabic and Latin philosophy which may be illustrated representatively by the mere fact that the two most important medieval commentators, Ibn Ruṣd (Averroes) and Thomas Aquinas, devoted no less than one quarter of their commentaries on the

---

Physics to this book\textsuperscript{57}. (iii) The below edition avoids any idiosyncracies by scrutinising, prior to any attempt at establishing the text proper, the complete manuscript tradition —Greek, Arabic and Latin— as well as the most critical questions concerning the genesis and transmission of the Arabic translation as a whole. It thus may serve as a model or starting point for future editions of the remaining books of the Physics.

II. The Arabic manuscripts of Aristotle’s Physics

The Arabic translation of Aristotle’s Physics ascribed to Ishāq ibn Ḥunayn (d. 910) survives in almost complete form in the manuscript Leiden Or. 583 and in a short fragment in ms. Escorial ár. 896. The latter is of minor importance for the present edition of Physics bk. VIII, because it covers only fragments of the section IV 9, 217b27 — V 1, 224b10. However, as it provides a valuable instrument of comparison for the assessment of the reliability and structure of the Leiden manuscript, it deserves to be taken into consideration here as well (cf. below, chapter II.4).

II.1 Ms. Leiden Or. 583 (olim Cod. 583 Warner)\textsuperscript{58}

The manuscript is stored among the Oriental Collections of the Leiden University Library. In all likelihood, it was acquired by Levinus Warner (d. 1665) between 1655 and 1665 in Istanbul. It is made of 233 folios of beige (slightly pale pink) woven paper with visible (undissolved) fibres\textsuperscript{59}. Before and after the textblock proper we find two (beginning) or three (end) flyleaves of another, lighter sort of paper with visible laid lines. The codex has a golden brown wavy patterned binding with envelope flap and colourful decorated doublure. Binding and flyleaves are of a much more recent date than the textblock proper. The

\textsuperscript{57} Not to mention numerous self-contained treatises by Arabic, Latin and Hebrew-writing scholars on particular topics or sections of Physics, book VIII.


\textsuperscript{59} All information provided here is based on colour photos of the manuscript kindly put at my disposal by Professor Amos Bertolacci (Pisa). My deepest thanks go to him as well as to Professor Adam Gacek (Montreal), who kindly offered advice on some particular questions concerning this manuscript.
whole codex has been rebound and restored at an unknown point of time (certainly after its acquisition by Warner), as becomes clear from traces of mending and filling with paper strips (possibly also cellulose), cutting of the outer margins, and partly illegible notes and glosses in the inner margins, which disappear behind the gutter seam.

In the middle of fol. 1a we read the title Šarḥ al-Samaʿ al-ṭabīʿī (“Commentary on the Physics”). Next to it is a seal, probably of Ottoman origin, with the text Allāhu ḥasbī waḥdahū wa-kaḥfī — al-Faqrī ʿUṭmān (?) *** and the date 1021 (= 1612). The same seal is found on fol. 1a of ms. Chester Beatty Ar. 438860 (copied 910/1504) and in a number of manuscripts from Berlin, Gotha and Leipzig. Underneath we read the handwritten ownership statement by a certain Yaʿqūb ibn al-Fahmī (or: al-Fahrī?) al-Azādī (or: al-Azrī?) dated 660/1262, and further below, possibly written by the same hand, two verses of a poem attributed to Muḥammad ibn Idrīs al-Šāfīʿī (d. 204/820). On the lower part of fol. 1a, which has been restored with modern paper, we read in printed letters Ex Legato Viri Ampliss. LEVINI WARNERI.

Another circular seal is found at the bottom of fol. 115a. The owner of the seal calls himself ʿAbd al-Bāqī ibn ʿAlī al-ʿArabī. A man with this name is mentioned in Muḥammad Rāġib al-Ṭabbāḥ (1877—1951), Iʿlām al-nubalāʿ bi-taʿrīḥ Ḥalab al-sāḥbā 63. According to this source, ʿAbd al-Bāqī was born in 899/1493-4 and passed away in 971/1563-4 in Istanbul. He was appointed as Ḥanafī Qāṭī of Aleppo in the year 951/1543-4 and later occupied positions as Qāṭī in Cairo and Mekka. Perhaps it was this man who brought the codex from some central Middle Eastern place to Istanbul.

---

60 As Dr Moya Carey, Curator of the Islamic Collections of the Chester Beatty Library, kindly informed me, the *Islamic Seals Database* has been taken offline for the purpose of restructuring. The seal is stored there as seal no. 409.

61 Cf. http://www.manuscripts-gotha.uni-jena.de/receive/GothaMSSecentry_secentry_00000329. An image of ms. Petermann II 406 (Ahlwardt 8625), fol. 1r, which contains the same seal, is retrievable at the digital manuscript database of the Staatsbibliothek zu Berlin — Preußischer Kulturbesitz.

62 The verses run as follows: 

إذا هيجع التوام أسلت ثغري  
وأنشدت بيتاً وهو من ألطف الشعر  
ألمَي من الحسناء ان لياليا  
 넘َر بلا نفع وجنبي من عمري


The textblock proper begins on fol. 1b and ends on fol. 233b as follows:

Incipit: al-ḥamdu li-l-lāhī l-waḥidī l-ḥaqiqī ‘alā ǧamīlī na’mā’ībī wa-l-ṣalātī ‘alā ǧamī‘i malā‘ikātībī wa-anbiyā‘ībī. qāla Arīṣīṭālīs lamāmā kānant ḥālu l-‘ilmi wa-l-yaqinī fī ǧamī‘ī l-subūlī

Explicit: wa-qad bayyann ānna l-ḥarakata wāḥidatun muttaṣīlatun lā waqfata fīhā


According to the colophon, the copy was completed on Ẓū l-Qaʿda 1, 524 (= October 5, 1130) in Baghdad. The name of the scribe, who says that he prepared the copy “for himself”, is covered by a glued strip of paper and illegible to me. Badawī likewise left it blank in his edition64, whereas Giannakis claims to be able to read “Abū l-Ḥakam”65. The name given by Giannakis corresponds with what we read in the colophons of books I and V of the Physics, where it says indeed Abū l-Ḥakam kāṭibūhū (“Abū l-Ḥakam [is] its scribe”, fol. 15b) and kataba Abū l-Ḥakam al-Maṭribī li-naṣībī (“Abū l-Ḥakam al-Maṭribi wrote [it] for himself”, fol. 150a). The colophons on fols. 233b and 150a are definitely written by the same hand. Stern identified the scribe with the physician, geometer and poet Abū l-Ḥakam ʿUbaydallāh ibn al-Muẓaffar ibn ʿAbdallāh al-Bāhilī, born in 486/1093-4 in Yemen and called “al-Maṭribī”, because his family was originally from Murcia (Spain)66. Under the Seljuq Sultan Maḥmūd II (reigned 1118—31), Abū l-Ḥakam was in charge of a travelling hospital of the Seljuq army. He died on Ẓū l-Qaʿda 4, 549 (= January 10, 1155) in Damascus.

