Geoffrey Roper

Britain was a relative late-comer to Arabic typography, as indeed it was in the development of printing generally. Furthermore, its production of Arabic books remained at a lower level than that of its main European rivals, both in quantity and in quality, at least until the nineteenth century.

The first English printer was William Caxton, and the first English printed book to contain Arabic was produced by his assistant and successor, Wynkyn de Worde, of Fleet Street in London. The work in question is Robert Wakefield's Latin treatise on the merits of Arabic, Aramaic and Hebrew, of 1524, entitled *Oratio de laudibus & utilitate trium linguarum Arabicae Chaldaicae & Hebraicae*. Wakefield, who died in 1537, was a graduate of Cambridge, and studied and taught Oriental languages at the Universities of Louvain/Leuven and Tübingen. He was later summoned back to England by Henry VIII to be Professor of Hebrew, first at Cambridge and later at Oxford.[1] His learned disquisition on the Semitic languages obviously needed good, clear Hebrew and Arabic typography, and, equally clearly, the printer was not competent to provide this. Indeed, the author was obliged to omit a further part of the work because of the lack of adequate types.[2] The few Arabic characters used, crudely cut on wood, are misshapen and lack cursiveness. The best specimen is the *bismillāh* incorporated into Wynkyn's elaborate printer's device at the end, in which Caxton's initials form the centrepiece. But in places the Arabic letters used in the text of the book are extremely crude and sometimes barely decipherable.

Arabic printing, in Europe as a whole, was still very much in its infancy at that time: the first book using Arabic type was printed in Italy only ten years earlier.[3] However, whereas, in Italy and other European countries, further experiments were made, and the art of Arabic typography eventually greatly improved, in Britain no such development took place. The only other sixteenth-century English book to contain Arabic, so far as is known, was the English translation of the *Hypnerotomachia Poliphili,* probably by Sir Robert Dallington,[4] printed for S.Waterson in 1592.[5] The two woodcuts containing Arabic words are faithfully copied from the original Italian edition of nearly 100 years earlier;[6] the original errors[7] are reproduced with no corrections or improvements whatsoever.[8]

The next appearance of printed Arabic in England was not until 1614. In that year John Selden, the celebrated jurist, antiquary and orientalist, published his *Titles of Honor,* which was printed by the London printer William Stansby. In it appear a number of Arabic and Turkish words, titles such as *Al-Shaykh, Sharif, Sultān* and *Amir al-Mu'minīn,* apparently engraved on wooden blocks inserted into the lines of type. They are all repeated in an index of 'Words of the Eastern Tongues', at the end. The

lettering is mostly crude and malformed, with a number of incorrect ligatures. A second edition was published in 1631, again printed by William Stansby, with only slight improvements to the Arabic, even though the blocks had to be recut to match the larger type used for the main text. The same printer in the same year also used Arabic woodcut words, vocalized but if anything rather more mis-shapen, in the first edition of Selden's *De successionibus in bona defuncti.*

These wood-blocks, like those used in Austria and Switzerland in the mid-sixteenth century,[9] were an expedient necessitated by the lack of proper movable metal type; for the great progress in Arabic typography made in the late sixteenth and early seventeenth century in Italy, the Netherlands and France had had no counterpart in Britain. Authors and scholars who were less fortunate (or less persistent) than Selden, if they wished to publish books containing Arabic at all, had to adopt even less satisfactory expedients. Sometimes a space might be left for Arabic words to be inserted by hand in all the copies, as in Richard Brett's *Theses,* containing an Arabic poem, published at Oxford in 1597.[10] Sometimes romanization was used, as in the pair of poems, in Arabic and Turkish, included in a collection called *Eidyllia,* to mourn the death of Prince Henry, published at Oxford in 1612,[11] and in William Bedwell's *The Arabian Trudgman* and *Index Assuratarum Muhammedici Alkorani* (1615).[12] Another solution was to use Hebrew characters, for which type was available, and which had a long tradition of use for Arabic, by Jews. This was done in Matthias Pasor's *Oratio pro linguae Arabicae,* Oxford 1627;[13] but his quotations from Muslim authors, such as Abū al-Fidā, look distinctly incongruous in this guise.

For Selden's next work with Arabic quotations, however, Stansby did, for the first time in England, use proper movable metal type. This was the first edition of his famous treatise on the law of the sea, entitled *Mare Clausum* and published in 1635. The typesetting is somewhat disjointed and contains a number of solecisms. The compositor left quite large gaps between letters which should have been joined, as well as using in places the wrong letters, or letters with the wrong dots filed off, or incorrect initial/medial/final forms. These defects are hardly surprising in view of the complete lack of experience of Arabic in the English printing trade.

The provenance of the type used by Stansby is a mystery. It is in the style of the early seventeenth-century Dutch scholar-typographers Raphelengius and Erpenius, but it is of a smaller size than the former's Arabic face, and differs in detail from the latter's, which it nevertheless closely resembles. It may perhaps be a copy of the Erpenius face, probably imported from the Netherlands; but this must remain a matter of conjecture until further research is done and more evidence is found.

The same fount was used the following year in the second and

greatly expanded edition of Selden's *De successionibus in bona defuncti*, 1636. This was printed by Richard Bishop, who had bought Stansby's business in 1635[14], and involved a more extensive use of Arabic, including one whole page (p.155). The composition, although still not without numerous errors and peculiarities, shows some improvement over Stansby's earlier efforts. The same type was used again by Bishop in Selden's *De iure naturali*, 1640 and *Eutychii Aegyptii... Ecclesiae suae origines*, 1642. The latter consisted of the Arabic text, with juxtaposed Latin translation, of a portion of the Church history of Sa'īd b. Baṭrīq. Its Arabic content was thus much more substantial than the previous items, and it can be considered as the first Arabic book to be printed in England.[15]

In the meantime, the lack of facilities for printing Arabic, and indeed other learned languages, which reflected the low state of philological scholarship in Britain at that time, had attracted attention in other quarters. In 1629 William Laud became Chancellor of the University of Oxford, and he was determined to raise the standards of learning there to international levels. He also wanted to tilt the balance away from the London printers, who had enjoyed a near monopoly of substantial book production hitherto, and towards the Universities.[16] As Archbishop of Canterbury from 1633, while remaining Chancellor of Oxford, he was in a powerful position to change matters. He arranged for a charter to be granted, specifically allowing Oxford University to maintain a printing establishment and to print any books not generally prohibited. However, the London Stationers' Company agreed to make an annual payment of £200 to retain its monopoly on bibles and prayer-books, which were the most lucrative publications in those days.[17]

