Early Arabic Bookmaking Techniques as Described by al-Rāzī in His Recently Rediscovered
Zīnat al-Katabah

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Abstract
This paper provides an introduction to one of the oldest, and until recently, unknown treatises on the topic of Islamic bookmaking: the Zīnat al-Katabah by the physician and chemist Abū Bakr Muḥammad ibn Zakariyā al-Rāzī (d. 313/925). It demonstrates this text’s relevance to bookmaking literature, contextualizes its title and author, and supplies a detailed description of its contents. The main subjects discussed within al-Rāzī’s work include ink-making techniques, invisible inks, paper soaking, and erasures on parchment, papyrus and paper. This paper also contains an initial comparison between al-Rāzī’s text and other texts, both earlier as well as subsequent, on the same subject. Lastly, an analysis reveals the fact that this text has been cited by authors who failed to provide a reference, then corrects some distorted passages, and disputes various falsely established ideas.

Keywords
Islamic manuscripts, Arabic manuscripts, Islamic codicology, Arabic codicology, Islamic bookmaking, Arabic bookmaking, al-Rāzī, Zīnat al-Katabah, Dār al-Kutub, Zīnat al-Kuttāb, Cairo, National Library and Archives of Egypt

Introduction
When I participated in a manuscript cataloguing project of composite volumes (majāmi’) at The National Library and Archives of Egypt (Dār al-Kutub) a colleague consulted me regarding the suitable subject heading of a manuscript entitled Zīnat al-katabah by Abū Bakr Muḥammad ibn Zakariyā al-Rāzī. It did not take long to realize that this was one of the oldest known treatises on Arabic bookmaking, a real discovery.1 This article constitutes a short notice

1 An earlier version of this article was presented at the conference Codicology and History of the Book in Arabic Script (Madrid, 27-29 May 2010). I hope to complete a critical edition of the text in the near future.
concerning this recently rediscovered manuscript; the title and the author are contextualized, and a detailed description is provided. This paper also provides a comparison involving certain preceding and subsequent texts on the same subject.

**Origins and Significance**

A substantial amount of difficulties related to the identification of authors and titles as well as the establishment of a link between these authors and book titles may be encountered during a survey of traditional literature treating treatises on Arabic bookmaking. Take, for example, the work entitled *al-Abrār fī bary al-qalam wa-sūn al-ahbār*, copies of which are preserved in Tétouan (Titwān), Berlin and possibly elsewhere. The author of this work remains anonymous to this date. Another potential difficulty is a lack of biographical details to compliment an author's name that has been provided, as is the case with Ibn Abī Ḥamīdah (or Ḥumaydah) recognized as the author of *Tadbīr al-safīr fī sinā at al-tasfīr*, a treatise on book binding. Yet other bibliographical obstacles are met when studying the *ʿUmdat al-kuttāb*. There exist numerous copies of this book and researchers have varying opinions concerning its author. Is it al-Muʿizz Ibn Bādis (d. 454/1062), as it is widely assumed, or is it his son Tamīm (d. 501/1108)? Or, was the book written by someone else; neither the father nor the son?

In addition, certain authors of texts on bookmaking are not particularly known specifically for this craft, whereas we may know them as Islamic

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2 Titwān, Public Library, MS 140, as seen in the copy preserved in the Institute of Arabic Manuscripts in Cairo (al-Maʿārif al-ʿĀmmah No. 222).


jurisprudents (fuqahāʾ) and judges (qudābāʾ), as is the case with al-Ishbili and al-Rasmūkī.5

While the above-mentioned works are all recognized to a certain extent, I have found the text presented in this paper to have been entirely unknown. Recent studies on Arabic bookmaking published in both the East and the West do not mention this treatise, not even as a lost work. It is in fact one of the oldest recorded treatises on the topic. It is certainly older than the ‘Umdat al-kuttāb, which is considered to be the oldest treatise of its kind.6 Al-Risālah al-ʿadhrāʾ by Abu al-Yusr Ibrāhīm al-Shaybānī (d. 298/911)7 is contemporary to al-Rāzī, yet it treats technical matters pertaining to bookmaking and literary subjects at the same time. Some passages, that date even earlier, can be found in more general works of literature8 and chemistry.9

The importance of this recently rediscovered text is—apart from its historical value—that it is genuine. What’s more, it was written by a famous physician and chemist, Abū Bakr Muḥammad ibn Zakarīyā al-Rāzī (251-313/865-925).10 This author was recognized for his interest in and work with texts and reproduction. Al-Nadīm (d. 380/990) mentions in his Fihrist that al-Rāzī had the tendency to be constantly at work transcribing; whenever someone visited him, he was seen either working on a draft or on a neat copy.11


6 al-Marrākushī, al-Azhār, pp. 41-42.


