

Pathology in the *Kitāb al-Malakī* and its two Latin translations: *Theorica*, Books VIII and IX



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1 Outline

Critical edition, translation, and commentary of the pathological section of three texts that are crucial in the history of medieval medicine: the *Kitāb al-Malakī* by al-Mağūsī (second half of the 10th century) and its two Latin translations, the *Pantegni* by Constantine the African (late 11th century) and the *Liber Regalis* by Stephen of Antioch (early 12th century).

Through a thorough examination of the manuscript tradition, trace their history of transmission. In the case of the *Pantegni*, examination of the presence of authorial variants as evidence of different stages in the drafting of the translation.

Analysis of the Greek sources of the *Kitāb*, as well as of its relationship with the earlier Arabic medical production. Assessment of the main features of the methods inspiring the two translations. Study of the lexical and content originality of the two versions in the context of their composition, as well as of their fortune in the Salernitan *Practicae*.

2 Methodology

My project lies at the crossroads of philology and history of medicine. Therefore, I want to establish a critical edition as reliable as possible of both the Arabic and the Latin texts. This is almost unprecedented in the history of Arabic-Latin medical translations, since only very few works are available in critical editions with translation and commentary. The philological work should build the premise for an historical assessment of the studied texts (see section Objectives).

So far, I have collated ca. 15 Arabic and 25 Latin MSS. My first approach to DH had the aim to build a digital critical edition encoded in XML/TEI. After having learned how to use the TEI module for critical editions and established a set of attributes I need to define the types of variants I find in my MSS (mirrored in the customized DTD scheme), I have developed the following pipeline:

1. Transcriptions of each MS
2. Use of Collatex for their collation to obtain a TEI encoded output
3. Checking the output
4. Transformation into a Latex/Reledmac (printable) edition through an XSLT Stylesheet
5. Attention! Encoding of different kinds of readings (authorial variants, scribal corrections)



Figure 1: XML/TEI encoding of the critical edition

A possible, further step would be to obtain a web-page displaying the Arabic and the Latin texts in parallel. The software I have tried so far (EVT) are not flexible enough, so I would be happy with every advice!

I am also using other TEI/XML modules to encode further information linked with the edition:

- module Manuscript Description for a catalogue of all existing manuscripts of the *Kitāb al-Malakī* (ca. 70), the *Pantegni* (ca. 80) and *Liber Regalis* (ca. 15)
- module Glossaries for an Arabic-Latin glossary of the technical lexicon

Both documents are transferred, through an XSLT style-sheet, to a LaTeX output or a CSV file.

3 Research Questions & (Partial) Results

- Identification of the stemmatic relations between the manuscripts for all three textual traditions
- Comprehensive assessment of the history of the tradition of the manuscripts
- Identification and study of the (lack of?) authorial variants in the *Pantegni*
- Identification of the sources consulted by al-Majusi through comparison with a significant number of earlier Arabic medical works, assessment of his adherence to tradition and originality

- Comparison of the Latin translations with earlier medical works circulating in the West: assessment of the lexical and doctrinal innovations introduced