This money enabled the University to expand its planned printing operations in accordance with the 1636 statutes, in which Laud laid the basis for the University Press.[18] Laud was very interested in Arabic studies and had been instrumental in both establishing a Chair of Arabic and acquiring Arabic manuscripts for the Bodleian Library. This being so, he was led to hope that 'having many excellent Manuscripts in your Library, you might in time hereby be encouraged to publish some of them in Print'.[19] For this purpose he set about acquiring the material necessary for printing in Arabic. Whether or not he was aware of the activities of Selden, Stansby and Bishop in this field is not known; but in any case, like them, he eventually turned his attention to the Netherlands, and in 1636 he sent a London bookseller named Samuel Brown to Leiden to buy equipment. In January 1637 Brown purchased from the stock of a recently deceased typefounder of that city, called Arent van Hoogenacker, a set of punches and matrices for oriental characters, including two sorts of Arabic.[20] This typefounder had, it seems, previously supplied types from the same matrices, which were used in some works of Erpenius and others -- for instance, his edition of *Amthāl Luqmān*, published at Amsterdam in 1636.[21]

It is generally reckoned, however, by printing historians, that

Oxford University did not get good value for the 2300 guilders which it paid.[22] First, only one of the two sorts of Arabic was complete and fit for use.[23] Secondly, the punches were not cut sharply enough to allow the type to give a really clean impression.[24] Thirdly, many of the dotted letters were of what is called the 'portmanteau' sort, that is to say, only one matrix was used to cast each group of letters of the same shape, e.g. $b\bar{a}'$, $t\bar{a}'$ and $th\bar{a}'$, with all the possible dots included, and the resulting type had to be filed down to remove the unwanted dots as required[25] -- obviously an unsatisfactory procedure.

The first use of type from these matrices has been dated by most authorities to 1648.[26] There exists, however, a book dated 1639, in which this type is used. It is John Viccars's ten-language commentary on the Psalms, entitled *Decapla in Psalmos*. Viccars dedicated the work to Archbishop Laud, and specifically mentioned, on both title-page and dedication (f.A3r), the new Syriac and Arabic types which had been provided through Laud's endeavour. He also had the complete Syriac and Arabic alphabets printed at the beginning of the work (facing p.1).

However, this book was neither printed nor published in Oxford, but in London, by Robert Young. For despite Laud's intentions, the Oxford University Press had not yet been established, and therefore any learned printing, even using the new types, still had to be done by private commercial printers. Viccars, the erudite author of this commentary, although originally a Cambridge man, had by this time moved to Oxford, and so was evidently able to make use of the new matrices in order to have type cast in London to print this ambitious work, which would previously have been impossible in England. Ironically, the same year in Oxford, Thomas Greaves published a Latin treatise on the importance of Arabic studies, in which the Arabic quotations still had to be written in by hand.[27]

The Civil War in the 1640s had an adverse effect on learned activity in the English universities, which, for the most part, supported the losing side and suffered in consequence. Laud himself was executed in 1645. Very little progress could be made in the scholarly publishing of Arabic texts, or of any learned work, in such conditions.[28] However, from 1648 onwards, the difficulties, both technical and political, were gradually overcome, and a series of increasingly substantial and important contributions was made to the field of Arabic studies by Oxford scholars, using the Leiden types, to which additions and improvements were gradually made.

The credit for this belongs largely to two men: John Greaves and Edward Pococke. Although the latter is more renowned as a scholar, it was the former who took the lead in the matter of Arabic printing -- and his scholarly contribution was also considerable. He had himself visited Leiden and was a friend of the great Dutch Arabist Golius; he had also travelled in Turkey

and Egypt in 1638-39, under the patronage of Laud, and collected manuscripts.[29]   In 1640 he wrote a Persian grammar, but was frustrated to find that he could not get it published for lack of types.[30]   He was, however, a mathematician and astronomer as well as being an orientalist, and in 1643 was appointed Savilian Professor of Astronomy at Oxford.[31] In the ensuing years, despite being ejected from his chair during the Civil War, he completed and prepared for publication a work on astronomy by his predecessor, John Bainbridge, and to it he appended the text of the astronomical observations of the Persian astronomer Ulugh Beg. Before it could be published, however, adequate Arabic type, with the extra Persian characters, had to be provided; for this purpose, in January 1648 he borrowed the University's Arabic matrices and volunteered to have their defects remedied. He took them to London, had new matrices made for the defective letters, and for the Persian ones, and then had a new fount cast (or, probably, more than one). Some of the type was then used by the Oxford printer Henry Hall, in the same year, to print the text of Ulugh Beg. This was the first Arabic printing in Oxford.[32] Greaves also arranged for the London printers Miles and James Flesher to use founts from the same matrices, but with still further extra characters, including a new set of numerals, to produce another Persian astronomical text which he had edited, and also his long-delayed Persian grammar, both of which appeared in 1649. The preface to the grammar laments the fact that it had been delayed for nine years by lack of types.[33]

In 1650 Greaves went on to publish yet another Persian astronomical text, that of Maḥmūd Shāh Khuljī, and in the same year an Arabic geographical text, Abū 'l-Fidā's description of Central Asia. Both these were also printed in London by Flesher, using types from the Oxford matrices.[34]   Greaves died two years later, in 1652.

The fact that Greaves transferred his publishing activities to London after 1648 reflects the demoralized state of Oxford at that time. King Charles I was executed early in 1649, and, as Falconer Madan, the Oxford bibliographer, observed, 'with the King's last days a silence fell on the Oxford press'.[35]   In any case, the University still had no money for publishing, and all Greaves's works were published at his own expense. They did, however, reimburse him for the new Arabic matrices and types which he returned to Oxford -- £1 and £1.15.0 respectively -- although a complaint was made of damage to some of the original matrices.[36]

Meanwhile, the other great seventeenth-century Oxford orientalist, Edward Pococke, had also turned his attention to the press, and in 1648, the same year as Greaves's first published text, he had printed, also by Henry Hall in Oxford, his Latin notes, with extensive Arabic quotations, to a history of the Arabs.[37]   This, however, was intended as an appendix to his edition and facing Latin translation of extracts from the *Lam῾ min akhbār al-῾Arab* of Abū al-Faraj Bar-Hebraeus. The two were

eventually published together in 1650. Although printed by Hall in Oxford, they were published at the expense -- and presumably also at the risk -- of a London bookseller, Humphrey Robinson.[38] The 1650s, the period of the Commonwealth, continued to be one of depression for Oxford scholarship. However, Pococke, despite a continual struggle to keep his position in Oxford and avoid deposition, arrest, or worse, as a Royalist and Episcopal sympathizer,[39] did manage to produce and publish two further Arabic texts during this period. One was, ironically, a further and fuller edition of Eutychius/Sa'id b. Batriq, paid for by John Selden to further his anti-Episcopal notions. It was printed by Henry Hall in 1656, using more type cast in London from the University's matrices.[40] The other was a curiosity entitled *The nature of the drink Kauhi, or Coffe, and the berry of which it is made, described by an Arabian Phisitian.* This was the Arabic text, with English translation, of a work by Da'ūd b. 'Umar al-Basīr, edited from a Bodleian manuscript, and published presumably because of the growth of interest in this new exotic drink, only very recently introduced into England. The Arabic typesetting in this work was rather poor, with intrusive gaps between letters.[41]