The found manuscript makes mention of its own title: *Zīnat al-Katabah* (زينة الكتّاب ‘The ornament of the scribes’), which almost matches the title *Zīnat al-Kuttāb* that is referred to in *ʿUyūn al-anbāʾ*12 and *Hadiyyat al-ʿĀrifīn*13 as a work attributed to al-Rāzī. It may be identical to *Ḥiyal al-Kuttāb* (حیل الكَتّاب = ‘The tricks of the scribes’), which is mentioned by al-Bīrūnī (d. 440/1048) in al-Rāzī’s bio-bibliography.14 The British Library’s manuscript of a separate al-Rāzī bio-bibliography, *Fihrist Kutub Muḥammad b. Zakariyāʾ al-Rāzī al-Mutatḥabbib wa-Aghrādīḥā* (فهرست كتب محمد بن زكريا الرازي المتطبب وأغراضها) only cites the title *Kitāb fī ʿamal al-ḥadīd wa-al-ḥibr* (‘A book on the work with iron and ink’), which may be a different text altogether.15

**Description of the Manuscript**

Al-Rāzī’s treatise on bookmaking appears to have been preserved in just one manuscript, which is kept in the Dār al-Kutub in Cairo. It is part of a composite volume (majmūʿ) with the class-mark MajāmīṬat 331. It is the fifth text of the volume, and consists of eleven pages (ff. 79a-84a). The book measures 18.1cm × 11.5cm (text area 13.3cm × 6.8cm), and there are 20 lines to the page. The title *Zīnat al-Katabah* is given along with the author in the heading at the beginning of the text, in the introduction (f. 79a), and at the colophon (f. 84a). The front-page of the volume includes a table of contents (مَلْفَةً مَعْلُومَةً) in which the title of the text is given as ‘ رسالة في صنعة المداد’ (Risālah fī ṣanʿat al-ḥidād) = ‘A treatise on the making of ink’.

The colophon states that it was copied on Monday 6 Shaʿbān 907 (1502), and it may be noted that the preceeding and subsequent texts within the same volume were written on different dates.

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15 The colophon of MS London, British Library, Or. 5479, shows the name of the scribe, who might also be the author: Alī ibn Yūsuf ibn Marwān.
The copyist of al-Rāzī’s text, although not mentioned, is likely Ṣād al-Dīn al-Shirwānī, the same person who copied other texts in the volume and inscribed an owner’s note on the front-page of the volume.

The text is written in a small nastalīq script, in black ink. Red ink is used for the heading, the folio numbering, and the overlining written over the beginning of each paragraph. There are also catchwords (ta’ṣībah). Some corrections are present in the margins or with collation marks. The paper is a beige colour and has some damp stains. Traces of a primitive conservation treatment are visible, especially on the upper and lower edges.

The volume is bound in brown leather with simple decoration: a single central medallion, stamped in relief on the leather, with plain fillets, and ending with a flap.

Seven statements are given on the front-page of the volume, including four ownership marks (tamalluk), two general statements in Turkish and a third statement that has been rendered illegible, scratched out. The four ownership statements read as follows:

من ممتلكات الفقير صدر الدين الشرواني. وقفل على المستحقين من أولاذي
ما سلوك في سلوك ملكي بالشراء الشرعي من تركه أستاذ بي عليه الوجه وآتا الحقير
ألفقر الموالي محمد نوري شيخ حسن أفندى قيمته 20
تملكة الفقير أحمد بن رشيد عفني عنه
لأحمد أفندى

The manuscript was previously part of the collection belonging to Ahmad Tal‘at Bek (d. 1346/1927). It entered Dār al-Kutub after 1929,16 and was never described in any published catalogue or database.

Topics of the Text

The text begins with the book’s title and the name of the author, and then defines the motive behind its composition, stating for whom it was written: the scribes and their professional needs:

The introduction concludes with a summary of the main topics and content, including ink recipes, invisible inks, erasers for use on paper and parchment, etc.:

The text continues with a series of recipes and techniques. Although there is a lack of clear classification, the beginning of each entry is indicated using red overlining. There are eighteen recipes in total: seven ink recipes for common use and eleven invisible ink recipes. Together, these recipes make up about thirty percent of the entire text. Although coloured inks were used at that time, the included recipes are only for making black ink.19

The ink recipes include various specialized inks. For example, one sort of ink listed can be used immediately after preparation, while another is more suited for longterm storage or for travelers. Other recipes are for invisible inks which can be made to reveal their message using certain techniques. While one such ink reappears only at night, another disappears gradually; there are many interesting tricks.

The materials which are commonly used in ink-making are gallnut, vitriol and gum arabic. The writing tools most often mentioned are the pen, the inkwell and the līqah, which is the pad (usually made of wool) used to absorb ink. No other instruments are described.

