Is the Organization for Standardization (ISO)'s Arabic Transliteration Scheme an Improvement over Library of Congress'?

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T he use of library transliteration of foreign languages has always generated controversy and debate. For those opposed to transliteration, especially in an age where computerization has introduced Unicode in which native scripts can be displayed, entered, and searched in library catalogues, the practice is wholly unsatisfactory, serves no-one, and should probably be abolished. The critics point out that, especially for native users of languages with non-Roman scripts, searching for data in transliterated script is time-consuming and frustrating. Bilingual and multi-lingual catalogues, they note, have rendered transliteration unnecessary and obsolete. Why would a native speaker even bother searching for an item using transliteration, when searching using the original script is so much more reliable and efficient? For opponents of transliteration, transliteration is unreliable and serves neither librarians, bibliographers nor users of bibliographic systems. The time spent transliterating text in a record, when it could simply be entered in its native script, is wasteful and unproductive.

Those who support library transliteration, even with the adoption of Unicode, however, argue that there are many reasons to continue the practice, inefficient as it is. Most of the arguments in favor of transliteration assert that while it is useless for native speakers to use transliteration, many other people need to search for records in any particular language employing non-Roman script. For example, transliteration is the only realistic way for Western-speaking librarians to maintain control over non-Roman materials. Moreover, at least a single transliteration scheme allows some degree of uniformity, even it requires learning that particular scheme. If there were no single transliteration scheme, there would be a large number of mutually inconsistent conversion systems. Many library workers, including those in cataloguing, serials, acquisitions, and circulation need to handle items in non-Roman script, even if they are unfamiliar with that script and language. How, for example, would a cataloguer with of item in French translated from the Arabic know where to shelf-list the item beside the Arabic original were it not

for some kind of transliteration scheme? Moreover, while the library itself might have keyboards that allow searching in the original script, are we sure that remote users will have this capacity? And what about the user who has learned the language, but has never learned to type in the original script? For that matter, can we really be certain that native users are comfortable with using a "map" of an Arabic keyboard (for surely the Arabic letters will not be found on most North American library keyboards)? Furthermore, what about the researchers who do not know the original language but still need the original title for scholarly works?

For better or worse, it is my opinion that despite its drawbacks, transliteration is a tool that must remain despite the introduction of Unicode for original scripts. Very few libraries with Arabic collections outside the Middle East, for example, have abandoned the use of transliteration. And for North American libraries, the scheme which holds the monopoly on Arabic (and let's face it, other language) transliteration is undoubtedly the Library of Congress/American Library Association transliteration scheme. Moreover, the major bibliographic utilities RLIN and OCLC continue to require and use LC transliteration (again, not just for Arabic, but for dozens of major languages), and no major changes to this situation can be foreseen in the near future.

In spite of this, the fact remains that LC is only one of a plethora of Arabic transliteration (some say "romanization" is a better term as Arabic script does not consistently represent short vowels) schemes. Indeed, only in North American libraries is there a large measure of uniformity, and this is because most academic libraries have adopted the LC scheme. In Europe, only Germany can claim a fair degree of unanimity. In fact, many different transliteration schemes have been developed for rendering Arabic into Roman script including the International Standard Organization (ISO), Brocklemann, the *Encyclopædia of Islam*, *IJMES*, and the Vatican Library. In addition, more continue to be suggested, such as one devised by Roderic Vassie, who has advanced emulating the more sympathetic and economical, un-vocalized, transliteration schemes of Judeo-Arabic and Karshuni texts (Vassie, 1998, p. 20).

The only serious competitor to the LC scheme, however, is the ISO scheme (first edition published in 1984) which has been adopted by the United Kingdom's branch of the Middle East Libraries Committee and by other European library committees. As the foreword to the ISO

scheme indicates, the ISO (International Organization for Standardization) is a worldwide federation of national standards bodies. The work of preparing international standards is carried out through ISO technical committees. The criteria for adoption of a particular standard are strict. As ISO notes, "draft international standards adopted by the technical committees are circulated to the member bodies for approval before their accepted as International Standards by the ISO Council. They are approved in accordance with ISO procedures requiring at least 75% approval by the member bodies voting" (International Organization for Standardization, foreword).