The restoration of the monarchy in 1660 was greeted with great jubilation in Oxford, and one of the forms which this took was a volume of joyful verses called *Britannia Rediviva,* to which Pococke himself contributed a poem in Arabic in praise of King Charles II. It was printed by the Oxford printer Lichfield, still using the same basic fount of Leiden types. Pococke, however, had already taken a dislike to some of the characters in the original fount and had had some new punches and matrices made in London. New type was cast, partly from these and partly from the original matrices, by Nicholas Nicholls at the expense of the University in the 1650s, and was lent to the Oxford printers until the Oxford University Press was properly established in the 1660s.[42]

The first University Printer, as such -- appointed by the University with the title of Architypographus -- was, in fact, an Arabic scholar, Samuel Clarke, who, in addition to his duties at the Press, found time to write a treatise in Latin on Arabic prosody, which was published in 1661, with an additional Arabic title and liberal use of Arabic type for quotations.[43] This established his credentials as an orientalist as well as a typographer, but unfortunately he died young -- because, it is said, of prolonged exposure to the cold in the Bodleian Library.[44]

Another Arabic and Persian scholar of the period was Thomas Hyde, who published many poems in those two languages in the regular volumes of verses to celebrate royal occasions[45] -- a characteristic part of the early output of the Oxford University Press, for which contributions in oriental languages were considered an especially prestigious form of erudition. In fact, a smattering of Arabic type in University publications of the period became a kind of academic status symbol: an Arabic marginal note is even to be found in a history of Balliol College, published in 1668.[46]

Ottoman Turkish also entered the Oxford repertoire in 1660, with the publication of a treatise on Christianity translated by William Seaman,[47] the pioneer of Turkish studies in England. He went on to translate and publish the New Testament in 1666[48] and a Turkish grammar in 1670. This latter was printed in Oxford, but published by E.Millington, a London bookseller.[49]   This was the first Turkish grammar to be published in England, and evidently aroused some interest and curiosity among the educated classes of the period. A copy of it is to be found in the library of Samuel Pepys, now in Magdalene College, Cambridge.[50] The publication of Turkish texts was facilitated by an additional forty-one sorts for extra characters or forms of letters, cut and cast by De Walpergen, a type-founder employed by Bishop Fell, who was the great promoter of University printing in Oxford after the Restoration. In addition, these extra types covered some of the deficiencies in the original Arabic (especially relating to the letter *hamza*) and also the requirements of Persian and Malay.[51]   Malay   texts   in   the Arabic (Jawi) script, however, were not printed at Oxford in this period, and the 1671 edition of the New Testament in that language was entirely in roman type.[52]

Returning   to   the   publication   of   Arabic   texts   in seventeenth-century Oxford, we can see that the work of one scholar was clearly pre-eminent, namely Edward Pococke. Some of his achievements up to 1660 have already been mentioned, and it remains to refer briefly to the rest of his career. As well as translations   of   Western   Christian   material   intended   for missionary purposes,[53] he also published a number of literary, historical and philosophical texts, in most cases with Latin translations alongside, including the *Lāmiyyat al-ʿAjam* of Ṭughrā'ī in 1661, the *Tārīkh Mukhtaṣar al-duwal* of Abū 'l-Faraj in 1663, Ibn Ṭufayl in 1671 (in which his son Edward Pococke also had a hand) and some specimen sheets of an unfortunately abortive edition of the poetry of Abū 'l-ʿAlā' al-Maʿarrī in 1673.[54] He died in 1691.[55]   It is these works that stand as his most enduring monument and on which his reputation as the great pioneer of Arabic scholarship in Britain are based. For no Arabic scholar, however learned and however brilliant, could come to occupy such a position in the history of scholarship unless and until his texts could be printed and published in the original   language.

Oxford   was   much   the   most   important   centre   for   Arabic printing and publishing in England in the early years: hence its somewhat extended treatment here.[56] Its Arabic types, as we have seen, derived from the Netherlands, with only minor local modifications. The type-faces were therefore in the Dutch tradition of Raphelengius and Erpenius, which in turn derived ultimately from the fifteenth century Granjon types of the Medici Press in Rome. [57]   These types continued to be used in Oxford well into the eighteenth century and were not without influence on Arabic type styles elsewhere in England.

The only other Arabic printing of any significance in seventeenth-century Britain was done in London. Apart from early works using Dutch or Oxford types, which have already been mentioned, the first Arabic typography there was for the famous London Polyglot Bible of 1653-57, prepared by Brian Walton, and printed by Thomas Roycroft. Arabic scholars from Oxford and Cambridge, including Viccars and Pococke, assisted in the preparation of the Arabic text and in the subsequent proof-reading.[58] A new type was cut and cast for this work, and in appearance it is quite different from the Leiden-Oxford type-face, being generally clearer and more elegant in style.[59] It is, in fact, modelled on that of Savary de Brèves,[60] used in the great Paris Polyglot of 1645, which Walton's version was designed to rival. This is clear from certain features common to both faces, notably the forward hook on the isolated *dāl.* These similarities led Arberry to the mistaken assertion that the Savary fount was actually lent to the London Polyglot printers.[61] Apart from the intrinsic improbability of the Imprimerie Royale lending its founts for the production of a Protestant rival work in Republican England, direct comparison of the two faces reveals numerous points of difference. Roycroft's Arabic types lack the exquisiteness of Savary's; nevertheless they were much superior to anything used in England hitherto.

The Polyglot was followed in 1669 by the *Lexicon Heptaglotton* of Edmund Castell (1606-85), Professor of Arabic at Cambridge. It is a dictionary of six languages, including Arabic, designed as a companion to the Polyglot Bible, on which its author had also worked. It is in the same massive format as the Polyglot and uses the same types. A few other works were also printed with them in the sixteenth-century, including Walton's own *Introductio ad lectionem linguarum orientalium,* London 1655. The subsequent history of the Polyglot Arabic types is outlined below.

In Cambridge, apart from Robert Wakefield, mentioned above, the first Arabic scholar of any consequence was the famous William Bedwell (1561-1632), who taught, among others, both Pococke and Erpenius. Bedwell spent some time in Leiden, where he was a friend and colleague of Raphelengius. There is documentary evidence to show that in 1612 he purchased Raphelengius's Arabic punches and matrices, and it is assumed that he took them back to England.[62] This was twenty-five years before the later Hoogenacker types went to Oxford. However, they were not, as far as can be ascertained, ever used here,[63] and the only subsequent reference to them is to the effect that, when Bedwell died in 1632, he left what was called his 'typographia Arabica' to the University of Cambridge, along with the unpublished manuscript of his 7-volume Arabic lexicon.[64] Nothing, however, was printed in Arabic in Cambridge,[65] as far as can be ascertained, until as late as 1688, and the type used then was definitely not that of Raphelengius. In the meantime

19

Castell, as we have seen, had his Arabic printing done in London, as did his predecessor in the Cambridge Chair, Abraham Wheelock (1593-1653).[66] The solution to this mystery may lie in the fact that another contemporary document mentions that "When Bedwell received the material [from Raphelengius], he found it 'defective' and could not use it".[67]