The author offers information and methods for removing ink traces from writing surfaces and from clothes, as well as for the reuse of parchment (palimpsest = tīrs or tīls). He also gives detailed instruction for the removal of other stains, caused by fruits and various natural or industrial materials. More than fifty functional recipes for this purpose are provided. Nine out of these are for removing ink from writing surfaces, and eight are for removing ink

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17 MS Cairo, Dār al-Kutub, Majāmī ʿTālʿat 331, f. 79a.
18 MS Cairo, Dār al-Kutub, Majāmī ʿTālʿat 331, f. 79a.
19 Recipes for gold ink and red ink are mentioned in Jābir ibn Ḥayyān, Kitāb al-Khawāṣṣ al-Kabīr, in: Ahmād Yūsuf Ḥassan, ‘Industrial Chemistry’, essays 31, 60.
stains from clothes. These recipes represent approximately forty percent of the text.

As for writing surfaces, parchment (raqq or riqq), papyrus (qirtās), and paper (kāghid or kāghdād) are all mentioned. Their inclusion in this text confirms that all these materials were available at the time when the treatise was composed, and that a special terminology was employed to distinguish between them.20

The author mentions processes for soaking, adhering and thickening paper, which he calls al-kāghid al-muṭabbqaq (‘layered paper’), as well as a recipe for treating papyrus to look aged. This section represents less than ten percent of the text.

Lastly, the manuscript touches on other topics of a more general nature, some of which may or may not be overly relevant to bookmaking. These subjects include hair pigments, the sharpening of knives and swords, etc.21 and represent roughly twenty percent of the text. Al-Rāzī does not deal in the present treatise with other matters related to bookmaking, such as paper-making and bookbinding.

A Comparative Analysis

The comparison of this newly rediscovered text with preceding and subsequent works reveals marked influences. For example, the removal of ink traces had been previously treated by other authors, in particular by al-Kindī (d. 252/867) in his treatise Risālah fi qalʿ al-āthār (‘a treatise on the removal of traces’),22 and by ‘Alī ibn Rabbān al-Ṭabarī (d. 247/861) in his medical handbook Firdaws al-hikmah.23 Furthermore, invisible inks have been mentioned by others, especially in literary works; although mainly in al-Rāzī’s own al-Risālah al-ʿadhrāʾ.24

In addition, there are lost titles which are contemporary to al-Rāzī’s treatise, such as ʿĀmal al-aṣbāb wa-al-midād wa-al-ḥibr (‘The making of dyes and

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20 For more details see: Ḥabīb Zayyāt, Al-Wirāqah wa-sināʿat al-kitābah wa-muʿjam al-sufun; Adam Gacek, ATM and suppl.
21 It should however be noted that knives and swords were used in bookbinding and in preparing pens.
inks’) by al-Kindī’s student Muḥammad ibn Yazīd al-Baghdādī Dūbays (deceased around 311/923).  

Contemporary texts as well as earlier works affected al-Rāzī’s treatise, while he himself influenced later productions, both directly and indirectly. Much of al-Rāzī’s Zīnat al-karabah has been copied by Ibn Bādīs in the ʿUmdat al-kuttāb. His work can also be recognized in other texts, without proper referencing; the source not specified. In fact, few authors are the exception. One is al-Qalalūsī, who often alludes implicitly to al-Rāzī, yet mentions him explicitly approximately four times. Al-Marrākushī, who refers to al-Rāzī only once, is another such author.

An example of one of al-Rāzī’s recipes, slightly altered, can be found in later texts as follows:


A further analysis of bibliographical sources used in later works on bookmaking may help correct textual distortions. Some well-known statements on the history of bookmaking now prove to be incorrect, as we were unaware of

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27 Al-Marrākushī, op. cit., p. 75.  
28 Al-Rāzī, Zīnat al-karabah, MS Cairo, Dār al-Kutub, f. 79b.  
29 Ibn Bādīs, ʿUmdat al-kuttāb, ed. al-Halwajī, p. 100.  
31 Al-Qalalūsī, op. cit., p. 21.  
33 Al-Marrākushī, op. cit., p. 75.  
34 MS Tiṭwān 140, p. 17.
al-Rāzī’s treatise. Ibn Bādis’ work ‘Umdat al-kuttāb is no longer considered to be the oldest treatise concerning bookmaking. Some sources, for example Ibrāhīm Shabbūh, state with certainty that the ink recipes described in works by al-Marrākushī and al-Qalalūsī can be attributed to al-Rāzī among others. The proposed justification being that they are recipes for ink which they themselves used. However, while the afore-mentioned inks do originate from Zīnat al-katabah, the presence of a recipe in his treatise does not guarantee that al-Rāzī used, let alone preferred, a specific ink over all others, nor does the text declare such a statement. Thus, the recently rediscovered treatise by al-Rāzī can be used as a tool for the reassessment of previous studies done on the history of Arabic bookmaking. This ancient text may extend our knowledge of Arabic codicology as well as of bookmaking history, and, finally, it may play a role in the development of new strategies in manuscript conservation.

Bibliography

Anon., Al-Abrār fī bary al-qalam wa-sun al-αλbār. MS Tiwān, No. 140.


MS Cairo, Dār al-Kutub, Majāmiʿ Ẓālʿat 331, f. 79a.