The textblock consisted originally of 17 quires each of which was made up of seven bifolios (septenions) or 14 folios. However, the first and the last quires comprise today only 13 folios. In the original binding, the first folio of the first quire, which in all likelihood had been left blank by the scribe, was used as a pastedown leaf glued onto the inner front cover. In the process of rebinding, this folio got lost together with the original bookcover. As for the last folio of

---

64 Badawī, al-Ṭabī‘a, p. 937.10.
66 Stern, Ibn as-Samḥ, p. 34.
the last quire, the case may be analogous, unless it was cut out immediately, because the text came to an end on the 13th folio of this quire. The beginning of a new quire is indicated by quire signatures in Eastern Arabic numerals at the top left-hand corner of the first recto of each quire. There are no catchwords, yet all quires close with a collation note on the lower right margin of the last verso. In most cases we read the formula qūbilat bi-ḥamdi llāh; quires V, XI and XII are signed qūbilat bi-ḥamdi llāhi wa-ʿawnihī; at the end of quires IV and XIV it simply says qūbilat; and in the first quire the scribe noted qūbilat bi-l-umm67. The middle of each septenion (i.e. the double-page which prior to folding the whole quire lies on top of the pile) is additionally marked by a sign (similar to this: ﹲ) at the bottom of the outer right margin of the right-hand page (i.e. the verso of the seventh folio) and at the top left-hand corner of the facing page (i.e. the recto of the eighth folio). Both marking systems date from a period prior to the rebinding, probably from the original process of copying and binding. The numerical quire signatures appear in the manuscript as follows:

- fol. 25a: “3”
- fol. 39a: “4”
- fol. 53a: “5”
- fol. 67a: “6”
- fol. 81a: “7”
- fol. 95a: “8”
- fol. 109a: “9”
- fol. 124a: “10”
- fol. 138a: “11”
- fol. 152a: “12”
- fol. 166a: “13”
- fol. 180a: “14”
- fol. 194a: “15”
- fol. 208a: “16”
- fol. 222a: “17”

Obviously, the quire signature of the second quire (to be expected on fol. 14a) is missing. Furthermore, one would expect the third quire to begin on the 28th folio of the actual binding instead of fol. 25a, the first quire comprising 13 counted folios (+ 1 pastedown leaf) and the second one 14 folios. The reason for the two phenomena is as follows: The quire signature of the second quire is missing, because the first two folios of this quire (originally the two folios following what is today fol. 13b) got lost. These two folios contained the Aristotelian text from Physics I 6, 189b28 (τούτων) up to I 8, 191a29 (ἐξ ὄντος ἢ) and the commentary related to this section68. Due to this loss, the two half sheets, which together with the two lost folios formed one bifolium each (i.e. fols. *27—*28 of the original binding), came off and sat loosely in the codex. Fortunately, they are not lost; rather, the bookbinder who completed the new binding inserted the two sheets of paper in the wrong places. What was originally fol. *27 thus became fol. 38 in the new binding, and what was originally fol. *28 is now fol. 123. However, the bookbinder somehow realised

67 For al-umm = “the exemplar” cf. below, p. XLV–XLVIII.
68 The corresponding Aristotelian text printed in Badawī, al-Ṭabīʿa, p. 58.1—66.10 is Badawī’s own translation.
that the second quire must be incomplete. In order to fill the gap, he took another loose sheet of paper, originally the last folio of the third quire, and put it at the end of the second quire (i.e. as the 24th fol. of the new binding). The fate of the first three quires can be illustrated as follows:

<table>
<thead>
<tr>
<th>Original binding</th>
<th>Today’s binding</th>
</tr>
</thead>
<tbody>
<tr>
<td>Septenion I</td>
<td>fols. 1—13</td>
</tr>
<tr>
<td>fol. *1 (originally pastedown leaf)</td>
<td>lost</td>
</tr>
<tr>
<td>fols. *2—*14</td>
<td>lost</td>
</tr>
<tr>
<td>Septenion II</td>
<td>fols. 14—23</td>
</tr>
<tr>
<td>fols. *15—*16 (= 189b28—191a29 + comm.)</td>
<td>lost</td>
</tr>
<tr>
<td>fols. *17—*26</td>
<td>† fol. 38</td>
</tr>
<tr>
<td>fol. *27</td>
<td>† fol. 123</td>
</tr>
<tr>
<td>fol. *28</td>
<td></td>
</tr>
<tr>
<td>Septenion III</td>
<td>fols. 25—37</td>
</tr>
<tr>
<td>fols. *29—*41</td>
<td>fols. 24</td>
</tr>
<tr>
<td>fol. *42</td>
<td></td>
</tr>
</tbody>
</table>

The following quires IV—IX, covering today fols. 39—122, are in the right order. They are followed, as mentioned above, by what was originally fol. *28, which is why the first folio of the tenth quire forms today fol. 124 (originally *123). Another confusion occurs in the eleventh quire (today fols. 138—151), the correct order of which was as follows: fols. 138—139, 141—150, 140, 151.

To sum up, the original order of the textblock was as follows:
Fols. 1—13; two fols. lost; 14—23; 38; 123; 25—37; 24; 39—122; 124—139; 141—150; 140; 151—233.

