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Regional standards and local routes in adoption techniques for specialised terminologies in the dialects of written Arabic

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ABSTRACT

As opposed to its numerous, somewhat mutually unintelligible regional spoken vernaculars, formal written Arabic is generally regarded by its users as constituting a single standard across the entire Arab world. Regardless of this perception, translators and interpreters are aware that written Arabic also demonstrates regional variations. This poses potential obstacles to those working in a transnational environment, in that regional technical terminologies are for their part also somewhat mutually unintelligible.

To assess the terminological variations in formal written Arabic, an examination was made of technical terms compiled from original works by Arab authors and western books translated into Arabic. Seventeen in all, these were the product of twelve Arab authors and translators writing or translating works in the fields of sociology and psychology. These fields were chosen precisely because they are among the fields outside of the Arab intellectual tradition, only being introduced to it relatively recently, being thus likely to employ novel terminologies. Terms extracted from these works were checked against 16 general and specialist dictionaries and three United Nations glossaries. Terminological discrepancies and inconsistencies were noticed in all of these works. Corroborating evidence is brought by observations of technical terms and regional variants in commercial jargon, journalistic usage, and municipal categories from Arab world.

KEYWORDS
Arabic lexicography, standard language, regional variation, technical terminology, lexicalization.

Among the oft-cited peculiarities of Arabic is its numerous regional vernaculars, against which is posited a superposed, supposedly standardised, usually written, variety often called in the West 'Modern Standard Arabic'. The regional dialects are said to be somewhat mutually unintelligible, and to some degree this is true. The differences between the vernaculars have been documented (by among others Brustad 2000); on the other hand, scant attention has been paid the dissimilarities between one regional variety of written Arabic and another. It is not often acknowledged that what is called Modern Standard Arabic also exhibits regional variations that are also somewhat incomprehensible to users from different Arabic dialect areas. This has been established or commented upon by a very few researchers who have examined variations in Arabic as they appear across dialect areas (for some who have, see Bentahila and Davies 1991; Ibrahim 1997; Kaye 1975; Parkinson and Ibrahim, 1998; Van Mol, 2003; Wilmsen 2003a and b). Just as there are dialects of spoken Arabic, there are also dialects of written Arabic. This is contrary to the image that native speakers of Arabic cherish

about their language: that the formal code used in writing is a super-regional standard comprehensible to the educated regardless of their native dialects and used as such in international forums, and for that reason and others, it is the only appropriate medium for the discussion of serious, scholarly, or scientific subjects.

Yet it is precisely in the arena of specialised terminology where the regional variations are most acutely felt, and it is especially in the arena of scientific discourse that standard Arabic terminologies are lacking. One of the many reasons for this is that the language academies working in various parts of the Arab world typically respond slowly to the flood of new terminology inundating the separate countries of the Arab world (for further elaboration, see, Ali 1987). Meanwhile, the need for the Arabisation of terms is immediate. Much of the work, then, is performed ad hoc by newspapers, which, unlike the academies, do not have the luxury of methodically compiling data and meeting annually to make their pronouncements, but instead must meet regular deadlines. As a result, many common terms for now familiar technologies such as aeronautics, automotives, and telephony have their origins in the popular press (Al-Saigh 1971) and not the academies.

A secondary reason may be that much of the domain of the natural sciences involve local phenomena, such as agriculture and other forms of food production, topography and geomorphology, climatology and hydrology, and so on—subjects with which the Arab public intelligentsia is little engaged.[1] Such avenues of discourse will perhaps exhibit a rich local (which is to s ay vernacular) vocabulary, but will often exhibit a corresponding poverty of 'standard' terminology (Wilmsen 2003a: 132—133). The adoption of terms from the local vernaculars is not usually acknowledged as a legitimate process for the construction of technical terminologies, except in the North African countries, where Arabisers consciously adopt colloquial roots for the coining of new concepts if no other alternatives are found (Benabdi 1986: 67-69 and 74). Even in other regions, where the practice is frowned upon, colloquial terms are often the only ones that exist for certain categories of discourse, for example, taxonomies of food production, and those will occasionally be adopted out of common usage if not by official sanction of the academies.