As a scheme which was devised on the eve of library catalogue automation, one might hope that the ISO scheme would have paid attention to the particular problems associated with automation. After all, at the time the LC scheme was devised, the main interest (outside the Arab world) in Arabic texts came from Oriental scholars whose first language was not Arabic. Might we assume that, given its chance to review the problems with other transliteration schemes, ISO is an improvement over LC?

On February 16, 2005, I presented a paper at the symposium "Arabic Script Web-Based Catalogs in the 21st century" entitled "Library of Congress Transliteration: a wall still to overcome" in which I identified five major areas in which LC transliteration created problems for successful retrieval. I thought that as a follow-up, it would be interesting to compare the ISO scheme (a scheme created in the modern era) to the LC scheme in order to discover whether ISO has in fact remedied the major problems I identified with LC.

ISO vs. LC

(1) The first major problem I identified with the standardized LC transliteration employed in most major libraries of Canada and the United States is that the LC transliteration does not match the actual sounds represented by the letters of the alphabet, in either classical Arabic or what has come to be known as Modern Standard Arabic. The blame for this cannot really be placed at the door of the Library of Congress, because their transliteration scheme largely follows that employed by the best-known Arabic-English dictionary the Hans Wehr *Dictionary of Modern Written Arabic*, edited by J.M. Cowan, and also standard works such as David Cowan's *Modern Literary Arabic*. (The Library of Congress also suggests alternative dictionaries for words not found in Hans Wehr (Tseng, p. 11)).

The letters of the alphabet which can cause transliteration confusion are those which represent the pairs of so-called "emphatic" (or "velarized") consonants and their ordinary correspondents, the "soft" consonants. These consonants might sound similar to non-native ears, but the "emphatic" ones differ distinctively in that they are "velarized". Two letters which seem to cause the most confusion are *Dhāl* or ذ (transliterated in LC as *dh*, as in the word *dhawq* / ذوق, "taste", and another letter representing an "emphatic" consonant, *Ẓāʾ* or ظ (transliterated in LC as *z* with a dot underneath), as in the word *ẓuhr* / ظهر, "afternoon." Depending on the dialect of Arabic, both letters more or less approximate the "th" sound in the English words "thus" and "this." Both consonants can cause major transliteration problems, and both might be better transliterated as "th", but this is impossible because the "th" has been reserved for the letter *Thāʾ* / ث, which sounds similar to the "th" sound found in the English word "thick." All the same, it really is difficult to imagine someone unacquainted with the LC Arabic transliteration scheme searching for words containing *dh*, especially as this letter combination in English could be associated with the Arabic loan word "dhow" (an Arab sailing vessel). Most English-speaking patrons would likely associate the *dh* with a simple *d* (something which cannot be done as there are two *d* sounds already in Arabic, the "soft" *Dāl* / د (transliterated simply as *d*) and the "emphatic" *Dād* / ض (transliterated as *d* with a dot underneath). The letter *Ẓāʾ* / ظ can present further confusion, because the "z" sound is also associated with the letter *Zāy* ز, as in the word *zawj* / زوج which translates in English as "husband."

Other "emphatic" and "soft" consonants, "h" (ح and ه), "d" (ض and د), and "t" (ط and ت) are less problematic, because they represent distinct sounds in Arabic. These "emphatic" consonants are distinguished in transliteration by dots underneath and usually do not cause confusion for most library users.