While the above-mentioned confusion has been caused by the loss of folios and the misplacement of single sheets in the process of rebinding, we encounter another type of confusion within quire III. Here the disorder concerns sections of text which begin and end in the middle of a page. Apparently, no text got lost, yet the order of the original text must be restored, as was done correctly by Badawī as follows: fol. 25a—26a11 (al-ḥarakatu) ‖ 26b19 (wa-dālika)—27a21 (al-ɡawāb) ‖ 26a12 (‘an li-mā)—26b19 (fi ʃūratihī) ‖ 27a21 (‘alā qaṭiliḥ)‖ etc. It goes without saying that the cause of this disorder must be sought in one of the antecedents of the Leiden manuscript (probably the “Karḫ-copy”, on which see below, section II.2). In this copy, two folios were bound in reversed order, a fact that went unnoticed by the scribe of the Leiden manuscript. This antecedent

---

69 Badawī, al-Ṭabī’a, p. 138—143.
copy must have been much more comprehensive as regards the quantity of folios, as each of the two confused folios covers only slightly more text than one page of the Leiden manuscript.

Ms. Leiden Or. 583 has an inconsistent Western foliation partly written with black ink, partly with blue ink, partly with a pencil. Some folio numbers are struck out and corrected. However, the struck out folio numbers do not correspond to the various cases of disorder discussed above. The foliation is consecutive up to fol. 115. From that point on, the following folios bear no folio number: 116—118, 121—122, 126—129, 131—133, 136—139, 142—144, 146—149, 156—159, 161—163, 168—169, 171, 173, 176—179, 182—183, 187—189, 191—192, 196—199, 201—204, 206—209, 211—219, 221—229, 231—232.

As for the page-layout in our manuscript, we can generally distinguish between the main text and anything else written in the margins or between the lines (for the latter, cf. below, chapter II.3). There are no frames or rule-borders. The main text is written in one column of 22—23 lines. It contains—in accord with the title of the manuscript (“Commentary on the Physics”)—not only the Arabic translation of the Aristotelian text, but also comments on this work introduced by the names of their authors. The commentators most frequently mentioned are John Philoponus, Abū Bišr Mattā ibn Yūnus⁷⁰, Yahyā ibn ʿAdī⁷¹, Abū ʿAlī ibn al-Samḥ⁷², and Abū l-Farağ ibn al-Ṭayyib⁷³. Occasional commentary sections are ascribed to Alexander of Aphrodisias, Themistius, or a certain

---


Abū ‘Amr, probably Abū ‘Amr al-Ṭabarî, a disciple of Mattâ ibn Yûnus, who is known as a commentator on Alexander’s treatise on the differentia specifica74.

The Aristotelian text is divided (as already in the Greek commentary tradition) into eight books. In the Arabic manuscript each book begins on a new page, independently of whether or not the text area on the preceding page has been filled with text. Within each book, the text is further divided into portions of Aristotelian text (lemmata) of varying length (from two lines up to two Bekker pages of the Greek text) followed by a commentary section which, in turn, may be composed of comments by different authors.

For the transition from an Aristotelian lemma to the following comment or from a commentary section to the next Aristotelian lemma different strategies have been pursued:

1. The use of the following textual dividers: ∴, ☉, ○, ♣, or ♣♣75
2. Blank space (2—3 letters) before and/or after the phrase qāla Aristūṭālīs (“Aristotle says”, introducing the next lemma)
3. Blank space (2—3 letters) before and/or after the name of the (first) commentator.
4. The use of bold Nasḫ script for the word qāla (before Aristūṭālīs) with a disproportional elongation of the final horizontal part of the letter lām.


75 The use of three dots arranged in the form of a triangle for the separation of single verses is already attested for manuscripts of the Qurān dating from the Umayyad period; the same holds true for the use of a circle (with or without central dot) for the indication of a certain cluster of verses (mostly six or ten) of the Qurān; cf. François Déroche, La transmission écrite du Coran dans les débuts de l’islam (Texts and Studies on the Qurān, vol. 5), Leiden 2009, p. 122–123; idem, Qur’ans of the Ummayads. A First Overview (Leiden Studies in Islam and Society, vol. 1), Leiden 2014, p. 46, 51, and Figures 11, 14, 32. Both dotted triangles and circles with central dot occur also in the second famous Aristotelian manuscript from the school of Baghdad, Paris BN, ar. 2436 dating from the first third of the 11th c. For dotted triangles as textual dividers in non-Qur’anic manuscripts see also Adam Gacek, Arabic Manuscripts. A Vademecum for Readers (Handbook of Oriental Studies. Section 1, The Near and Middle East, vol. 98), Leiden 2009, p. 269. A slightly different use of three dots in triangular form is found in a manuscript containing another Aristotelian text, now De Caelo, together with Ibn al-Ṭayyib’s commentary. The marker serves here not as divider between Aristotelian lemma and following comment, but indicates the end of each Aristotelian lemma commented upon in a parallel column which is clearly set apart from the main column containing Aristotle’s work alone; cf. Endress, Ibn al-Ṭayyib’s Arabic Version, p. 236—237.
5. The use of red ink. Evidently, this has been inserted after the original process of copying, as the red ink was brushed on the dots of the marker or on the central dot in the marker after the fact. In many cases, the red-ink-hand added a horizontal stroke over the name Aristūṭālis. Less frequently, it used the blank space (cf. nos. 2—3) to add one of the textual dividers (cf. no. 1) in red.

6. All kinds of combinations of the above five methods.

The entire codex, main text as well as notes and glosses, is written in black ink in an old Nash script with sparse (for many parts completely lacking) punctuation and even more sketchy vocalization. On the whole, it is difficult to assess with certainty whether it is written throughout by one and the same hand. Roughly from fols. 95—97 onwards the script is slightly more sloppy, twisted, and less punctuated than before, in other words inclined to what is known as Nash muʿtaḍī. However, I do not venture to suggest a change of hands, for the following reasons: From the subscriptions which follow after each of the eight books of the Physics with the exception of book VII, we learn that the copy was made during a travel from Khuzestan to Baghdad. The colophons mention the following places and dates:

1. Ḥūzistān bi-l-Qaṣr, Ṣafar 1, 524 = January 13, 1130
2. Ǧundīšābūr (Gondēšāpūr), Ṣafar 22, 524 = February 3, 1130
3. ‘Askar Mukram, Rabīʿ al-awwal (no day), 524 = February/March 1130
4. Baġdād, Raḡab 28, 524 = July 6, 1130
5. Baġdād, Šaʿbān 20, 524 = July 28, 1130
6. [No place], Šawwāl (no day), 524 = September 1130
8. Baġdād, Dū l-Qaʿda 1, 524 = October 5, 1130