For that matter, the desirability of Arabising the sciences is far from being settled within the Arab world itself. Science is itself something of an international language, and in order to participate in scientific discourse, those involved must as much as possible speak a language comprehensible to others from different parts of the world (Abulghar 2003). The North African states embarking upon a deliberate Arabising of the educational curriculum encountered unanticipated difficulties in adapting terminology along with unintended socio-cultural consequences. Among these is that scientists find themselves isolated from the

international scientific community owing to their unfamiliarity with the European counterparts to the Arabic terminologies they have learned (see Berdzoui 2000: 21, who uses the term 'ghetto' in describing the situation; and Montgomery in this issue). As a result, governments, which for decades have been pursuing a policy of Arabisation in the curriculum, are acknowledging the need to reverse course and admit bilingual education into the teaching of science and in other fields. For example, since 1999, Algeria has been moving toward recognising multilingualism in education and within broader society (the so-called 'Bouteflika effect' after the current president, Abdelaziz Bouteflika, who is gradually reversing more than three decades of Arabisation policies; see Benrabieh 2005: 380—383); similarly Morocco has recently revised its language policies to allow science and technology to be taught in what is rather archly called 'appropriate languages' in the language charter released in 2000. By allowing this it "appears to acknowledge tacitly the failure of Arabization in the area of science and technology teaching and to herald at least a temporary return to bilingual education in this field." (Marely 2004: 31-32).

The Study

In an attempt to asses the avenues by which technical terms enter and are adapted to formal written Arabic across the Arab world, we have conducted a study of twelve individual writers and translators from different regions of the Arab world working in the fields of psychology and sociology to observe the terminological solutions they adopted. We have chosen this field particularly for its relative lack of familiarity to Arab readers; what is more, these are two of the many fields for which very few adequate reference works exist in Arabic. McLauglin (1972) singles out psychology specifically as being underrepresented in technical terminology). It thus can be a rich field for lexicographers and something of a practical laboratory for the observation of Arabic localising practices.

The technique used in extracting terms was simple: we scanned the works in question for technical terms, collated them, and compared the terms extracted from each work against similar terms from the other authors of the study and against various dictionaries. As it happens, the collection of terms is easily accomplished, owing to a practice common amongst writers of Arabic in treating novel concepts coming from outside of the Arab world for which no equivalent terms exist. When introducing such concepts for the first time, writers usually present their corresponding terms in the source language alphabet, often between parentheses or quotation marks, usually just after introducing their attempt at an Arabic equivalent (Hijazy 1991, lists them in footnotes along with proposed Arabic equivalents, which, of course, are also included within the body of the text).

From the seventeen works we have examined, we extracted ninety terms, which we then checked against sixteen general and specialist dictionaries and three United Nations glossaries. Tremendous variability was noticed between all authors and between reference works. There is not space to address all of these terms here, but they include such difficult-to-transfer concepts as behaviourism, bulimia, epistemology, eschatology, fabulation, fideism, imago, intelligentsia, narcolepsy, neurashthenia, nominalism, orthodoxy, populism, psychometry, psychosomatic, rationalism, reification, sadism, synthetisation, transvestism, and voyeurism.

Of those we will address only six terms in detail, chosen precisely because the English terms are well known to bilingual speakers of Arabic. For the sake of simplicity, we will also concentrate on only five authors and five reference works, occasionally making reference to the three UN glossaries as well. The reference works are the two common languages Arabic/English dictionaries most widely used by translators whose native speakers of Arabic, *al-Mawrid* (represented by the letter M in the tables) and *al-Mughny al-Akbar* (represented by MK), hereafter, simply *al-Mughny*, and three bilingual specialist dictionaries: a Hitti's dictionary of medical terminology (H in the tables), a sociological terminology (B in the tables after the author Badawi), and a dictionary of psychological terminology (BS, after its authors Barovsky and Saad). A brief discussion follows each table, and the principles involved in the adoption of terms following the presentation of all six of the terms chosen for analysis are considered.

AMBIVALENCE

Source	Term	Transliteration	Gloss and Comments
Hijazy	تجاذب وجداني	tajāðub wijdāni	emotional back-and-forth (periphriasis)
Tarabishy	تعارض وجداني	taᶜārud wijdāni	emotional incompatibility (periphriasis)
Yassin	سريع المزاج المتقلب التغيير	mazāj mutaqallib sarīᶜ al-taghyīr	unstable, quickly-changing mood (periphriasis)
Zaayur	الثناقيمة	Thunāqīma	compounding of the words for 'duality' and 'value'
	تكافؤ القيمة	takāfu' al-qīma	equivalence of value (periphriasis)
M	تناقض	Tanāqud	contradiction (coinage)
	تضارب	Tadārub	contradiction (coinage)
	تأرجح	ta'arjuh	pendularity (coinage)
	ازدواجية	Izdiwājiyya	Binarity
H	تكافؤ الضدين	takāfu' al-diddayn	equivalence of opposites
	التناقض الوجداني	tanāqud wijdāni	emotional mutual contradiction
B	الازدواج الوجداني	izdiwāj wijdāni	emotional binarity
	ثنائية المشاعر	thunā'iyyat al-mashāᶜir	Duality of emotions
BS	تناقض	tanāqud	Contradiction