The 1688 Cambridge publication using Arabic type was a volume of celebratory odes in learned languages called the *Genethliacon,* which included a poem in rather strange Ottoman Turkish by John Luke, Castell's successor as Professor of Arabic. The type used was in many ways similar to that of Oxford, although there are some important differences, notably the much neater terminal and isolated *nūn,* and the curl at each end of the isolated *rā',* which is characteristic of some seventeenth-century Leiden types. It seems likely, although there is no external evidence, that the type was imported from the Netherlands, which was the main source for all kinds of types in use in Cambridge at a time when English type-founding in general was at a low ebb.[68] The *Genethliacon* was printed by John Hayes of Cambridge, who in 1700 and again in 1702 lent his Arabic fount to the University Press for further volumes of celebratory odes;[69] the Arabic texts, moreover, had to be set by Hayes's compositor. This was also true of the Arabic quotations in Simon Ockley's *Introductio ad linguas orientales,* Cambridge 1706. The University Press did not acquire its own Arabic type until the 1730s, when the Society for Promoting Christian Knowledge (SPCK) donated a fount of Caslon's Arabic, which was first used for the Arabic contribution to a volume of odes on the death of Queen Caroline in 1738.[70] In the meantime, after Hayes's death in 1705, Hebrew type had to be used for other Arabic odes in 1727, 1734 and 1736,[71] and Leonard Chappelow (1683-1768), Ockley's successor as Professor of Arabic at Cambridge, had his Arabic grammar of 1730 printed by Charles Ackers in London.[72]

The eighteenth century was not a great period for Arabic studies in Britain, but there were some significant developments in the field of Arabic typography. The Oxford and Polyglot types continued to be used, and the Polyglot matrices passed through the hands of a number of different London foundries, which added to them and supplemented them in various ways. James and Thomas Grover established a type-foundry in 1674, and at some date between then and *ca.* 1700 acquired the matrices for a number of the Polyglot types, including the Great Primer Arabic.[73] These matrices passed subsequently to Richard Nutt (*ca.* 1730), John James (1758) and Joseph & Edmund Fry (1782).[74]

Robert Andrews's foundry (est. 1683) possessed in 1706 two sets of matrices for Arabic, in Great Primer and English sizes, but their provenance is unknown. They were purchased by his apprentice John James in 1733, but only the Great Primer

survived when the James foundry equipment was sold in 1782.[75] The most important new development, however, in the first half of the eighteenth century, came from the famous type-founder William Caslon (1693-1766). His great claim to fame is the immensely popular roman type which he designed in 1724-25, and which has continued in widespread use ever since; but before that, in 1721-22, his first major task as a punch-cutter had been to cut a completely new set of Arabic characters for an edition of the Psalms prepared by the SPCK.[76] This type-face was modelled directly on Granjon's famous Arabic type used in the late sixteenth century by the Medici Oriental Press in Rome, and it was executed under the guidance of Salomon Negri, a Syrian Christian scholar resident in London.[77] The SPCK's printer, Samuel Palmer, originally proposed to use the Polyglot types from the matrices in the Grover foundry, but it was realised at an early stage that their large size (Great Primer) would mean that the Psalter would cost more to produce than the Society was willing or able at that time to spend. Eventually Caslon was called in, and with great skill cut a set of punches in the smaller 'English' size, which aroused great admiration.[78] They became part of the standard range of types on offer from the Caslon foundry for the next century or more,[79] and were supplied to both the Oxford and Cambridge University Presses,[80] as well as to London printers such as William Bowyer.[81]

Joseph Jackson (1733-92) was an apprentice of Caslon, who later acquired a high reputation for cutting exotic and scholarly types. His Arabic, with Persian/Turkish additions, seems to have been cut originally for John Richardson's massive *Dictionary, Persian, Arabic, and English,* and types were supplied from his foundry to the Oxford University Press to produce the first edition of that work in 1777; a fount was subsequently purchased for Oxford in 1782.[82] The type-face had also been used for the same author's *A Grammar of the Arabick Language,* printed by William Richardson under the patronage of the East India Company in 1776, and continued to be favoured for publications produced under their auspices until supplanted by those of William Martin after 1804. The punches and matrices, however, probably perished in the fire which destroyed Jackson's foundry in 1790.[83]

In 1778 the antiquary and typographical enthusiast Edward Rowe Mores gave a summary of all the type-faces in use in Britain up to that date. As far as Arabic and related types were concerned, the position was as follows[84]:-

Size	Foundry possessing matrices and/or punches
Double Pica	James
Great Primer	James
English	Oxford*; James; Caslon; Jackson*
Pica	James (punches only)

* Including Persian, Turkish, and/or Malay letters; Mores lists these separately as 'Persic', 'Turcic' and 'Malaic'.

21

Until the last quarter of the eighteenth century, all Arabic type used in Britain, with the possible exception of Cambridge, which may have imported Dutch types, came from these four foundries or their predecessors. Towards the end of the century, however, others began to enter the field. After James's death in 1772, his material was purchased by Mores himself, and after the latter's death in 1778, his punches and matrices were sold at auction in 1782. The old Polyglot Great Primer Arabic was purchased[85] by Dr Edmund Fry, who already ran, with his father Joseph Fry, a flourishing type-founding business.[86] But Dr Fry, a learned man with a great interest in 'exotic' languages, was not satisfied with just this one antiquated Arabic type-face, and he subsequently cut two more, under the guidance of the orientalist Charles Wilkins: another Great Primer and an English, to rival Caslon's.[87]

Mention has already been made of William Martin, who was the first English craftsman to describe himself specifically as an 'Oriental type founder'.[88] He was the brother of Robert Martin, apprentice and successor to the illustrious eighteenth century type designer John Baskerville. He received his early training at Baskerville's Birmingham foundry and went to London about 1786, where he was engaged as a punch-cutter to prepare new fine types for a lavish edition of Shakespeare, printed by the celebrated William Bulmer between 1791 and 1810. The work of both type-cutter and printer, who continued to work in close and almost exclusive association until the former's death in 1815, set new standards in British typography, and greatly influenced the development of the art in the first half of the nineteenth century.[89]

One of the publishing bodies attracted by the work of Bulmer and Martin was the East India Company, which, from the turn of the century onwards, employed Bulmer as their principal printer in England, until his retirement in 1819.[90] They were major patrons of works in Arabic and Persian, for the use of their employees, and had previously used, or sponsored, a number of printers, including William Richardson, the Oxford University Press, John Nichols, and the 'Arabic and Persian Press' of Samuel Rousseau (1763-1820). These printers had for the most part used Jackson's Arabic types, plus, in the case of the last-named, a *nastaʿlīq* of unknown provenance.[91] In the early 1800s, however, the Company requested a new Arabic fount from Martin, for use by Bulmer; and the orientalist Charles Wilkins prepared a new set of models, based on clear *naskhī* calligraphy, for Martin to cut. Wilkins had previously, as we have seen, helped Edmund Fry to design an Arabic type, and he had himself pioneered Arabic/Persian typography in India, where he had been for long resident in the Company's service.[92]

The first use of the new Wilkins-Martin types, which were cut in two sizes,[93] was in the sixth edition of Sir William Jones's *A Grammar of the Persian Language,* London, 1804.[94] They next appeared in the new edition of Richardson's Dictionary, revised by