The change of the script occurs gradually in the transcription of bk. IV, thus coinciding conspicuously with two other facts, first the long pause (3—4 months) between the completion of bk. III and bk. IV, and secondly the transition from copying at stopovers of the journey to copying while being domiciled in Baghdad. Hence, we cannot rule out that this change was caused by external factors such as health impairments (therefore the long pause?), varying writing

---

77 Stern, Ibn as-Samḥ, p. 361, identifies this place with Qaṣr al-Rūnāš in Dezfūl. One might also think of Qalʿat al-Salāsil, the fortress of Tustar (Ṣuṣṭar).
postures, or increasing time pressure during the stay in Baghdad. What speaks in favour of changing modes of handwriting by one and the same hand are the facts that the transition is gradually and, more important, that we also encounter in the first, more neatly written part short sections copied more hastily and in a more sloppy style similar to that of the pages copied in Baghdad (e.g., fol. 14, parts of fols. 47-52) and, conversely, in the later part passages written in a style very close to the first 90 fols. (e.g., fols. 99a, 144b, 162b, 173b). Furthermore, there are no significant disparities in particular letter forms or other characteristics that might be unambiguously attributed to different hands. And finally, the two colophons on fols. 15b and 150a, that is before and after the gradual change of the script, mention one and the same person as the scribe of the manuscript. To sum up, the question of the number of hands is difficult. There are certain indicators pointing to the involvement of more than one hand, while others point to the opposite. In what follows, references to the scribe of our manuscript must be taken as implying this uncertainty.

Closely related to the above problem is the fact that the text of the manuscript has been corrected at a number of places. In some cases, the corrections are written immediately in the text, i.e. without erasure in bold script onto the word or letter to be corrected, but in other cases they are superscript over the relevant word. Deletions are either marked by superscript horizontal strokes or by crossed out words. Corrections are not restricted to the main text, but also found in the marginal scholia, i.e. correcting the text of the marginal note itself. It is not possible to determine whether they originate (partly or altogether) from the hand of the main scribe.

**II.2 The “prehistory” of ms. Leiden Or. 583**

The subscriptions, collation notes and other details of the Leiden manuscript reveal important information about its antecedents and the sources of the compilation composed of Aristotelian text and commentary sections. About the immediate ancestor of the Leiden manuscript we learn from the colophon attached by the scribe, Abū l-Ḥakam al-Maḡribī, to bk. I of the *Physics*:

“I have reproduced all this in the way it is [written] in the manuscript which was copied from ‘the original’ (al-aṣl) in al-Karḫ in Ġumādā al-ahlīr (sic) of the year 470. The only thing I changed is the date [given] in accordance with the present copy. Not a single letter has been added or omitted. Hence, if anybody reads the present [copy], it is as if he were reading that one, I mean

---

‘the exemplar’ (al-umm) which was copied from ‘the author’s original’ (āṣl al-
mu‘allif).”

Hence, ms. Leiden Or. 583 was copied from a manuscript prepared in December
1077 or January 1078 in al-Karḫ. “Al-Karḫ” means “fortress”, “fortified town”,
and as to be expected, there is a number of places called “al-Karḫ” in the eleventh
century, most notably in or near Baṣra, Sāmarrā and Baghdad79. There is good
reason to assume that it is al-Karḫ in Baghdad that Abū l-Ḥakam is referring to
here. We know that “the author’s original” (āṣl al-muʾallif) which served as the
exemplar of what might be called the Karḫ-copy, is nothing other than the
authoritative compilation prepared by the young Abū l-Ḥasan (or: Abū l-
Ḥasan) Muḥammad ibn ‘Alī ibn al-Ṭayyib al-Baṣrī80, who spent his life in
Baghdad (where he died —having achieved some fame as a Muʿtazilite theo-
logian— in October 1044). In all likelihood, the first copy of his autograph was
prepared in the milieu of his disciples. Two of his first generation disciples, Abū
ʿAlī Muḥammad ibn al-Walīd al-Karḫī and Abū l-Qāsim ibn al-Ṭabban, worked
as teachers of logic, medicine and Muʿtazilite theology during the second half of
the 11th century in Baghdad81, and Ibn al-Walīd (d. 478/1086) is even reported
to have spent the last five decades of his life there in the district called “al-
Karḫ”82.

Apart from the date and place of copying we have no further information
about the ancestor of the Leiden manuscript, except that Abū l-Ḥakam checked
his copy once again against his exemplar as becomes clear from collation notes
and corrections referring explicitly to al-umm83. However, at least one marginal

in: Madelung, Wilferd, “Abū l-Ḥusayn al-Baṣrī”, in: Encyclopaedia of Islam, THREE,
<http://dx.doi.org/10.1163/1573-3912_ei3_COM_0011>; Sabine Schmidtke, “The
Muʿtazilite Movement (III): The Scholastic Phase”, in S. Schmidtke (ed.), The Oxford
81 Among their disciples were the physician Ibn Ġazla and the theologian Ibn ‘Aqīl;
cf. Šams al-Dīn al-Ḏahabī, Sīrat dīlām al-nubalāʾ, ed. Šuʿayb al-Arnaʿūṭ, Muḥammad
ibn Raḡāb, K. al-Ṭayl ḍalāl tābaqīt al-ḥanābīla, ed. ‘Abd al-Raḥmān ibn Sulaymān al-
ʿUtaymīn, 5 vols., Mekka 1425/2005, vol. 1, p. 319, 322; William Montgomery Watt,
83 Cf. Badawī, al-Ṭabīʿa, p. 99, 209, further notes referring to al-umm occur in the
margin of fol. 6b, at the bottom of fol. 50a, and in the margin of fols. 64b, 95b, 144b (all
omitted by Badawī).
II.2 The “prehistory” of ms. Leiden Or. 583

note (related to Physics VIII 9, 265b24-28) suggests that Abū l-Ḥakam had access to a further copy of the Baghdad compilation. This note —originating almost certainly from Abū l-Ḥakam’s hand— refers explicitly to another manuscript (nusha uhrā) and reports a phrase of the Aristotelian text omitted by homoiooteleuton within the Arabic transmission (for more details see below, p. L—LI). Unless Abū l-Ḥakam uses nusha uhrā here as a synonym for al-umm, there must have been another copy at his disposal.