Table 1

Most works rely upon periphrastic amplification of the term 'ambivalence' in Arabic. Of note is that Yassin's clinical psychology textbook provides a definition of the term without ever suggesting an equivalent; the same is true of *al-Mughni*, which also simply defines the term. The dictionary *al-Mawrid* suggests four separate words that already exist in Arabic with in the semantic domain of ambivalence but without identifying a unique term, while. Zayur attempts a compound of /thunā'/ 'dual' and /qīma/ 'value' to yield [thunaqīma].

DEPRESSION

Source	Term	Transliteration	Gloss and Comments
Tarabishy	إنهيار	inhiyār	Collapse
	هبوط	hubūt	Decline
Yassin	إنقباض	inqibād	Gloom
	كآبة	ka'āba	Dejection
	إكتئاب	ikti'āb	Dejection
Zaayur	إكتئاب	ikti'āb	Dejection
Mawrid	حزن	huzn	Grief
	كآبة	ka'āba	Dejection
Mughni	حطة	hitta	degradation: (>economics)
	هبطة	habta	decline: (>economics) depression: (>geography)
H	إعياء	iᶜyā'	weariness
	همود	humūd	torpor
	إنخساف	inxisāf	sinking, (>astronomy)
	كآبة	ka'āba	setting: dejection
B	اكتئاب	ikti'āb	Dejection
BS	ضعف	daᶜf	weakness
	إكتئاب	ikti'āb	dejection
	إنقباض	inqibād	gloom

Table 2

Despite the concept of depression being a fairly well known in the Arab world, authors and dictionaries cannot seem to agree on a term for it. Most common are [ikti'āb] (also found in the WHO glossary) and [kaʻāba], from the root meaning 'dejection'. Yassin's textbook employs both and another term as well. The dictionary *al-Mughni* defines the term in its purely economic denotation. Other writers and references run the circuit of the semantic range from collapse ([inhiyār] also used to denote a nervous breakdown: [inhiyār ᶜasabi]) to decline, to gloom, grief, degradation, torpor, weakness, and weariness.

EMPIRICAL

Source	Term	Transliteration	Gloss and Comments
Tarabishy	اختباري	Ixtibāri	Experiential
Yassin	إمبريقي	Imbirīqi	borrowing: /q/
Zaayur	إمبيريكي	Imbīrīki	borrowing: /k/
	تجربي	Tajribi	experimental: spelled with short vowel
M	تجريبي	Tajrībi	experimental: spelled with long vowel
H	تجريبي	Tajrībi	experimental: spelled with long vowel
	اختباري	Ixtibāri	Experiential
B	إمبريقي	Imbirīqi	borrowing: /q/
	تجريبي	Tajrībi	experimental: spelled with long vowel
BS	تجربي	Tajribi	experimental: spelled with short vowel

Table 3

The most common suggestion to be put forth for 'empirical' by any author or reference work was [tajrībi], either with an internal long vowel or with a short vowel, which carries the meaning 'experimental' more than 'empirical'; this could lead to confusion as the two can occur in the same context. The UN Manual for Arabic Translators gives [tajrībi] and the perhaps more successful [ixtibāri] 'experiential', also suggested by one author and the dictionary of psychological terms. Others wish to adopt the English term but cannot seem to decide whether to spell it with the Arabic letter [k] or [q].

IDEOLOGY

Source	Term	Transliteration	Gloss and Comments
Urwy	أدلوجة	Adlūja	Arabised coinage:
Zaayur	إفكارية	Ifkāriyya	coinage > 'concept', 'thought'
	أيديولوجيا	Aydīyūlūjiyyā	borrowing: ending with long vowel
M	أيديولوجية	Aydīyūlūjiyya	borrowing: ending with short vowel
MK	مذهب	Madhhab	Creed
	مثالية	Mithāliyya	coinage > 'exemplary', 'ideal'
H	عقائدية	ᶜaqā'idiyya	coinage > pl. of 'faith'
B	إيديولوجية	Īdīyūlūjiyya	borrowing: ending with short vowel

Table 4

With ideology, one author attempts borrowing and clipping [adlūja], which will probably not take. The author then feels free to derive other forms out his coinage ([tadlīj], 'ideologisation'?), thereby creating even more opaque constructions. Another simply borrows the term as is, which echoes Egyptian usage and agrees with al-Mawrid, but he coins another term derived from the Arabic word for thought [fikr] as well. The dictionaries al-Mughni and Hitti's Medical Dictionary both attempt coinages from native Arabic concepts 'faith' and 'ideal'.