Wilkins and published in 1806. It seems, however, that Wilkins had had other requirements, besides those of the East India Company, in mind when he designed this type-face, for he states, in his 'Advertisement' in the Dictionary:

> ...the punches were gratuitously designed by myself, and executed, under my superintendence, by that ingenious mechanic, Mr William Martin, expressly for the purpose of printing a portable edition of the Old Testament in the Arabic language, for which he long since supplied a very large fount of letter; but as the execution of that work, owing to various accidents, particularly the death of that celebrated Arabic scholar and amiable man, the Reverend Mr Carlisle, who had liberally undertaken the labour of being its editor, has been retarded, there had not occurred, till now, a fair opportunity of exhibiting them. They will, I trust, be found not only legible, but if compared with any that have been before made in this country, not inelegant. I chose the best specimens of Arabic writing for my copy, and I preferred the form which is called *naskh,* because, from its superior regularity and plainness over all other hands, it is, in my humble opinion, the only form which should be used for printing,[95] whose object is not only to multiply and disseminate with superior expedition, but to facilitate study by plainness and uniformity of character.[96]

The 'Carlisle' mentioned in the above passage was Joseph Dacre Carlyle (1759–1805), who had been Professor of Arabic at Cambridge, where he had published at the University Press an edition of Ibn Taghrībirdī in 1792 and a much-admired anthology of Arabic verse in 1796.[97] In 1801 he became Vicar of Newcastle upon Tyne, where he died in 1805. His Arabic Bible was eventually seen through the press by Henry Ford, Reader in Arabic at Oxford, and was printed by Sarah Hodgson of Newcastle in 1811, using Martin's type.[98] This publication was a major feat of Arabic typography, on a scale scarcely attempted before in this country, and all the more remarkable for being the product of a provincial printer with very little experience in such work. It was intended primarily for distribution in the Middle East by the Bible Society.

There is no doubt that the new Wilkins-Martin Arabic type-face was a considerable improvement on all its predecessors in this contry, in clarity, legibility and in its fidelity to authentic Arabic *naskhī* hands. Until Martin's death in 1815, the types which he cast were used almost exclusively (apart from Sarah Hodgson's Bible) by William Bulmer, who went on to print with them a number of notable works, both for the East India Company and its scholar-servants (mainly in Persian and Urdu)[99] and for others, mainly in Arabic.[100] What happened to Martin's punches and matrices after his death is by no means clear. One authority states that in 1817 his 'foundry was united with that of the Caslons'.[101] However, that firm's specimen book of 1844

did not include any Arabic types, although it mentioned that Caslon's original Arabic (of 1722) was still available.[102] Reed adds that 'there is, however, reason for supposing that some of the matrices were retained for the use of the Shakespeare Press [i.e. Bulmer's business, continued by W.Nicol], and that others went into the market and were secured by other founders'.[103] One of these founders may have been Richard Watt, who at about that time took over most of the East India Company's printing, as well as other oriental work for the British and Foreign Bible Society. His Arabic type-face was, with some minor modifications, the same as Martin's, and may well have been cast from his matrices.

To conclude this review of Arabic typography in England from its beginnings up to *ca.* 1820, it will be appropriate to make a few general observations about the nature of Arabic publishing in that period. In the first place, it has to be borne in mind that the nature of the output inevitably depended on economic factors. Punch-cutting, type-casting, composing, printing and proof-reading in Arabic characters was bound to be an expensive series of operations, and the market for Arabic books was very small. Therefore, although there were in seventeenth- and eighteenth-century England a number of Arabists and orientalists who were capable of good scholarly work in preparing texts and works of reference, what they could publish depended for the most part on what others were willing to finance. A few, with adequate private fortunes, could themselves pay to have their works printed, and could therefore confine themselves to pure scholarship in print. John Greaves in the seventeenth century, and Sir William Jones in the eighteenth, were among the few examples of this. Others were impoverished by their attempts to give the world the fruits of their learning: two Arabic Professors at Cambridge, Edmund Castell and Simon Ockley, whose works have been mentioned, were both imprisoned for debt.[104] Nor did the Universities, in those days, even after the establishment of the University Presses, have much money to devote to subsidizing learned publications in oriental languages. A few historical and philological texts were issued, notably those produced by Pococke at Oxford, but there were strict limits to this. The University Presses, moreover, tended to be conservative in their publishing policies, and preferred to reprint old successes rather than to embark on new work, especially in the eighteenth century.[105] One of Pococke's texts, part of Abū 'l-Faraj's *History,* was reprinted at Oxford as late as 1806.[106] They also liked to use their Arabic in volumes of celebratory odes, to curry favour with kings and princes, some of which have been mentioned above.

There were two other sources of finance for Arabic publishing, however, which were rather more forthcoming. One, as we have seen, was the East India Company, especially from the mid-eighteenth century onwards. They were involved in both commerce and administration, and they wanted books to help their

servants and officials to learn the languages, and study the cultures and laws, of the areas in which the Company operated, which extended from India westwards into Iran and the Gulf and involved them in extensive dealings with Muslim populations. To this end, they commissioned sometimes quite lavish editions of Arabic, Persian and Urdu literary anthologies, grammars, dictionaries, legal texts, and the like.

The other major sponsor of publishing in Arabic and other Islamic languages was the Church; or rather, various groups of churchmen, who wanted, firstly, aids to the elucidation of Scripture and church history; and secondly, texts for the use of missionaries or local churches in the Middle East and beyond. They were often prepared to pay quite handsomely for books printed in Arabic type, but what they wanted, naturally, were translations and editions of the Bible and other Christian texts. Inevitably, therefore, scholars were drawn into the work of preparing such editions. Most of those mentioned in the foregoing survey, from Pococke onwards, were involved in such work. These, moreover, were almost the only Arabic books which were supplied in quantity from Britain to the Middle East itself, in the period in question. Later, in the nineteenth century, they were to be supplemented by reading-books, and other educational works for use in missionary schools. But what these evangelical bodies did not want were Islamic texts of any sort.

Arabic and orientalist printing and publishing in Britain in the seventeenth and eighteenth centuries were, therefore, distorted by this pattern of sponsorship, away from the paths of pure philological, literary and historical scholarship, which the scholars themselves would doubtless have preferred to follow. This began to change in the nineteenth century, with the expansion of the Universities and other learned bodies, but not until the latter part of that century did the publishing of scholarly or literary texts for their own sake become the norm.

NOTES

1. G.L.Jones, *The Discovery of Hebrew in Tudor England*, Manchester 1983; J.H.L(upton) "Wakefield, Robert" in *Dictionary of National Biography*, Vol.LVIII, London, 1899, pp.446-447; M.Krek, *Typographia Arabica*, Waltham (USA), p.7.
2. T.F.Dibdin, *Typographical Antiquities*, London 1810-19, pp.254-255; J.Johnson, *Typographia*, 2nd ed., London, 1824, I pp.326-327; J.Moran, *Wynkyn de Worde*, 2nd ed. London, 1976, p.23.
3. *Kitāb Ṣalāt al-sawāʿī*, Fano (or Venice), 1514.
4. Introduction by Lucy Gent to the facsimile edition, Delmar, 1973, p.xviii.
5. [F.Colonna,] *Hypnerotomachia. The Strife of Love in a Dreame*, London, 1592.
6. [Idem], *Hypnerotomachia Poliphili*, Venice, 1499.