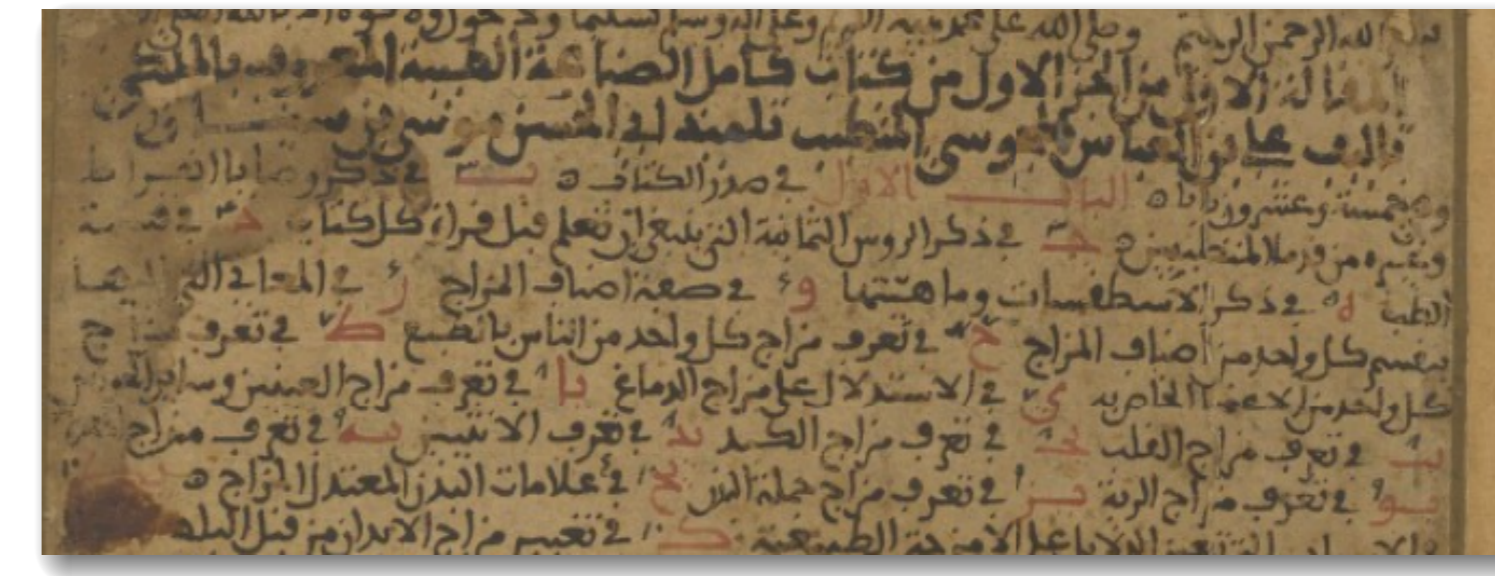


Figure 2: Manuscript of the *Kitāb al-Malakī* (London, BL, Or. 6591)

4 Future perspectives

By attending the Leipzig Summer School (August 2022) and the EnExDi Winter School (January 2023), I have gained some basis knowledge of stylometry, topic modeling and authorship attribution methodologies, but I have no firsthand experience. My aim is to follow the paradigm set by Dag Nikolaus Hasse in two essays concerning the disputed attribution of Arabic-into-Latin translation of scientific works (see bibliography). Moreover, thanks to Hasse's project *Arabic and Latin Corpus* (<https://www.arabic-latin-corpus.philosophie.uni-wuerzburg.de/>), a new library of Arabic-into-Latin translations will be available online in XML/TEI format.

I would like to tackle at least three issues using NLP tools on these texts:

1. How to make lemmatized Arabic and Latin texts available online for everyone to study and consult
2. The *Pantegni* and the *Liber Regalis* are sizable medical encyclopedias composed of various books. Did the translators, Constantine the African and Stephen of Antioch, translate the books according to their order in the encyclopedia, or did they follow a different sequence, as my study of the manuscript tradition suggests? Are lexical or stylistic lexical fluctuations detectable?
3. The authorship of the two above-mentioned translations is certain. Is it possible, on this basis, to use NLP tools to ascribe to both Constantine and Stephen other anonymously transmitted Arabic-into-Latin translations?

These themes will not only be dealt with in my PhD thesis, but I also intend to make them the cornerstone of my future projects concerning Arabic-into-Latin versions of medical works.

My pending tasks!

- Learn Python (and everything new I will discover this week)
- understand how to make the texts I am working on more usable and searchable (beyond XML/TEI)
- establish a line of work that will enable me to carry out larger-scale investigations into the vocabulary and content of these translations: similarities of technical vocabulary / recurrence of common themes in medical works

Bibliography

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(HASSE; BUETTNER, 2016, 2018)



Summer School "Computational Language Technologies for Medievalists"
Graz, 8-12 July 2024