PARANOIA

Source	Term	Transliteration	Gloss	Comment
Hijazy	عظام	ᶜudhām	coinage >great {fuᶜāl}: opaque	
Yassin	هذاء	hudhā'	delirium: {fuᶜāl}	
	بارانويا	Bārānūya	Borrowing	
Zaayur	عظام	ᶜudhām	Grandeur: {fuᶜāl}	
M	جنون الاضطهد	junūn al-idtihād	insanity of persecution	
	جنون العظم	junūn al- ᶜidham	insanity of grandeur	
	جنون الارتياب	junūn al-irtiyāb	insanity of suspicion	
MK	وسواس جنوني	waswās junūni	insane delusion	
Hitti	بارانويا	Bārānūyā	Borrowing	
	زور	Zaur	coinage >falsity: opaque	
	ذهان خيلائي	dhuhān xuyalā'i	mental + arrogance: {fuᶜāl}: opaque	
B	ذهان هذائي	dhuhān hudhā'i	mental delirium	

Table 5

There is very little agreement in usage with the concept paranoia. Several coinages are attempted cast into the pattern {fuᶜāl}, denoting illness or unsoundness, to lend a sense of pathology to the underlying meaning. Others are derived from existing words by extending their meanings. All are drawn by analogy to native Arabic roots, all of them opaque in their meanings. Indeed the two preferred by the WHO are of this type: *dhuhān kibriyā'i*, a coinage meaning something like 'mental disease of grandiosity' and *hudhā'*, an extension of the word for delirium. The UN Translator's manual cites the latter as well. Again, some sources simply adopt the term *bārānūya* as is, with allowances for Arabic phonology, which cannot accept the voiceless bilabial 'p'.

PHOBIA

Source	Term	Transliteration	Gloss and Comments
Hijazy	خواف	Xuwāf	pathological fear: {fuᶜāl}
	ذعار	dhuᶜār	pathological panic: {fuᶜāl}

Tarabishy	رهاب	Ruhāb	pathological terror: {fu^{c}āl}
Yassin	فوبيا	Fūbyā	borrowing: ending with long vowel
	فوبية	Fūbya	borrowing: ending with short vowel
	مخاوف	Maxāwif	fears, anxieties
	فوبيات	Fūbyāt	borrowing: plural
	خوف وهمي مرضي	xawf maradi wahmi	pathological imaginary fear
Zaayur	خواف	Xuwāf	pathological fear: {fu^{c}āl}
M	رهاب	Ruhāb	pathological terror: {fu^{c}āl}
	فوبيا	Fūbya	borrowing: ending with long vowel
	هلع مرضي	hala^{c} maradi	pathological alarm
MK	خيلع	xayla^{c}	coinage >?: opaque
	إهتيال	Ihtiyāl	coinage > horror
H	رهاب	Ruhāb	pathological terror: {fu^{c}āl}
	رهبة	Rahba	alarm, terror
	رهب	ruhb, rahab	Dread
B	خوف وهمي	xauf wahmi	imaginary fear
	رهاب	Ruhāb	pathological terror: {fu^{c}āl}
BS	رهاب	Ruhāb	pathological terror: {fu^{c}āl}
	مخاوف	Maxāwif	fears, anxieties

Table 6

The pattern {fu^{c}āl} is very much in evidence with this term, along with the usual borrowing of the foreign term outright (with the clinical psychology text being unable to settle upon a single spelling or a single term for that matter). The periphrastic translations of the term appear to be acceptable, as indeed the does the use of the {fu^{c}āl} pattern. The same cannot be said for one of the offerings of *al-Mughni*, whose [xayla^{c}] is entirely opaque. It is not even certain what semantic domain the lexicographer had in mind when coining this.