Further confusion arises for some native speakers of Arabic, because their pronunciation of Arabic consonants differs in some respects from that of speakers of other dialects, and this causes variation in the pronunciation of classical and Modern Standard Arabic. For instance, in the Levantine and Egyptian dialects of Arabic (two dialects with which I am acquainted), the consonant *thāʾ* / ث is pronounced like an English "s", *dhāl* / ذ like a "z", and *ẓāʾ* / ظ also like a "z". Thus the word

for "afternoon" really is pronounced *zuhr*, even when speakers of these dialects know classical or modern Arabic. The same pronunciation, however, does not hold true for the Iraqi or Moroccan dialects, which might prompt an Iraqi or a Moroccan library patron to wonder why *ẓuhr* is transliterated as it is, with a "z" (rather than, for example, with a "d"). Furthermore, an Egyptian who pronounces the letter *jīm* / ج as "g", as in "get" instead of "j" as in "juniper", even in classical and Modern Standard Arabic, might wonder why an author with the name Najib is transliterated *Najīb* instead of *Nagīb* (although, in fact, Nobel laureate Najib Mahfuz does get a cross reference to Mahfuz, Nagib in the LC authority file).

ISO transliteration

Does the ISO transliteration solve the problem with "emphatic" and "soft" consonants? Unfortunately, this cannot be claimed to be so. The ذ is transliterated as an underlined "d" (*d̲*), and this might lead one to assume that the ذ sounds like the "d" as in "door" (more like the Arabic letter د), rather than the "th" sound in "the". Moreover, the ظ consonant in the word ظهر "afternoon" is transliterated with a "z" with a dot underneath it (*ẓ*), and this can confuse it with the ز consonant in زوج or "marriage". Thus, it cannot be said that ISO transliteration matches the actual sounds represented by the Arabic alphabet in either classical or Modern Standard Arabic, and so really it is not an improvement in this regard. Even more confusing in my opinion is that the long vowel *ū* و is transliterated as "uw" and the *ī* long vowel ي is transliterated as "iy". It is extremely doubtful if any patron, including me, would think to look for a word such as كرسي "chair" as "kursiy". Instead of clarifying confusion, therefore, in terms of the long vowels, ISO can even be said to have created futher confusion. However, in its favor, one can say that at least ISO has made an attempt to distinguish between the long and the short vowels.

(2) The second major problem with LC Arabic transliteration is that the transliteration does not match the more popular transliteration employed by the English-language news media. While LC transliterates using only the three Arabic-language vowels *a*, *i*, and *u*, the transliteration largely employed by the news media quite liberally adds the English-language vowels *e* and *o*. Thus, while LC transliterates the word شيخ as "shaykh," the transliteration used by the news media

and others would transliterate this as "sheikh." This inconsistency can be appreciated probably most acutely in the writing of the name Mohammed/Muhammad.

This problem is probably most serious in the realm of library name authorities. And, while the entire realm of Arabic name authorities is problematic because of the attempt to accommodate personal names belonging to a diversity of origins under one set of rules (Houissa, p. 17), problems in transliteration make matters worse. For example, finding a work by the author Hanan al-Shaykh might be a difficult task for a library patron un-acquainted with LC transliteration, since the generally accepted spelling of the word is "Sheikh." Moreover, in fact, the Library of Congress name authority for Hanan al-Shaykh gives as a cross reference from "Cheikh" and "al-Cheik" but does not give "Sheikh."

The problem of inconsistent representation of personal names is further compounded because French and English name authorities entries for Arabic authors who write mainly in English and French, rather than in Arabic, do not follow systematic Arabic LC transliteration. For instance, the author Khālid Nizār (the LC systematic Arabic transliteration) is established by LC as Khaled Nezzar. Moreover, there is not even a cross reference for the common LC transliteration. The LC name-authority file establishes Quranī, ʿIzzat and gives a "see" reference to Qaranī, ʿIzzat, but there is no reference to the name Qarnī, even though the LC name-authority for Arabic writers establishes the name as Qarnī. The name Ibrāhīm Bāqir, who writes in English, is established as Bakir, although in Arabic the name is established as Bāqir, which corresponds to the way it is actually written in Arabic. The name عبد الله is transliterated for writers with Arabic surnames as ʿAbd Allāh, but for those who write in English it is conventionally written Abdullah.