That Abū l-Ḥusayn al-Baṣrī is the author/editor of “the original” (al-aṣl), i.e. the one who arranged the compilation made up of lemmata of the Aristotelian text together with comments of the Baghdad Aristotelians, follows from the colophons of bks. I and IV of the Physics:

Fol. 15b (end of bk. I):

[a] “At this place, there is [the following] note in the handwriting of the Ṣayḥ Abū l-Ḥasan [scil. Abū l-Ḥusayn al-Baṣrī], may God have mercy on him: ‘I finished copying and annotating (taʿlīq) it [scil. bk. I] in Ṣafar of the year 395 [= November—December 1004], may God bless the Prophet Muḥammad and his family.’”

“And on the back of the first and the second quires [it reads] in his [scil. Abū l-Ḥusayn al-Baṣrī’s] handwriting, may God have mercy on him:

‘I have collated Yaḥyā ibn ‘Adī’s copy with the text [contained] in this quire. [Yaḥyā ibn ‘Adī] mentioned (dakara) that he had transcribed it [scil. his copy] from the dastūr of Ishāq’s translation and collated it with this three times, and a fourth time with the Syriac. Corrections and annotations (taʿlīq) found in the margins of this quire together with the mark ז are taken from Yaḥyā [ibn ‘Adī’s] copy.’”

[b] “And on the back of the first quire [it reads]:


“And on the back of the second [quire it reads]:

‘The second [quire] of Aristotle’s Physics translated by Ishāq ibn ᪮unayn, including annotations (taʿlīq) from Abū ʿAlī al-Ḥasan ibn

84 On this term see below, p. LXVIII f.
al-Samḥ. Muḥammad ibn ‘Alī al-Baṣrī took down the annotations (‘allaqahū) from him.”

“On the back of the third [quire], he adds:

‘[Annotated] also from the words (kalām) of Mattā [ibn Yūnus].’

“And in the fourth [quire], he adds:

‘[Annotated] also from the words (kalām) of Abū Biṣr Mattā [ibn Yūnus] and the words of Yaḥyā.’

“And in the fifth [quire]:

‘[Annotated] also from the words (kalām) of Yaḥyā and Abū Biṣr Mattā [ibn Yūnus].’”

Evidently, the indented passages in section [a] quote Abū l-Ḥusayn al-Baṣrī speaking in the first person. The one who took down these statements by Abū l-Ḥusayn al-Baṣrī indicating the places of the latter’s notes in his exemplar must be the scribe of the Karḫ-copy (al-umm). Whether the same holds true for the indented passages in section [b] is not quite clear, as they refer to Abū l-Ḥusayn al-Baṣrī in the third person. Possibly these notes were phrased by the scribe of the Karḫ-copy, while the information proper contained in them must trace back to Abū l-Ḥusayn al-Baṣrī himself. The honorific title Ṣayḥ supports my assumption that the Karḫ-copy was prepared by a pupil or follower of Abū l-Ḥusayn al-Baṣrī. Similarly, we read at the end of bk. IV (fol. 113b):

“[Here] ends the annotation (taʿlīq) of the fourth book of the Physics by the Ṣayḥ and learned Imām Abū l-Ḥusayn Muḥammad ibn ‘Alī al-Baṣrī.”

Thus, we learn about Abū l-Ḥusayn al-Baṣrī’s autograph that it was undertaken in the year 1004 and that it was divided into separate quires. The Ṣayḥ himself depicts his work as “copying and annotating” (nash wa-taʿlīq), where it is a matter

---

85 English translations of Arabic, Greek or Latin quotations are mine unless other translators are indicated.

86 Paul Lettinck, Aristotle’s Physics and its Reception in the Arabic World, with an Edition of the Unpublished Parts of Ibn Bāji’a’s Commentary on the Physics (Aristoteles Semitico-Latinus, vol. 7), Leiden 1994, p. 4, interprets the references to Ibn al-Samḥ in this section of the colophon in the sense that Abū l-Ḥusayn al-Baṣrī “had a copy of Ishāq’s translation by Ibn as-Samḥ” at his disposal. In my view, this is by no means deducible from the wording of the colophon. If anything, we may speculate whether this might apply to the first two quires, i.e. up to Physics II 2, 194a12 (see below). However, even for this part “taking down Ibn as-Samḥ’s annotations” does not necessarily presuppose that Abū l-Ḥusayn drew on Ibn as-Samḥ’s own annotated copy (see what follows).
of speculation in which way the two terms relate to his handling of (written and oral?) sources. Interestingly, the annotations drawing on the teaching of Abū Bišr Mattā ibn Yūnus, who had passed away long before Abū l-Ḥusayn al-Baṣrī’s student career in Baghdad, are said to be taken from his words (kalām), whereas the annotations of his teacher Abū ‘Alī ibn al-Samḥ are simply said to be taken “from him” (anhu). As already observed by Giannakis87 this may point to Ibn al-Samḥ as an oral source as opposed to written sources by the former. As regards the written sources by Abū Bišr Mattā ibn Yūnus and Yahyā ibn ‘Adī, we can infer indirectly from Abū l-Ḥusayn al-Baṣrī’s notes that “Yaḥyā ibn ‘Adī’s copy” (henceforth: Y), from which Abū l-Ḥusayn al-Baṣrī transcribed corrections and annotations which he marked with the letter ح, was a copy of Ishāq ibn Ḥunayn’s translation with rather brief remarks and corrections by Yahyā ibn ‘Adī. Since the Leiden manuscript also contains comprehensive doctrinal comments by Yahyā ibn ‘Adī, Abū l-Ḥusayn al-Baṣrī must have had access to other written materials of his. In any case, Y did not serve as Abū l-Ḥusayn al-Baṣrī’s primary source for the transcription of the Aristotelian text. This is clear not only from the fact that Abū l-Ḥusayn mentions explicitly having collated his copy with Y, but even more conclusively from a number of marginal notes which obviously result from this collation and point to variant readings in Y which were nonetheless rejected by Abū l-Ḥusayn al-Baṣrī88.