7. Specified in M.Krek, *Typographia Arabica: The Development of Arabic Printing as Illustrated by Arabic Type Specimens,* Waltham (USA), 1971, p.4.

8. Gent quotes some lines by the seventeenth-century poet Henry Vaughan which may have been influenced by the *Hypnerotomachia:*

   Weake beames, and fires flash'd to my sight,
   Like a young East, or Moone-shine night,
   Which shew'd me in a nook cast by
   A peece of much antiquity,
   With Hyerogliphicks quite dismembred,
   And broken letters scarce remembred.
   I tooke them up, and (much Joy'd,) went about
   T'unite those peeces, hoping to find out
   The mystery; but this neer done,
   That little light I had was gone.

   (H.Vaughan, *Poetry and Selected Prose,* ed. L.C.Martin, London 1963, p.249.)
   This seems an appropriate reflection of Elizabethan Attitudes to Arabic and Arabic script, as manifested in the production of the English *Hypnerotomachia.*

9. In B.Gjorgević, *Haec nova, fert Affrica...,* Vienna 1548 and .T.Bibliander, *De ratione communi omnium linguarum & litterarum,* Zurich, 1548.

10. F.Madan, *Oxford books,* Oxford 1895-1931, I, p.230.

11. Ibid, I, 1612:6; II, 1612: 342.

12. Both published as appendices to his *Mohammedis imposturae,* London: R.Field, 1615.

13. Madan, op.cit., I, 1627:7 (p.134); II, 590 (p.109).

14. W.W.Greg, *A Companion to Arber, being a Calendar of Documents in Edward Arber's Transcript of the Registers of the Company of Stationers of London, 1554-1640,* Oxford, 1967, No.312, p.100.

15. Brief notices of this work and its author appear in J.Fück, *Die arabischen Studien in Europa bis in den Anfang des 20. Jahrhunderts,* Leipzig, 1955, pp.85-86; in C.F.Schnurrer, *Bibliotheca Arabica,* Halle, 1811, No.171, p.145; and in J.Balagna, *L'imprimerie arabe en occident (XVIe, XVIIe et XVIIIe siècles),* Paris, 1984, p.74.

16. S.Morison, *John Fell, the University Press and the 'Fell' types,* Oxford, 1967, p.21.

17. Ibid., p.21; Bodleian Library, *Printing and publishing at Oxford,* Oxford, 1978, p.xi.

18. Morison, op.cit., p.22.

19. H.Carter, Introduction to H.Hart, *Notes on a century of typography at the University Press,* Oxford, 1693-1794, Oxford 1900, repr.1970, p.13*. Laud must have been well aware of how far behind England was in the matter of Arabic typography, for he himself possessed a copy of the Venico/Fano *Kitāb Ṣalāt al-sawā'ī* of 1514: it bears his ownership inscription, dated 1633, and is now in the Bodleian Library, Oxford (Vet.Or.f.Arab.:1).

20. Bodleian Library, op.cit., p.xi; H.G.Carter, *A history of the Oxford University Press*, Vol.I, Oxford 1975, p.33; Morison pp.cit., pp.22 & 233.

21. Hart, op.cit., p.182; Morison, op.cit., p.240.

22. Carter in Hart, op.cit., p.13*; Madan, op.cit., III, p.456; Morison, op.cit., p.22.

23. Carter, op.cit., p.34; idem in Hart, op.cit., p.13*; Morison, op.cit., p.241.

24. Morison, op.cit., p.241.

25. Ibid., p.240.

26. Carter, op.cit., p.38; Hart, op.cit., p.182; Morison, op.cit., p.241. Krek, on the other hand, attributes the first use of these types to Richard Bishop (*Typographia Arabica*, p.20); but Bishop, as we have seen, used Stansby's Arabic types, which are clearly different from the Oxford ones, and in any case were first used at least two years before the Oxford/Leiden transaction of 1637.

27. T.Greaves, *De linguae arabicae utilitate et praestantia oratio*, Oxford 1639.

28. Madan, op.cit., II, p.478.

29. T.Birch (?), Account of his life & writings, in J.Greaves, *Miscellaneous works*, London 1737, I, pp.iii-x.

30. T.Birch (?)in Greaves, op.cit., p.xxxiii; T.B.Reed, *A History of the Old English Letter Foundries*, 2nd ed. revd. by A.F.Johnson, London 1952, p.59.

31. Carter, op.cit., p.38.

32. J.Bainbridge & J.Greaves, *Astronomiae canicularia*, Oxford 1648. Cf.Birch (?) in Greaves, *Miscellaneous works*, 1737, I, p.xxvii; Carter, op.cit., p.38; Hart, op.cit., p.182; Bodleian Library, op.cit., p.26; Madan, op.cit., II, pp.474-475; J.Johnson, *Print and Privilege at Oxford*, London, 1946, p.27; Morison, op.cit., pp.241-242; V.P.Shcheglov, 'Rasprostranenie, "Zidzh Ulugbek" evropeĭskoĭ nechami' in *Iz istorii nauki épokhi Ulugbeka*, Tashkent 1979, pp.143-151.

33. *Anonymus Persa de siglis astronomicis*, London 1648; J.Greaves, *Elementa linguae persicae*, London 1649 [sc.1648]. Birch (?) in Greaves, *Miscellaneous works*, 1737, p.xxxiii: 'In 1649 (n.: or rather 1648, the Printers usually anticipating part of the following year), he had published at London in 4to, *Elementa Linguae Persicae...* ...he propos'd to have published it nine years before, but wanting type... ...he had been obliged to suspend the edition". Cf.Carter, op.cit., p.39.

34. [Khulji, Maḥmūd Shāh.] *Astronomica quaedam ex traditione Shah Cholgii Persae..... Studia et opera Johannia Gravii*, London 1650 (Birch erroneously dates it 1652); [Abū 'l-Fidā.] *Chorasmiae et Mawaralnahrae, hoc est regionum extra fluvium Oxum, descriptio, ex tabulis Abulfedae*, London 1650. Cf.Schnurrer, op.cit., p.122 (item 159).

35. Madan, op.cit., II, p.478.

36. Madan, op.cit., III, p.466; Morison, op.cit., p.241.

37. E.Pocock, *Notae in quibus aliquam-multa quae ad historiam Orientalium apprime illustrandum faciunt*, Oxford, 1648.

38. 'Impensis Humph.Robinson in Cemetario Paulino'. Pococke's voluminous annotations 'established his reputation as the foremost Arabic scholar in Western Europe' (Carter, op.cit., p.38). Cf.Bodleian Library, op.cit., p.53; Madan, op.cit., II, pp.475 (item 2007) & 488 (item 2034); Morison, op.cit., pp.26 &242; Schnurrer, op.cit., pp.139-140 (item 168); L.Twells, *The lives of Dr Edward Pocock, the celebrated Orientalist, of Dr Z.Pearce*, etc., London, 1816, p.141.