The transliteration of the Arabic article *al* / ال or "the" also causes major name-authority confusion in English and French (and other European languages). Sometimes the article is simply elided into the next element of the name. For instance, consider the LC name-authority record established for Elalamy, Youssef Amine which contains no see reference (even though the Arabic form of name would be systematically established as (al-)ʿAlamī, Yūsuf Amīn). Other such LC name-authority records separate the "El" article from the rest of the name as in El Alamy. In both cases, the names are cuttered for the "E", although for purely Arabic name authority convention the name would

be cuttered for the "A" for "Alami." Again, the inevitable result is confusion for the library user.

The same confusion is true of uniform titles based on transliterated Arabic. For instance, the word *kunūz* (كنوز) translated into English as "treasures" is transliterated as "konooz". For users who do research in English and/or other European languages and Arabic, the use of both forms of transliteration schemes must seem random and is confusing, to say the least.

ISO Transliteration

Like the LC scheme, ISO is also significantly different from the transliteration employed by the English news media. The word شيخ would still be transliterated as "shaykh". Once again, perhaps this only reinforces the point that any transliteration scheme, even the English media transliteration, requires some degree of study and familiarity by the user. ISO is no different, at least in this regard.

Moreover, can it not be said that the English news media, which employs double vowels, is actually a more sympathetic transliteration? For example, would most English speakers render the name "Walīd" and stress the last syllable "íd"? Is not Waleed a much better rendition for most English-language speakers?

I also assume that ISO transliteration can introduce as many major ambiguities in cross referencing names and includes renditions of the news media spellings. In addition, French and English name-authority records for Arabic authors who write mainly in English and French, rather than in Arabic, I assume would also not follow Arabic ISO systematic transliteration. Thus, the confusion for the library patron would remain.

(3) The next major problem encountered with LC Arabic transliteration is the representation of doubled consonants (in Arabic with the *Shaddah*). There is not consistent evidence of practice in records found in OCLC and RLIN. Sometimes words which should exhibit a doubled consonant are transliterated with a double consonant, and sometimes they are not. In fact, one of the consistent errors that Vassie discovered among the Egyptian cataloguers at the LC Field Office in Cairo was the failure to mark double consonants when required (Vassie, 1998, p. 21). Words ending with *īyah* such as *shakhsīyah* / شخصيّة are normally transliterated without the *Shaddah*, even though they are always written in Arabic with a *Shaddah* symbol. While a library cataloguer

quickly discovers that this is the case, the same cannot be said for a library patron who, once again, might be puzzled and frustrated by the inability to find a record. The inconsistency in the use of the doubled letter for *Shaddah* is once again seen most clearly in name-authority entries. For instance, LC establishes محمّد شناوي as Shinnāwi, Muḥammad even though no doubled consonant is indicated in the actual record. Similarly, حسن عوّامي is established as ʿAwwāmī, Ḥasan with no cross reference to ʿAwāmī, Ḥasan, while other authors with the same surname are established without the doubled letter as ʿAwāmī. The name مكرم is established as both Mukarram and Makram, without cross references to either form of the name in either record. Needless to say, these inconsistencies, which arise most likely because the cataloguer can find no authoritative source, are no doubt once again very confusing for library users.

ISO Transliteration

In the case of the *Shaddah*, the ISO transliteration is an improvement. The *Shaddah* is transliterated with a hyphen on top of the doubled consonant and is therefore unambiguous. Anyone transliterating using ISO will have to take account of the *Shaddah*.