Analysis

Of the range of techniques lexicographers utilise when attempting to Arabise the novel concepts that enter the language, not all of them successful all of the time, a few are on display here. The preferred method is to exploit the derivative properties of the language and expand the meanings of available roots, either those current in the modern language or those from archaic words that have fallen out of use. Most Arabic words

are derived from three-consonant roots (sometimes two consonants and vowel—the so-called 'weak' roots—and very occasionally from four or more consonants), conventionally represented by the letters (or radicals) [f], [ᶜ] and [l] (from the verb 'to do', *faᶜala*), from which added meanings are derived by the insertion of long vowels, the affixing of additional consonants or vowels, or the doubling of one of the existing consonants of the root. The short vowels also vary according to pattern. So, for example, the word for 'reactor' (as in 'nuclear reactor') derives from the root {f,ᶜ,l} by the affixing of [m] and the infixing of the long vowel [ā] along with a characteristic patterning of the short vowels to yield *mufāᶜil*. Similarly the word for aeroplane is derived from the root ṭ *aār* 'to fly' the pattern *fāᶜil* with the meaning of 'doer' or 'agent', accorded a feminine ending [a] (for reasons that need not concern us here) 'to yield' *ji'ira*, and the word for automobile is produced by manipulating the root *sār*, with the underlying meaning of 'to move', and 'to journey', and, as it were, pouring it into the template faᶜᶜāl, meaning 'something that does something often or well', again adding a feminine suffix, to produce *sayyāra*. (For phonological reasons that again need not concern us here, the underlying weak radical {ā} is usually expressed as {ī}, or here when doubled {yy}.) The principle can be seen at work in the attempts at coining a term for the concept paranoia in the works under consideration, with, for example, the term dhuhān, appearing in Table 5 above, derived from the root {dh,h,n}, with the underlying meaning of mind, or cognition, and the pattern {fuᶜāl}, to yield the first word in a periphrastic term preferred by two of the dictionaries and the WHO glossary.

Another method often employed by the academies is simply to expand the meaning of an existing word to take on the enhanced technical meaning. This is, of course, a venerable practice seen in other languages with large technical lexicons (Picard 1982: 94—104). It is however, less preferred than constructing new coinages out of related roots. Indeed, the attempts at such expansion of meaning that we have seen here are unconvincing because they do not convey the precision or appropriateness desired in technical terms (see Sager 1998: 256 for a discussion of the desired qualities of technical terms).

The unbroken heritage from the earliest days of recorded literary Arabic makes this process of derivation possible, and notions about Arab unity and a nostalgia for a glorious past compel Arabic speakers, regardless of training, to endorse the technique (Benabdi 1986: 65). The language academies attempt to impose the orderly rules of the derivational system of Arabic onto the chaos of coining new terminology (described in Hamzawi 1972: 297—329). Despite such preferences, neither archaic nor modern roots can consistently or successfully be recruited into the service of coining new terms (Shraybom-Shivtiel 2001: 194).

When a derivation from the root and pattern system of Arabic cannot yield

a single term, a periphrastic translation of the meaning of a term can substitute. It is likely that most newly coined technical terms fall into this category, known as 'loan translations' or 'calques'. Occasionally, a particularly courageous writer, translator, or lexicographer will attempt a blending of two separate roots, which together would convey a more complete rendering of the concept in question. This has never been a terribly productive process in Arabic, there being only a handful of such words inherited from the classical legacy, and it is generally resisted by more cautious lexicographers and language users alike (see Asfour's criticism of Ba'albaki's prodigious exploitation of this technique in *al-Mawrid*, 2003: 47—51). We have seen this in the attempt to render 'ambiguous' into Arabic as *thunaqīma*; it also occurs elsewhere in our sample with an attempt at rendering 'psychosomatic' as *jasadinafsi* (from *jasadi* 'physical' and nafsi 'psychological') in *al-Mawrid* and *nafsjasadi* in Hijazy. Both words look enormously odd when written in Arabic.

If all of these options are exhausted, then the foreign word itself may be adopted, either the whole word or a clipped version thereof, apocopated to conform to the canonical Semitic three or four consonant root system. The result of these processes are summarised in Figure 1 with well known examples of each technique provided as examples:

Assimilation and Arabisation of new concepts and terminologies

coinage	hāsūb: something that computes well	الحسوب
calque	Rattāba: something that orders things	الرتّابة
periphrasis	Hāsib 'āli: computing machine	الحاسب الآلي
compounding	rā's māl: capital: rā's = head, māl = money	رأسمال
Borrowing and clipping	tilfāz: telephone	تلفاز
transliteration	kombiyūtir	الكومبيوتر