39. Twells, op.cit., *passim*.

40. Eutychius, *Contextio Gemmarum*/Sa'id b. Batrīq, *Naẓm al-jawhar*. Interprete Edwardo Pocockio, Oxford 1656. Cf. Carter, op.cit., pp.40-41; Madan, op.cit., III, pp.51-52 (item 2297); Schnurrer, op.cit., p.145 (item 172).

41. Published in 1659. This is, apparently, the earliest published treatise on coffee. Madan, op.cit., III, p.99 (item 2438).

42. Carter, op.cit., p.44; Hart,op.cit., p.182; Madan, op.cit., III, pp.xxviii-xxix; Morison, op.cit., pp.241-242; Twells, op.cit., p.229.

43. S.Clarke, *Scientia metrica & rhythmica, seu tractatus de prosodia Arabica: 'Ilm al-'arūd wa 'l- qawāfī*, Oxford,1661. Madan, op.cit., III, p.147 (item 2549); Schnurrer, op.cit., p.188. According to Madan, the work 'occurs separately, but is properly part of Pococke's Tograi (see below)... and is covered by the title-page of the latter'.

44. N.Barker, *The Oxford University Press and the Spread of Learning*, Oxford 1978, p.14; Carter, op.cit., p.42; Morison, op.cit., p.28.

45. E.g. *Domiduca Oxoniensis*, Oxford 1662; *Epicedia Universitatis Oxoniensis*, Oxford, 1669; ditto, 1670; ditto, 1671. Cf.Madan, op.cit., III, pp.156-158, 239-242, 249-250 (items 2578, 2844, 2845 & 2869).

46. H.Savage, *Balliofergus*, Oxford, 1668, p.31. Cf.Madan, opcit., III, p.222 (item 2794).

47. Madan, op.cit., III, p.122 (item 2480).

48. *Domini Nostri Jesu Christi Testamentum Novum, Turcice redditum: Incil-i Mukaddes*, Oxford, 1666. Cf. T.H.Darlow & H.F.Moule, *Historical Catalogue of the Printed Editions of Holy Scripture in the Library of the British and Foreign Bible Society*, London 1911, Vol.II, item 9435; Madan, op.cit., III, pp.204-205 (item 2727).

49. W.Seaman, *Grammatica linguae Turcicae*, Oxford, 1670. It was priced 3s.6d. Cf.Madan, op.cit., III, p.247 (item 2863).

50. N.A.Smith, *Catalogue of the Pepys Library at Magdalene College, Cambridge*. Volume I: *Printed books*, Cambridge, 1978, p.159.

51. Hart, op.cit., p.183, suggests that these Persian, Turkish and Malay types, of whose quality he is highly critical, may have been made for Hyde in London before Fell set up

his Oxford type-foundry. Cf. *A Specimen of Several Sorts of Letters Given to the University by Dr John Fell,* Oxford 1693, which includes 'A Supplement to the Arabick Alphabet, to print any thing in the Persian, Turkish, and Malayan languages'; Morison, op.cit., pp.72 & 247.

52. Hart, op.cit., p.183; Madan, op.cit., III, p.355.
53. E.g. H.Grotius, *De veritate religionis Christianae: Kitāb fī ṣiḥḥat al-sharī'a al-Masīhīya,* tr. E.Pococke, Oxford 1660; *Catechismus Ecclesiae Anglicanae, arabice,* [Oxford 1671]; *Liturgiae Ecclesiae Anglicanae... ...in linguam Arabicam traductae,* opera Eduardi Pocock, Oxford 1674. Cf.Madan, op.cit., pp.127, 254 & 293-4 (items 2498, 2885 & 3000); Schnurrer, op.cit., pp.250 & 254 (items 254, 258 & 259).
54. Madan, op.cit., III, p.276 (item 2959): 'five copies are in the Bodleian Library, the only copies known.'.
55. Twells, op.cit., p.342.
56. Seventeenth-century Oxford typography is also exceptionally well documented: the exhaustive bibliography of Falconer Madan is especially useful, as are the works of Carter, Hart and Morison to which frequent reference has been made.
57. A.J.Arberry, *Arabic Printing Types* [no imprint], p.16.
58. D.S.Berkowitz, *In Remembrance of Creation,* Waltham (USA), 1968, p.105; Darlow & Moule, op.cit., pp.23-26 (item 1446); E.R.Mores, *A Dissertation upon English Typographical Founders and Founderies (1778),* ed. H.Carter & C.Ricks, Oxford 1961, pp.11-12; T.B.Reed, op.cit., pp.158ff.; H.J.Todd, *Memoirs of the Life and Writings of the Rt.Rev. Brian Walton,* London, 1821, *passim.*
59. Krek, op.cit., p.20.
60. French diplomat, orientalist and typographer, d.1627. His celebrated Arabic fount was acquired by the Imprimerie Royale.
61. Arberry, op.cit., p.18.
62. E.Braches, 'Raphelengius's Naschi and Maghribi' in *Quaerendo,* 5, iii (1975), p.243; M.Parker, K.Melis & H.D.L.Vervliet, 'Typographia Plantiniana, II: Early Inventories of Punches, Matrices, and Moulds in the Plantin-Moretus Archives' in *De Gulden Passer,* 38 (1960), p.108; Reed, op.cit., p.59; L.Voet, *The Golden Compasses,* Amsterdam, 1972, II, p.77.
63. As mentioned above, Bedwell's Arabic-English glossary & list of *Qur'ān* suras, published in London in 1615, used romanization. Some time before 1616, Launcelot Andrewes, then Bishop of Ely, had unsuccessfully attempted to obtain Le Bé's Arabic types (Paris, 1599-1610) for Bedwell's use in Cambridge; this is revealed in a letter of Isaac Casaubon, quoted in Schnurrer, op.cit., pp.509-510. Cf.Arberry, op.cit., p.19.
64. Letter from J.Greaves, quoted in Reed, op.cit., p.59; G.Richter, *Epistolae selectiores,* Nuremberg, 1662, p.485.
65. Archbishop Usher had tried to obtain Arabic matrices from Leiden, for use by the University of Cambridge, as early as 1626, but was unsuccessful. S.C.Roberts, *A History of the*

Cambridge University Press, Cambridge, 1921, pp.54-55.

66. *Quatuor Evangeliorum... ...versio Persica, per Abraham Whelocum,* London: Typis Jacobi Flesheri, 1657. The Oxford, not the Polyglot types were used.

67. Parker, Melis & Vervliet, op.cit., p.108.

68. H.Carter & C.Ricks, Foreword to E.R.Mores, op.cit., pp.lxxvii-lxxviii; Reed, op.cit., p.184; S.C.Roberts, *The Evolution of Cambridge Publishing,* Cambridge, 1956, pp.4ff.

69. *Threnodia Academiae Cantabrigiensis,* Cambridge 1700; *Academiae Cantabrigiensis Carmina,* Cambridge, 1702.

70. *Pietas Academiae Cantabrigiensis in funere serenissimae Principis Wilhelminae Carolinae,* Cambridge, 1738. Cf. D.F.McKenzie, *The Cambridge University Press 1696-1712,* Cambridge 1966, p.37; H.Forster, 'The Rise and Fall of the Cambridge Muses (1603-1763)' in *Transactions of the Cambridge Bibliographical Society,* 8, ii (1982), p.148.