(4) The fourth problem in LC transliteration of Arabic involves the inconsistent transcription of the *Tāʾ Marbūṭah* (the "tied" *tāʾ* or ة, ة), which serves, among other functions, as the sign of the feminine in Arabic. Transliteration of *Tāʾ Marbūṭah* is not practiced uniformly by all cataloguers, who seemingly at whim render it either "-ah" or "-at", regardless of context. What makes this problem more confusing is that the feminine plural ات is similarly rendered "-āt". While experienced cataloguers might simply search twice for a record with a word or phrase containing *Tāʾ Marbūṭah*, it is doubtful that inexperienced library users appreciate the inconsistencies in application and will miss some records.

ISO Transliteration

As with the *Shaddah*, the transliteration of the *Tāʾ Marbūṭah* is clear, and is rendered with a "t" with two dots over the "t" in all positions (ẗ). This is therefore an improvement over the ambiguous LC transliteration scheme in that there will be no confusion over whether the *Tāʾ Marbūṭah* is rendered "-ah" or "-at". It will always be rendered "at" (accompanied by two dots over the "t").

(5) The fifth problem involved in transliteration is that in Arabic the short vowels are usually not indicated and must be supplied by the cataloguer. Incorrect vocalization can affect not only the meaning of the text, but also, of course, the ability to retrieve an item (Joachim, p. 11). Thus, different words in Arabic are in fact spelled the same (as revealed by their consonantal frame) and are pronounced differently. Sometimes the different pronunciation results in a difference in meaning, while at other times it does not. Examples of this sort are too numerous to mention, but a few examples will suffice to illustrate the point. The word بنية, for instance, can be pronounced either *binyat* or *bunyat* (or *binyah* or *bunyah* depending on context and how one transliterates the *Tāʾ Marbūṭah* at the end). The word رشد can be pronounced either *rushd* meaning the "integrity of one's actions" or *rashd* which means "integrity of conduct." The word هدى can be pronounced either *hadi* which means "guidance" or *hudan* which translates as "right guidance." Perhaps this accounts for the variation in the spelling of the name حمش which LC name-authority file represents in three different ways in three different name-authority records: Ḥamish, Ḥammash, or Ḥamash . Once again, the lack of short vowel indicators means that an authority for the name عتيبي is established ʿUtaybī and is also given see references to ʿAtībī and ʿItībī. While an attentive cataloguer would make a conscientious effort to make these cross references, unfortunately it cannot be said that such conscientious efforts are made consistently in LC name-authority file. Naturally, it goes without saying that such inconsistencies in spelling and transliteration affect the ability to conduct successful author and title searches. Another repeated inconsistency involving the short vowels (one that Vassie also noticed at the Cairo LC Field Office among his cataloguers) was the absence of, or incorrect, short vowels required for case endings of nouns followed by pronoun suffixes (e.g. ʿAbd Rabbuhu for ʿAbd Rabbihi) (Vassie, 1998, p. 20). Consistently, one notices that some cataloguers choose to add the short vowels, while others do not. Thus, for a title such as مروان واخواته, sometimes one will see *Marwān wa-Akhawāthuhu*, while others simply choose to ignore the final vowel and romanize it as *Marwān wa-Akhawatuh*. Moreover, sometimes one sees errors where the case ending and suffix -*uhu* should correctly be -*ihi*. A similar problem can be seen in imperfect verb mood endings. Thus one sees the imperfect of the verb "he hates" يكره transliterated as both *yakrah* and *yakrahu*. While these may seem minor points, they present enormous problems for successful retrieval.

ISO Transliteration

The ISO transliteration tables tackle the question of short vowels and case endings directly and unequivocally. In the preliminary notice, for example, the standard states directly that "the proposed transliteration system is a stringent one specifying an equivalent for each character. (International Organization for Standards, p. 3)." Moreover, the standard then proceeds to spell out specifically three ways in which the vowels will be transcribed. First, if the Arabic text supplies vowels (I believe this means if the text is explicitly vocalized), then it will be entirely transliterated. If the Arabic text does not supply vowels, then only the characters appearing in the text are transliterated. Presumably, this would solve any problems arising with case endings. If the text supplies the vowels for the case endings, they are reproduced. If not, they are not reproduced.