Fortunately, the scribe of the Karḫ-copy recorded (with three exceptions) the beginning or end of all quires of Abū l-Ḥusayn al-Baṣrī’s autograph89, and even the scribe of the Leiden manuscript took these notes over into his copy. That we are dealing with the quires of Abū l-Ḥusayn al-Baṣrī’s autograph and not, as one might suspect, with those of the Karḫ-copy becomes clear from a quire mark referring explicitly to “the quires of the Šayḥ Abū l-Ḥasan”90, while the other quire marks refer to “the quires in his [scil. Abū l-Ḥusayn al-Baṣrī’s] handwriting”. Due to these notes we know that Abū l-Ḥusayn al-Baṣrī’s autograph was composed of twenty-two quires (each covering about 40—50 pages of Badawī’s edition) corresponding to the following parts of the compilation:

88 Cf. Badawī, al-Ṭabiʿa, p. 185, 301, 7732, 7743, etc.
89 For a list of all notes indicating the end or beginning of the quires cf. Giannakis, Philoponus, p. 243. The missing quire marks concern the points of transition from quire IV to V, IX to X, and XVI to XVII. It is not clear whether they were omitted by the scribe of the Leiden manuscript or were already absent from his exemplar.
### Quire  Aristotelian text + Commentary  Ed. Badawi

<table>
<thead>
<tr>
<th>Quire</th>
<th>Aristotelian text + Commentary</th>
<th>Ed. Badawi</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>I 1, 184a10 — I 4, 188a18 (post comm.)</td>
<td>p. 1.1—42 ult.</td>
</tr>
<tr>
<td>2</td>
<td>I 5, 188a19 — II 2, 194a12 (post comm.)</td>
<td>p. 43.1—93.11</td>
</tr>
<tr>
<td>3</td>
<td>II 2, 194a12 — II 8, 199a13 (post comm.)</td>
<td>p. 93.12—148 ult.</td>
</tr>
<tr>
<td>4</td>
<td>II 8, 199a13 — ? [probably III 2, 202a12]</td>
<td>p. 149.1—? [probably p. 190 ult.]</td>
</tr>
<tr>
<td>6</td>
<td>III 5, 205a7 — III 8, 208a23 (post comm.)</td>
<td>p. 232.19—270.20</td>
</tr>
<tr>
<td>7</td>
<td>IV 1, 208a27 — IV 4, 212a7 (post comm.)</td>
<td>p. 271.1—323 ult.</td>
</tr>
<tr>
<td>8</td>
<td>IV 4, 212a7 — IV 8, 216a11 (intra comm.)</td>
<td>p. 324.1—372.3</td>
</tr>
<tr>
<td>9</td>
<td>IV 8, 216a11 — ? [probably IV 9, 217b28]</td>
<td>p. 372.4—? [probably 403 ult.]</td>
</tr>
<tr>
<td>10</td>
<td>? [probably IV 10, 217b29] — IV 12, 220b32 (intra comm.)</td>
<td>? [probably p. 404.1]—p. 444.8</td>
</tr>
<tr>
<td>11</td>
<td>IV 12, 220b32 — V 1, 224b35 (intra comm.)</td>
<td>p. 444.9—501.20 (om. Bad.)</td>
</tr>
<tr>
<td>12</td>
<td>V 1, 225a1 — V 3, 227a13 (post comm.)</td>
<td>p. 501.21—546.2</td>
</tr>
<tr>
<td>13</td>
<td>V 3, 227a13 — V 6, 230a18 (intra comm.)</td>
<td>p. 546.3—587 ult.</td>
</tr>
<tr>
<td>14</td>
<td>V 6, 230a18 — VI 2, 233a12 (post comm.)</td>
<td>p. 588.1—625 ult.</td>
</tr>
<tr>
<td>15</td>
<td>VI 2, 233a13 — VI 4, 235b5 (post comm.)</td>
<td>p. 626.1—665 ult.</td>
</tr>
<tr>
<td>16</td>
<td>VI 5, 235b6 — ? [probably VI 8, 239b4]</td>
<td>p. 666.3—? [probably 710 ult.]</td>
</tr>
<tr>
<td>18</td>
<td>VII 3, 245b19 — VII 4, 249b19 (intra lemma)</td>
<td>p. 756.12—790.2</td>
</tr>
<tr>
<td>19</td>
<td>VII 4, 249b19 — VIII 2, 253a21 (post comm.)</td>
<td>p. 790.3—822 ult. (om. Bad.)</td>
</tr>
<tr>
<td>20</td>
<td>VIII 3, 253a22 — VIII 5, 258b9 (intra comm.)</td>
<td>p. 823.1—864.10</td>
</tr>
<tr>
<td>21</td>
<td>VIII 6, 258b10 — VIII 8, 264a8 (post lemma)</td>
<td>p. 864.11—904 ult.</td>
</tr>
<tr>
<td>22</td>
<td>VIII 8, 264a8 — end.</td>
<td>p. 905.1—end.</td>
</tr>
</tbody>
</table>

---

91 In this overview “post comm.” indicates that the end of a quire coincides with the end of a commentary section (with the next quire starting with an Aristotelian lemma), “intra comm.” marks a quire ending in the middle of a commentary section (with the next quire resuming the commentary before moving on to the next Aristotelian lemma), “intra lemma” points to a quire ending in the middle of an Aristotelian lemma, “post lemma” to a quire ending after an Aristotelian lemma and before a commentary section. “Om. Bad.” indicates that the quire mark is extant in the manuscript, yet not reproduced in Badawi’s edition. The precise wording of each quire mark is also quoted in Elias Giannakis, “The Structure of Abū l-Husayn al-Ḥusayn’s Copy of Aristotle’s Physics”, *Zeitschrift für Geschichte der Arabisch-Islamischen Wissenschaften* 8 (1993), p. 251—258, esp. 253—254.
Evidently, Abū l-Ḥusayn al-Baṣrī set no great value on arranging his compilation in such a way that each quire started with a new Aristotelian lemma (only ten of the twenty-two quires do so). Fourteen quires either began or ended in the middle of a commentary section; two even began or ended in the middle of an Aristotelian lemma.

It is a matter of speculation why Abū l-Ḥusayn did not choose Y as his main model. The rejected variant readings of Y may indicate that he did not deem it reliable enough, unless the reason is to be sought in the methodology of his compilation, such that he preferred to work with sources comprising both the Aristotelian text and comprehensive commentary sections. Similarly, we do not know whether it was Mattā ibn Yūnus’ or Ibn al-Samḥ’s materials that served as Abū l-Husayn’s basic source for the Aristotelian text or whether in general he had at his disposal a separate copy of the Arabic translation apart from Y and other written materials of the Baghdad Aristotelians.