71. Forster, op.cit., pp.148 & 160-161.

72. L.Chappelow, *Elementa.linguae Arabicae,* London 1730.

73. Mores, op.cit., pp.12 & 45; Reed, op.cit., p.190; M.Treadwell, "The Grover typefoundry" in *Journal of the Printing Historical Society,* 15 (1980-81), p.51, citing a 1725 MS inventory.

74. Mores, op.cit., p.46; Reed, op.cit., pp.200, 214, 223,301-302 & 309, n.2. See further below.

75. Mores, op.cit., p.47; Reed, op.cit., pp.187-189, 213 & 220.

76. *Kitāb Zabūr Dā'ūd,* [London] 1725.

77. J.Ball, *William Caslon 1693-1766,* Kineton, 1973, pp.190-193.

78. Ibid., pp.313ff.

79. Cf. their type specimen sheets and books of 1734, 1742, 1764, 1844, etc.

80. Carter, op.cit., p.282; McKenzie, op.cit., p.37.

81. Used by him for [Rāzī, Abū Bakr b. Zakariyā'.] *Rhazes de variolis et morbillis, arabice et latine,* London, 1766.

82. Hart, op.cit., p.188.

83. Reed, op.cit., p.318.

84. Mores, op.cit., p.84.

85. What became of James's other three Arabics is not known.

86. Reed, op.cit., pp.223 & 301-2.

87. Reed, op.cit., p.309. These and many other exotic types are exhibited in Fry's *Pantographia, containing Accurate Copies of all the Known Alphabets in the World,* London 1799, which also contains engraved specimens of Kufic, Maghribī and *nasta'līq.*

88. W.Jones, *A Grammar of the Persian Language,* 6th ed., London, 1804, title-page: 'Printed...from the types of W.Martin, Oriental type founder'.

89. Reed, op.cit., pp.324-325; H.V.Marrot, *William Bulmer -- Thomas Bentley,* London 1930; P.G.C.Isaac, *William Bulmer, 1757-1830: 'Fine' Printer,* Sandars Lectures, University of Cambridge, May, 1984 (unpublished typescript).

90. Reed, op.cit., p.326; Isaac, op.cit., pp.28-29.

91. First used, apparently, in Rousseau's own anthology entitled *The Flowers of Persian Literature,* London, 1801. The editor explains in the preface (p.v.) that he 'has been for some years employed as a teacher of the Persian, as well as a printer, of that and other Oriental languages, and the greatest difficulty he has met with has been a want of proper books for the instruction of pupils'.

92. C.A.Storey, 'The beginnings of Persian printing in India in *Oriental Studies in Honour of Cursetji Erachji Pavry,* London 1933, pp.457-459; G.Shaw, *Printing in Calcutta to 1800,* London, 1981, pp.69-71.

93. The larger was apparently Double Pica and the smaller English, according to my measurements, based on the guidelines in P.Gaskell, *A New Introduction to Bibliography,* Oxford, 1972, repr. 1979, pp.13-15. Unfortunately no specimen book of Martin's types exists (cf. Reed, op.cit., p.316).

94. 'Great improvement has been made in the printing and paper; and it comes forth with an elegant new type, cut after the best examples of writing in the *Niskhi* character, and of which no specimen has before been exhibited' (Advertisement by the Editor [Charles Wilkins], p.xxi).

95. Wilkins was being somewhat disingenuous here: *naskh* was, of course, the only form which had been used for printing in England hitherto, apart from Rousseau's work in *nasta‘līq* since 1801, mentioned above.

96. J.Richardson, *A Dictionary, Persian, Arabic, and English,* new edition 'with numerous additions and improvements' by Charles Wilkins, London, 1806, p.XCV. Wilkins goes on to state his conclusion, based on his own previous experience [in India] that *nasta‘līq* cannot be successfully typeset, and can only be printed by 'almost a logographic process': in this, he showed remarkable foresight, for nearly all *nasta‘līq* printing subsequently was to be by lithography (invented by Senefelder only seven years previously and not yet widely known), which was just such a 'logographic process'.

97. *Maured allatafet Jemaleddini filii Togri-Bardii, edidit, latine vertit, notisque illustravit J.D.Carlyle,* Cambridge 1972; J.D.Carlyle, *Specimens of Arabian poetry,* Cambridge, 1796.

98. *The Holy Bible, containing the Old and New Testaments, in the Arabic language; Al-Kutub al-Muqaddasa wa-hiya Kutub al-‘Ahd al-‘Atīq wa 'l-‘Ahd al-Jadīd,* Newcastle upon Tyne, 1811. Cf.Darlow & Moule, op.cit., II, item 1663.

99. E.g. *Pendeh-i-Attar: The Counsels of Attar,* ed. J.H.Hindley, 1809; Jāmī, *Niṣāb-i Tajnīs al-Lughāt: Resemblances linear and verbal,* ed. & tr. F.Gladwin, 2nd ed. 1811.

100. E.g. Ibn Waḥshiyya's *Ancient Alphabets and Hieroglyphic Characters Explained, (Shawq al-mustaḥām fī maʿrifat rumūz al-aqlām)*, ed. & tr. J.Hammer, 1806 -- a typographical *tour de force*, the Arabic text being interspersed with numerous specially cut characters reproduced from the mysterious alphabets and pseudo-alphabets in the original MS; the second edition of Carlyle's *Specimens of Arabian poetry*, 1810; J.C.Murphy, *The History of the Mahometan Empire in Spain*, 1816, which has an Appendix of Arabic texts of inscriptions in the Alhambra. Cf. P.C.G.Isaac, *A Second Checklist of Books, Pamphlets & Periodicals printed by William Bulmer*, Wylam 1973.

101. J.Nichols, *Illustrations of the Literary History of the Eighteenth Century*, London, 1817-58, Vol.VIII, p.485, quoted in Reed, op.cit., p.327.

102. Henry Caslon, *Specimen of Printing Types*, London, (1844). The 1821, 1825 and 1829 specimen books also lack Arabic. Cf. W.T.Berry & A.R.Johnson, *Catalogue of Specimens of Printing Types by English and Scottish Printers and Founders 1665-1830*, London, 1934, pp.23-24.

103. Reed, op.cit., p.327.

104. A.J.Arberry, *The Cambridge School of Arabic*, Cambridge, 1948, pp.11 & 15; idem, *Oriental Essays*, pp.11 & 42.

105. They did, however, devote much attention to correcting the profuse typographical errors of the earlier editions. When Thomas Hunt prepared a revised edition in 1740 of Pococke's *A Commentary on the Prophecy of Hosea*, Oxford, 1635, with its copious Arabic quotations, he claimed to have corrected over 2000 errors in the original edition. Bodleian Library, op.cit., p.42 (item 86).

106. *Specimen historiae Arabum; auctore Edvardo Pocockio... ...edidit Josephus White*, Oxford 1806. Cf.Barker, op.cit., p.40.