The ISO standard also indicates that, nonetheless, a modification may sometimes be necessary. In some cases, "the words and especially the names of authors (in library catalogues, bibliographic reference lists, etc.) shall be reproduced (Documentation – Transliteration of Arabic characters into Latin characters, p. 3). While the stated "modification" does appear to allow some flexibility, the ISO standard regarding transliterating short vowels still leaves some questions to be answered. For example, does the standard really resolve the problem of translating the correct spelling of a word or name? Indeed, what is the ultimate source for making a decision regarding correct spelling? At least the LC transliteration scheme does list several authoritative dictionaries (most notably Hans Wehr) to consult in making decisions. What, however, is the ISO's authoritative source? If there is one, it is not listed in its documentation. What about making cross references for a name authority? How would a cataloguer go about doing so using the ISO guide? Thus, while making some improvements on the LC standard, the ISO standard also leaves some questions unanswered.

In addition, can we not expect that some records showing the case endings—and some not—will produce confusion for the user? When searching a database, how do library users know, for example, that one particular book has supplied vocalization, while the other has not?

Conclusions

Obviously, any transliteration scheme is limited, and no scheme can claim to be scientific and free of ambiguity. Certainly, as we have seen,

both the Library of Congress and the International Organization for Standardization Arabic transliteration schemes are both problematic in certain respects.

It is true that with regard to rendering the *Tāʾ Marbūṭah* and the *Shaddah*, the ISO rules for transliteration are much more specific than LC's and will reduce confusion for patrons searching the library database. In other areas, however, the ISO scheme cannot be said to be a real improvement over LC's, and in some instances (for example, rendering the long vowels as *iy* and *uy*), it can even be said to add more confusion.

Clearly, any transliteration scheme rendering Arabic into Roman script requires a learning process (both rules of romanization and Arabic grammar) for the user. Nonetheless, for a variety of reasons, it is unrealistic to assume that Unicode and the use of original scripts will solve all our problems, and that transliteration can be eliminated. The benefit of any transliteration scheme is that, when used consistently, it does provide a degree of uniformity and predicatability. In the meantime, to lessen confusion for users, it will be necessary for library catalogues to state clearly which transliteration scheme they follow. In addition, cataloguers will have to do a better job supplying cross references for name authorities, and we will have to develop better manuals to provide new and experienced cataloguers with more guidance.

In the end, it appears that there is not a universal transliteration scheme that will solve all our problems, and it is difficult to say that one is better than another. It appears that what we librarians must do, no matter what transliteration scheme we use, is to simplify and clarify matters for the user as much as possible.

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1. International Organization for Standardization
ISO 233:1984