Various indications suggest that Abū l-Ḥusayn al-Baṣrī worked with different groups of sources or switched his exemplars during the course of his compilation. The most conspicuous shift concerns the transition from Physics VI 5 to VI 6 (in the middle of quire XVI). Up to bk. VI 5 the main bulk of the commentary sections draws (apart from John Philoponus) on materials of Abū Bīr Mattā ibn Yūnus, Yahyā ibn ‘Adī and Abū ‘Alī ibn al-Samḥ, but from bk. VI 6 on Abū l-Ḥusayn al-Baṣrī quotes almost exclusively Abū l-Farağ ‘Abdallāh ibn al-Ṭayyib (d. 435/1043)92. The famous Nestorian physician and philosopher was a pupil of the Baghdad Aristotelians ‘Īsā ibn Zur‘a and al-Ḥasan ibn Suwār ibn al-Ḥammār and, like Ibn al-Samḥ, a teacher of Abū l-Ḥusayn al-Baṣrī93. The reason for this shift is not known. Since the compilation related to Physics VI 6 — VIII 10 draws not only on Ibn al-Ṭayyib’s explanations, but also on earlier materials inaccessible to Abū l-Ḥusayn al-Baṣrī otherwise than by means of written sources, there can be little doubt that he switched between his sources, and this independently of the arrangement of his materials into separate quires94. Yet, the Leiden manuscript provides further signs pointing in this direction:

(i) The manuscript contains altogether 18 marginal and interlinear notes beginning with “Ishāq”95. There can be little doubt that this labelling points to

---

94 That it was indeed Abū l-Ḥusayn al-Baṣrī and not the scribe of the Karḫ-copy who switched exemplars at this place has been shown by Giannakis, The Structure of Abū l-Ḥusayn al-Baṣrī’s Copy, p. 255—257.
95 On which cf. below, ch. III.
Ishâq ibn Hunayn as the author of the following note. Conspicuously, 17 out of the total of 18 notes labelled with “Ishâq” are related to sections pertaining to books V 1 — VI 5 of the Physics. That Ishâq supplied his translation with his own brief annotations only in this section of the Aristotelian text to the exclusion of the other books is highly improbable. The reason for the present phenomenon must rather be sought in the circumstances of the transmission of his translation. That the record of these notes comes to an end with Physics VI 5 can be easily related to the above-mentioned switch from materials derived from Abû Bišr Mattâ ibn Yûnus, Yaḥyâ ibn ‘Adî and Abû ‘Alî ibn al-Samîh to those based mainly on the authority of Abû l-Farağ ibn al-Ṭayyib. Since the notes labelled with “Ishâq” occur almost exclusively in the margins or between the lines of the Aristotelian text, we are quite safe in assuming that Abû l-Ḥusayn al-Baṣrî switched at this point not only his commentary sources, but together with them also his exemplars of Ishâq’s translation of Aristotle’s text. The exemplar he used from bk. VI 6 onwards together with the commentary by his teacher Ibn al-Ṭayyib evidently no longer reproduced Ishâq’s marginal remarks. For an alternative explanation one would have to suppose that the inconsistent occurrence of the notes labelled with “Ishâq” is due to Abû l-Ḥusayn al-Baṣrî’s commentary sources in such a way that he had extracted these notes from separate commentary materials and placed them (always correctly!) in the margin or between the lines of the Aristotelian text. In view of the fact that most of these notes consist of Ishâq ibn Hunayn’s explanation alone, i.e. without repetition of the Aristotelian word or phrase they are related to, this assumption is extremely unlikely. As regards the fact that (with a single exception) no note labelled with “Ishâq” has been recorded in bks. I—IV of the Physics, see what follows.

(ii) Some parts of the compilation are divided and headed by numbered “lectures” (taʿâlîm), others are not. The distribution of these two layouts coincides conspicuously partly with the occurrence of notes labelled with “Ishâq”, partly with the transition from Physics VI 5 to VI 6. The parts divided into “lectures” are bks. III—IV and VI 6 — VIII 10; in other words, the section preserving Ishâq’s notes lies exactly between two parts divided into “lectures”. In

---

96 For a third hypothesis according to which Abû l-Ḥusayn took the notes from Y, see below.
97 The division of chapters 6—10 of bk. VI into “lectures” is not marked by separate headings. However, there can be no doubt that Abû l-Farağ ibn al-Ṭayyib had such a division at least in mind, if not noted down in his exemplar, as he refers to the sections he comments upon as taʿlim (cf. Badawî, al-Ṭabîʿa, p. 686.4, 718 ult., 728.5). On the division of text + commentary into taʿālîm as “a hallmark of his method” cf. Endress, Ibn al-Ṭayyib’s Arabic Version, p. 230.
II.2 The “prehistory” of ms. Leiden Or. 583

all likelihood, the part of the compilation related to *Physics* V 1—VI 5 is based on written materials tracing back to another Baghdad authority than the preceding and following parts.

(iii) Regarding the comments attributed to “Yaḥyā” (Yaḥyā ibn ‘Adī or John Philoponus, occasionally Ibn ‘Adī summarizing Philoponus) and Abū ‘Alī ibn al-Samḥ we observe a significant change of their arrangement in the commentary sections in bks. I—II as opposed to bks. III—VI 5. Ibn al-Samḥ’s comments on bks. I—II are generally rather comprehensive and self-contained discussions of the preceding section of the Aristotelian texts, while this part contains only one comment attributed to “Yaḥyā” (ed. Badawī, p. 148). On the other hand, comments attributed to “Yaḥyā” are ubiquitous in bks. III—VI 598, whereas Ibn al-Samḥ’s comments are here rather short and in many cases refer not to the Aristotelian text, but rather (as a sort of super-commentary) to “Yaḥyā’s” comment quoted previously. With few exceptions (ed. Badawī, p. 428—431, 441) bks. III—VI 5 do not contain any comment by Ibn al-Samḥ that is not accompanied (in most cases preceded) by a comment attributed to “Yaḥyā”.

(iv) The Leiden manuscript contains also minutes taken down during class meetings in Baghdad99. Although Ibn al-Samḥ evidently concerned himself with all parts of the *Physics* from the beginning up to bk. VI 5, it is only in bks. III—VI 5 that we encounter such notes of classroom conversations (probably noted down by Abū l-Ḥusayn al-Baṣrī) of the pattern *qultu li-Abī ‘Alī* (in one case *saʿaltu Ābā ‘Alī*) ... *fa-qāla* ..., i.e. “I said to/asked Abū ‘Alī [ibn al-Samḥ] ... and he replied ...”100.