Figure 1

These terms are, of course, no longer strictly technical terms, and yet they illustrate the forces involved in assimilating novel concepts. Indeed in the illustration here, they are almost self-explanatory. Nevertheless, some comments are in order. The English term 'computer' itself is a coinage from the early days of the machine when it was designed to handle enormously large computing tasks. By now, it has developed beyond being simply a glorified adding machine, and indeed personal or office computers are probably used more often for other functions than contending with large figures. Nevertheless, the concept itself exits in Arabic, as it no doubt does in any language, in the root {h, s, b}. The consonantal skeleton is fitted into the pattern {fa^{c}ūl}, another pattern carrying the meaning 'something (or someone) who does something

constantly or very well' (it is sometimes rendered {fā^{c}ūl}. It is worth noting that those regions of the Arab world where French was the colonial European language, the Latinate word *ordinateur* is analysed by Arabic lexicographers as [rattāba] from the root {r, t, b}, which carries the meaning 'to put into order', while the pattern {fa^{cc}āla} indicates an implement for performing some function or task. This rendering of the concept may be found in the Levantine dialects, with [hasūb] being used in North Africa (it can be found spelled with a long /ā/ as well, rendering it [hāsūb]). The calque [hāsib 'āli] harks back to the original English conception of a machine that computes (*hāsib* in modern Arabic, being used to indicate someone or something that counts or reckons, while *'āli* is an adjective derived from *'āla* 'implement' 'instrument'). For its part, [hāsib 'āli] is the term used in the Peninsular dialects, and may be seen in writing in Egypt, where [kombiyūtir] is also found. Indeed all of the variants for computer are to be encountered with more or less frequency throughout the Arab world, with the exception of *rattāba*, which is only seen in the Levant and Tunisia, Algeria, and Morocco. This calls attention to the various routes by which novel concepts enter into Arabic in disparate dialect areas, depending, in this case upon the dominant European language of the region.

Borrowing and clipping, when it occurs, is used to bring a foreign word into conformity with the Arabic root and pattern system; when adapting such borrowings to Arabic phonology, a tri-literal or more often quadri-literal form is constructed. Not every dialect is comfortable with such clipped forms, and some adopt the European term instead. Thus for the word 'television', for which no common Arabised concept exists, many local vernaculars are more comfortable with [tilifizyōn] than with the Arabised variant [tilfāz] (with the constructed root {t, l, f, z}. With a similar word, 'telephone', which possesses four consonants and could be adapted to a quadri-literal root system, the various language academies (in Damascus, Cairo, Baghdad, Rabat, and Amman) have proposed four separate terms, those being [misāra], [hātif], [nādi], and [ʿirzīz] (Bentahila and Davies, 1991: 78). Of these only [hātif] (from the root {h,t,f} 'a call or summons coming from afar') has come into common usage (especially in the Peninsular dialects, although it is recognised and sometimes used elsewhere). Other dialects opt to borrow the term wholesale as [tilifōn]. (Some vernaculars, however, have innovated a verb from the imagined root {t, l, f, n} to yield talfan (perfect)/yi-talfin (indicative)). Finally, the compound [rā'smāl] is an unproblematic coinage everywhere (with, however, variant spellings), which cannot always be said of other results of an attempt at compounding.

As it happens all of the concepts in Figure 1 except *komibiyūtir* have been proposed by the academies and found acceptance with the public. That notwithstanding, the academies, overwhelmed as they are with the sheer volume of new vocabulary entering the Arab world at all points, are not

always successful in persuading their publics to adopt their innovations. Sometimes the reason for this is that their constructions strike the ear as odd, even laughable. At other times, other agents, having need of immediate solutions to terminological problems, cannot wait for the academies to meet and make their pronouncements and often impose their own solutions without their having first been vetted by the academies. For example, the words for automobile and aeroplane entered Arabic not by the route of the academies but through the press, which clearly had need to discuss such modern innovations immediately as they appeared (Al-Saigh 1992: 186).

The glacial pace at which the academies work aside, the bottleneck in the whole process of adopting a unified set of terms for any discipline appears in the enterprise of compiling dictionaries and glossaries. There is a long tradition of lexicography in Arabic, but the work has not changed in character much since its beginnings. That is to say, most reference works in the Arabic language are the work of a single individual working alone. When individual lexicographers retire or die, their works are rarely if ever revised or updated. This presents a monumental problem to those working professionally with the language, especially when translating, in that technical and specialist dictionaries manifest the same individualistic tradition. It is almost impossible for lone lexicographers to keep their works current. Most of the well-known bilingual Arabic technical works were last updated in the nineteen eighties (some in the early nineties—there are also some computer dictionaries from the late nineteen-nineties; it hardly seems necessary to point out that these become obsolete even faster than other technical and specialist dictionaries). This means that all technical vocabulary introduced into the language since they were last updated does not appear in them.