Isol	From R	Mid	From L	Roman	Name	Number
ا	ا	—	—	$\ni$, $\bar{a}$	$\ni$alif	1
ب	ب	ﺒ	ﺑ	b	$b\bar{a}\ni$	2
ت	ت	ﺘ	ﺗ	t	$t\bar{a}\ni$	400
ث	ث	ﺜ	ﺛ	$\underline{t}$	$\underline{t}\bar{a}\ni$	500
ج	ج	ﺠ	ﺟ	$\breve{g}$	$\breve{g}\bar{\imath}m$	3
ح	ح	ﺤ	ﺣ	$\dot{h}$	$\dot{h}\bar{a}\ni$	8
خ	خ	ﺨ	ﺧ	$\underline{h}$	$\underline{h}\bar{a}\ni$	600
د	د	—	—	d	$d\bar{a}l$	4
ذ	ذ	—	—	$\underline{d}$	$\underline{d}\bar{a}l$	700
ر	ر	—	—	r	$r\bar{a}\ni$	200
ز	ز	—	—	z	$z\bar{a}y$	7
س	س	ﺴ	ﺳ	s	$s\bar{\imath}n$	60
ش	ش	ﺸ	ﺷ	š	$\check{s}\bar{\imath}n$	300
ص	ص	ﺼ	ﺻ	ṣ	$\d{s}\bar{a}d$	90
ض	ض	ﻀ	ﺿ	ḍ	$\d{d}\bar{a}d$	800
ط	ط	ﻄ	ﻃ	ṭ	$\d{t}\bar{a}\ni$	9
ظ	ظ	ﻈ	ﻇ	ẓ	$\d{z}\bar{a}\ni$	900
ع	ع	ﻌ	ﻋ	ʿ	$\ʿayn$	70
غ	غ	ﻐ	ﻏ	ġ	$\dot{g}ayn$	1000
ف	ف	ﻔ	ﻓ	f	$f\bar{a}\ni$	80
ق	ق	ﻘ	ﻗ	q	$q\bar{a}f$	100
ك	ك	ﻜ	ﻛ	k	$k\bar{a}f$	20
ل	ل	ﻠ	ﻟ	l	$l\bar{a}m$	30
م	م	ﻤ	ﻣ	m	$m\bar{\imath}m$	40
ن	ن	ﻨ	ﻧ	n	$n\bar{u}n$	50
ه	ه	ﻬ	ﻫ	h	$h\bar{a}\ni$	5
ة	ة	—	—	$\ddot{t}$	$t\bar{a}\ni$ $marb\bar{u}\d{t}ah$	—
و	و	—	—	$w, \bar{u}$	$w\bar{a}w$	6
ي	ي	ﻴ	ﻳ	$y, \bar{\imath}$	$y\bar{a}\ni$	10
ى	ى	—	—	$\grave{y}$	$alif$ $maq\d{s}\bar{u}rah$	—

2. Library of Congress/ALA

Isol	From R	Mid	From L	Roman	Name	Number
ا آ	ا	—	—	ʾ, ā *, **	ʾalif	1
ب	ب	ـبـ	بـ	b	bāʾ	2
ت	ت	ـتـ	تـ	t	tāʾ	400
ث	ث	ـثـ	ثـ	th	thāʾ	500
ج	ج	ـجـ	جـ	j	jīm	3
ح	ح	ـحـ	حـ	ḥ	ḥāʾ	8
خ	خ	ـخـ	خـ	kh	khāʾ	600
د	د	—	—	d	dāl	4
ذ	ذ	—	—	dh	dhāl	700
ر	ر	—	—	r	rāʾ	200
ز	ز	—	—	z	zāy	7
س	س	ـسـ	سـ	s	sīn	60
ش	ش	ـشـ	شـ	sh	shīn	300
ص	ص	ـصـ	صـ	ṣ	ṣād	90
ض	ض	ـضـ	ضـ	ḍ	ḍād	800
ط	ط	ـطـ	طـ	ṭ	ṭāʾ	9
ظ	ظ	ـظـ	ظـ	ẓ	ẓāʾ	900
ع	ع	ـعـ	عـ	ʿ	ʿayn	70
غ	غ	ـغـ	غـ	gh	ghayn	1000
ف	ف	ـفـ	فـ	f	fāʾ	80
ق	ق	ـقـ	قـ	q	qāf	100
ك	ك	ـكـ	كـ	k	kāf	20
ل	ل	ـلـ	لـ	l	lām	30
م	م	ـمـ	مـ	m	mīm	40
ن	ن	ـنـ	نـ	n	nūn	50
ه	ه، ة	ـﻬ	هـ	h, t ***	hāʾ, tāʾ marbūṭah	5
و	و	—	—	w, ū	wāw	6
ي	ي	ـيـ	يـ	y, ī	yāʾ	10
ى	ى	—	—	á	alif maqṣūrah	—