Taking all this evidence together we may draw the conclusion that Abū l-Ḥusayn al-Baṣrī switched more than once the exemplars (henceforth: θ1, θ2, etc.) for his compilation. (θ1) In all likelihood he used for bks. I—II a compilation that originated from a period prior to Ibn al-Samḥ’s and Ibn al-Ṭayyib’s teaching activities, as this part contains no classroom minutes of questions directed to them, but only those addressed to Abū Bišr Mattā. (θ2) The source he used for bks. III—IV was divided, unlike the preceding part, into lectures. The intense consideration of Yaḥyā ibn ‘Adī’s thoughts on place (*Physics* IV 4) in this part of the compilation (ed. Badawī, p. 316—334101) suggests that its formation is closely

---

101 Cf. Giannakis, *Philoponus*, p. 38, notes 1 and 3; Endress, *The Works of Yaḥyā Ibn ‘Adī*, p. 38. 16 out of the total of 17 comments which can be attributed beyond doubt to Yaḥyā ibn ‘Adī occur in *Physics* bk. IV.
linked to Yaḥyā ibn ʿAdī and his teaching and writings, and that the latter might be responsible for its division into lectures. On the other hand, it is worth noticing that this part contains not a single comment by Yaḥyā ibn ʿAdī related to bk. III, although he evidently dealt with this book in separate treatises. Hence, we must take into consideration the possibility that part θ₂ derives ultimately from two distinct partial compilations θ₂.a (= bk. III) and θ₂.b (= bk. IV), especially as two other phenomena underline the exceptional status of bk. IV: (i) it is only in this book that we encounter marginal notes referring to „some/many manuscripts“ (baʿḍ al-nusah / kaṭīr min al-nusah, cf. below, chapter II.3); (ii) from bk. IV onwards (up to the end of bk. VII) the commentary sections are frequently interspersed with quotations (lemmata) of the Aristotelian text introduced by the formula qāla Arisṭū or qāla Arisṭūṭālīs (cf. below, chapter VII.1). This phenomenon is entirely absent from bks. I-II and VIII and occurs only twice in bk. III. (θ³) Bks. V 1 — VI 5 of Abū l-Ḥusayn al-Baṣrī’s compilation must trace back to yet another source. This becomes clear from (i) the careful reproduction of Ishāq ibn Ḥunayn’s notes in this part alone, (ii) the absence of any division into lectures as provided in the preceding and in the following parts, and (iii) the fact that this part contains significantly more commentary sections introduced by (qāla) Yahyā wa-Abū ʿAlī (“John [Philoponus] and Abū Ḥalī [ibn al-Samḥ] say”) than the preceding part of the compilation. Unlike part θ₂, this section presumably did not derive from Yaḥyā ibn ṣAdī’s materials. As we know from the colophon of bk. I of the Physics (cf. above), Abū l-Ḥusayn al-Baṣrī collated his transcription with Yaḥyā ibn ṣAdī’s copy and noted down “corrections and annotations” (iṣlāḥ wa-taḥqiq) taken from the latter in the margins of his copy with the sign ح. Notes of this type are found in all parts of the compilation and for all books of the Aristotelian text, which means that Abū l-Husayn must have had access to the whole translation as preserved in Y. Hence, if this copy had served as Abū l-Husayn’s source for the transcription of Ishāq ibn Ḥunayn’s own marginal notes, one would expect to encounter notes labelled with “Ishāq” not only in part θ³, but equally distributed over all parts of the compilation. However, parts θ² and θ³ share the peculiarity of incorporated classroom minutes with Abū Ḥalī ibn al-Samḥ as reference person and respondent. (θ⁴) Finally, we have from bk. VI 6 onwards the switch to the commentary by Abū l-Faraḵ ibn al-Ṭayyib described above.

103 Cf. Giannakis, Philoponus, p. 152—178. Parts θ³ and θ⁴ do not contain any comment of this type.
II.2 The “prehistory” of ms. Leiden Or. 583

Thus, the sources of Abū l-Husayn al-Baṣrī’s compilation reflect in a certain way the different stages of the reception and commentation of Aristotle’s *Physics* among the subsequent generations of Baghdad Aristotelians, which he unified and “updated” as matters stood in the year 395/1004. The evidence above suggests that Abū l-Husayn probably relied for the inclusion of the Aristotelian text translated by Ishāq in his compilation not on a separate copy, but rather on these different sources which already included the Aristotelian text together with other materials. That all parts of his compilation reproduce Ishāq ibn Ḥunayn’s translation in an equally meticulous way without imbrications or substantial lacunae is certainly to Abū l-Husayn’s credit. However, he could not do better than his sources. Unfortunately, three of the four sources at his disposal did not reproduce the translator’s own notes and bits of advice for the reader.

II.3 The marginal and interlinear notes and glosses in ms. Leiden Or. 583

The Leiden manuscript contains more than (!) 1,000 marginal and interlinear notes which for the analysis of the composition and history of the codex must be carefully kept apart from the integral commentary sections104. Since most notes seem to be written by the hand of the main copyist, we must take into consideration that many of them derive from an early stage of transmission of Ishāq ibn Ḥunayn’s translation. Roughly 30—40% of the marginal notes are marked with various kinds of signs corresponding to superscript signs in the main text at the place to which the note refers. The marks most frequently used are as follows (roughly in order of frequency)105:

Some of these signes-de-renvoi also occur in the sections of ms. Paris BnF ar. 2346 covering Porphyry’s Isagoge and Aristotle’s *Categories*, *De interpretatione*, *Prior* and *Posterior Analytics* (significantly less frequently in the other texts of this codex). However, in proportion to the great variety of marks the conformity is rather limited. More interestingly, the use of some of these marks is also attested in Greek manuscripts contemporary with the Graeco-Arabic translation movement (such as mss. Vind. gr. 100, Pal. Soc. I 231, Vat. gr. 2066 [all 9th c.],

104 The notes certainly deserve an in-depth study with regard to the prevalent philological ambitions and teaching practices among the Baghdad Aristotelian which goes far beyond the scope of the present edition.

105 Only three of these marks are registered in A. Gacek, *Arabic Manuscripts*, p. 250f.