Another aspect of the problem is that many of these technical dictionaries consist solely of glossaries, in which terms are listed in one language with their corresponding terms in the other, with none of the explanatory information that is generally found in better-developed dictionaries. Moreover, the fields covered in bilingual Arabic technical dictionaries are few in comparison with those intended for the European languages. There are, for example, bilingual (and often multilingual) dictionaries in French, German, and Spanish in such fields as *inter alia* acoustics; agriculture; forestry; artificial intelligence; business, commerce, and finance; ecology; engineering and materials testing; environmental technology; horticulture; mathematics; medical engineering; plastics engineering; printed circuit boards; telecommunications; and veterinary medicine. All of the subjects mentioned here represent bilingual dictionaries with editions published after 1990.[2] Compounding the problem is that such bilingual Arabic technical dictionaries as do exist are often little known or hard to obtain, even within the Arab world.

As a result, language professionals working in Arabic must build working vocabularies and glossaries for their own use, and they have little avenue for recourse when they encounter unfamiliar terms, save consultation with peers. They are often obliged to coin new terminology. What this leads to is a perpetuation of the individualistic tradition in Arabic lexicography, in that language professionals are compelled to compile individual terminology data sets. This action is then repeated as many times as there are professionals working in the field. The result is that such works that do exist often do not agree with one another in their treatment of terminology.

It should be clear that if language planners and indeed individual users of the language in different regions or the Arab world are utilising these processes separately and in different manners, the result will be that varying solutions to similar problems will be found in disparate areas of the Arab world. That is indeed what we have found in our study.

Before drawing some conclusions, it may do to quote at length from one of the foremost bilingual Arabic dictionaries available (of which there exist Arabic/English and Arabic/German versions —the original lexicographer was German), Hans Wehr's (1976: viii) *A Dictionary of Modern Written Arabic*:

> The vocabulary of scientific and technological writings…is by no means standardized. The impact of Western civilisation has confronted the Arab world with the serious linguistic problem of expressing a vast and ever-increasing number of new concepts for which no words in Arabic exist. The creation of scientific and technological terminology is still a major intellectual challenge. Reluctance to borrow wholesale from European languages has spurred efforts to coin terms according to productive Arabic patterns. In recent decades innumerable such words have been suggested in various periodicals and special publications. Relatively few of these have gained acceptance in common usage. Specialists in all fields keep coining new terms that are either not understood by other specialists in the same field or are rejected in favour of other, equally short-lived, private fabrications…[I]n many fields… it is still not possible for professional people from the different Arab states to discuss details of their profession in Arabic. The situation is complicated by the fact that purists and the academies demand the translation into Arabic even of those Greek and Latin technical terms, which make possible international understanding among specialists. Thus... several technical terms which all fit one definition may still be current, or a given scientific term may have different meanings for different experts.

Penned more than thirty years ago, this description of the peculiarities of Arabic lexicography continues to reflect everything we have discussed in our own description of the situation as it exists today. In our study, this situation is on display, along with the entire range of the lexicographical techniques employed by Arab writers and translators in the adoption or introduction of new terms.

Discussion

The impression lent by a consideration of technical and scientific vocabulary in Arabic is one of a confusing lack of precision. Arabic is not the only language with disparities in terminologies between regions. It has been observed that there are inconsistencies between British and American English technical terms in, for example, the financial sectors of the two countries (Mourier 2001). In some cases, terminological discrepancies are sufficiently different —even contradictory— as to introduce the possibility of perilous misunderstandings where precision is required. If this is true in the developed world, where the concepts and technologies are similar, it is all the more true in the Arab world, which, for its part, is importing technologies and their associated concepts.

A notable difference between Arabic and other languages with wide geographical spread, such as English or Spanish, is that its speakers harbour the erroneous perception that their language is in fact uniform from 'sea to sea', as they say. Yet, even without considering the variable state of technical terminology, regional variations in Arabic writing norms are not difficult to detect in all aspects of the writing system, be they in the orthography, syntax, morphology or lexicon. We adduce a few examples of each here comparing Egyptian usage with that of other parts of the Arab world, not because we necessarily think that the Egyptian variants are more correct, but simply because we are more familiar with those. In orthography, the placement of long vowels or in the treatment of the symbol representing the glottal stop are not entirely fixed: the word for tariff is *taᶜrīfa*, تعريفة in Egypt and *taᶜrifa*, نعرفة elsewhere. The word 'responsibility' is spelled مسئولية in Egypt and مسؤولية lsewhere (the difference in orthography cannot be captured in transliteration!). In syntax, Egyptian writers may use phrasal verbs (verbs accompanied by prepositions) where others will not and vice versa (Ibrahim 1997: 62-63), and they tend strongly to prefer placing a pronominal direct object before a pronominal indirect object while Levantine writers prefer the opposite (wilmsen, in preparation). Regional morphological variants often appear in the ablaut plurals, (the so-called 'broken plurals'), as in, for example, the Egyptian *šahādāt* (certificates) as opposed to the *šahā'id* of North Africa or *mudīrūn* (directors) of Egypt to the *mudarā'* of the Levant and eastwards. Lexical variants are numerous, ranging from terms used more or less daily, such as 'office supplies' *adawāt maktabiyya*, أدوات مكتبية in Egypt, but *qurtāsiyya*, قرطاسية in the Levant or 'fuel' *wuqūd*, وقود (Egyptian) and *mahrūqāt,* محروقات used elsewhere, to more specialised but nevertheless familiar concepts such as 'privatisation', which is xasasa, خصخصة in Egypt but xawsasa, خوصصة in Morocco or 'recycling', *iᶜādat at-tadwīr*, إعادة التدوير in Egypt but al-raskala, الرسكلة in Morocco.

The orthographic, syntactic, and morphological differences in writing as they occur across regions are all canonical variants of written Arabic

(perhaps with the exception of *raskala*, which strikes us as odd). It has been noted since the days of the classical grammarians that more than one plural form may be allowed for some words (which itself may reflect ancient vernacular usage). Meanwhile, the differences in the treatment of vowels may also have their ultimate origin in the spoken vernaculars, which treat vowels differently by area. Often differences in lexis reflect local vernaculars as well, with acceptable formal discourse in one area striking readers from other areas as colloquialisms. Here again, the list of such variants is long. It is probably safe to say that morphological, orthographic, and even syntactic differences will not hinder comprehension between speakers from different dialect areas, but that lexical differences may do, whether in technical terminologies or in quotidian discourse.

Given the situation in Arabic described here, the label 'standard' in the Western appellation 'Modern Standard Arabic' is ill conceived. It should be noted that the concept of a modern standard variety of Arabic is not well understood by native speakers of Arabic, who tend to confuse the concept with their conception of 'classical Arabic' and often speak of modern written Arabic as if it were identical to classical Arabic. For its part, classical Arabic, being the written language of the early and golden ages of Arabic letters, a style emulated by Arab writers until the nineteenth century when Arab writers came into extensive contact with Western journalistic styles of writing, can lay better claim to a label of 'standard', if only because it has been thoroughly described in the Arabic philological heritage (see Kaye, 1972, for a discussion of this).

Despite their confusion between the two varieties, native speakers of Arabic do tend to view written Arabic as embodying some set of reified objective standards, and they do assert that it is uniform throughout the Arab world, that it changes little over time, and that it lends precision to expression either in writing or in declamation (we use this term rather than 'speaking' as this variety is never used in natural conversation). When pressed to define or identify this standard, in newspapers for example, however, they have difficulty in doing so (Parkinson, 1991). Nevertheless, the impression persists that formal Arabic is uniform in all aspects of its grammar across the entire Arab world. The impression is probably fostered by the relative homogeneity and agreement in a shared terminology to be found in the traditional fields of scholarly endeavour such as theology, canon law, rhetoric, even grammar, or their modern offshoots and in topics of pan-Arab interest (such as, for instance, the Palestinian struggle for independence). The requisite terminologies for such discourse enjoy the sanction of long-held conventional definitions. On the other hand, were we to look at other technical fields, such as agriculture and animal husbandry, automotive engineering, and information technology, among many others, we would find the same regional variety and the same shallow depth of terminology in the so-called standard as we have seen here. The modern extension of the

classical form of Arabic has yet to settle into a universally accepted set of standards.

Notes

[1] Entire faculties devoted to the study of these and other natural phenomena, of course, exist at national universities, and members of their faculties do appear occasionally in the public arena, but when they do their discourse is usually couched in the vernacular, and their classes are conducted in that medium, or in a European language, especially where the technical terminology is concerned.

[2] This list is drawn from a glance through the latest catalogues from Routledge and Blackwell, both of which publishers having a commitment to releasing dictionaries and other linguistic studies.

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