

THE IMPACT OF TECHNOLOGY TRANSFER ON THE ARABIC LANGUAGE

The products of technology are usually transferred from industrialized to developing countries (North-South transfer). These products are on the whole transferred along with the language of the country that produces them, moreover, the documents relating to these products are written in the language of the producing country. This process leads to the interaction of the language of the producing country with that of the recipient on a number of levels among which are institutional and non-institutional verbal communication and institutional written communication within a corporation or a company. This kind of interaction may lead to cross fertilization as a result of translation and phonetic / semantic arabization which is bound to affect the language of the recipient country on a number of levels among which are :-

(1) The role of the language of the recipient country in the official language of communication :

The transfer of the products of technology along with the language of the producing country may confine the language of the recipient country to a marginal role in the official mode of communication within a corporation or a company and to the use of the language of the producing country as a means of communication by the work force in the corporation or the company at all levels. Moreover, it is a well known fact that the use of the language of the producing country (the foreign language) varies in frequency in accordance with the proficiency of the work force in the language concerned so that the higher the level of this proficiency the stronger the tendency

on the part of the members in work force to use this language or some of its lexical items among themselves in official communication (both written and verbal) in a company or a corporation. This process may lead to the relegation of the language of the recipient country to the status of secondary language and this may in turn impede the integration of the products of technology in the language of the recipient country and affect in an adverse manner their assimilation in its general scientific culture. Perhaps one of the results of this distinctive linguistic situation (which is characterized by the ascendancy of foreign language and the peripheral role assigned to the local language) is the kind of stratification of knowledge in the technological field which allows a group of employees to monopolize technological knowledge at its highest levels while other groups of employees remain more or less ignorant about the elementary principles of technology. This is something which may impede the process of production and the flow of information necessary for this process.

2. The structures of the language of the recipient country are affected by the idiomatic phrases of the language of the producing country since the instructions for operating the machinery and equipment and the other products of technology are translated, as a result of the need for interaction and communication among the work force, from the language of the producing country to the language of the recipient country. This translation is seldom carried out according to a scientific plan but is often dictated by haste and the pressures of work.

المراجع العربية

- 1 - الحمزاوي ، محمد رشاد ، الصدور واللواحق وصلتها بتعريب التعليم ونقلها إلى العربية الحديثة ، اللسان العربي ، عدد 12 ، الجزء الأول 1975 ، ص 121 - 138 .
- 2 - الحمزاوي ، محمد رشاد ، المنهجية العربية لوضع المصطلحات : من التوحيد إلى التمييط ، اللسان العربي ، العدد 24 ، 1984 / 1985 ، ص 41 - 51 .
- 3 - الخطيب ، أحمد شفيق ، معجم المصطلحات العلمية ، مكتبة لبنان ، بيروت ، الطبعة الخامسة ، 1981 .
- 4 - الخطيب ، أحمد شفيق ، منهجية وضع المصطلحات الجديدة في الميزان ، اللسان العربي عدد 24 ، 1984 / 1985 ، ص 37 - 66 .
- 5 - الخوري ، شحادة ، اللغة العربية والتقدم العلمي والتكنولوجي في هذا العصر ، اللسان العربي ، عدد 26 ، 1986 ، ص 37 - 48 .
- 6 - القاسمي ، د . علي ، المعاجم العربية المتخصصة ومساهماتها في الترجمة ونقل التكنولوجيا ، اللسان العربي ، عدد 25 ، 1983 / 1984 ، ص 45 - 54 .
- 7 - المبارك ، د . مازن ، اللغة العربية في التعليم العالي والبحث العلمي ، مؤسسة الرسالة ، دار النفائس ، بيروت 1983 .
- 8 - المغنم ، محمد ، مسألة السوابق واللواحق وطرق معالجتها ، اللسان العربي ، عدد 24 ، 1984 / 1985 ، ص 95 - 102 .
- 9 - بنعبد الله ، عبد العزيز ، التعريب ومستقبل اللغة العربية ، معهد البحوث والدراسات العربية التابع للمنظمة العربية للتربية والثقافة والعلوم ، 1975 .
- 10 - حجازي ، د . محمود فهمي ، اللغة العربية عبر القرون ، دار الثقافة للطباعة والنشر بالقاهرة ، 1978 .
- 11 - عبد الرحمان ، وجيه ، منهجية وضع المصطلحات الجديدة في الميزان ، اللسان العربي ، عدد 24 ، 1984 / 1985 ، ص 57 - 65 .
- 12 - مجمع اللغة العربية ، المعجم الوسيط ، القاهرة ، 1974 .
- 13 - مذكور ، د . إبراهيم ، محصول المصطلحات العلم ، العربي ، عدد 187 الكويت ، 1974 .
- 14 - ندوة توحيد منهجيات وضع المصطلح العلمي العربي ، الرباط 18 - 20 / 2 / 1981 ، اللسان العربي ، المجلد 18 ، 1981 ، ص 175 - 178 .
- 15 - يعقوب ، إميل ، المعاجم اللغوية العربية ، بدايتها وتطورها ، دار العلم للملايين ، بيروت ، 1985 .

References

English References

- 1 - Abdul-wahed,
Technical Dictionary : Machine Tools, Edition Leipzig. East Germany, 1977.
- 2 - Abdulla, Hassan,
A Dictionary of International Relations and Conference Terminology, Librairie Du Liban, Beirut, 1983.
- 3 - Abu-Ghazaleh, Talal,
The Abu-Ghazaleh English-Arabic Dictionary of Accounting, Macmillan Press Ltd, London, 1982.
- 4 - Al-Kasemi, Ali M.,
Dictionaries for Translation, Al-Lisan Al-Arabi, Volume 18, 1980.
- 5 - Al - Khatib, Ahmad,
A New Dictionary of Petroleum and the Oil Industry, Librairie Du Liban, Beirut, 1975.
- 6 - El-Assiouty, Magdi,
El-Assiouty Banking and Financial Dictionary, El-Assiouty, Cairo, 1980.
- 7 - Henni, Mustapha,
Dictionary of Economic and commercial Terms, Librairie Du Liban, Beirut, 1972.
- 8 - Hitti, Yusuf K.,
Hitti's English-Arabic Medical Dictionary, Librairie Du Liban, Beirut, 1980.
- 9 - Kabarity, A.M et al.,
Botany and Microbiology Dictionary, Kuwait Foundation for the Advancement of Sciences, Kuwait, 1985.
- 10 - Monkhouse, F.J. and John Small,
A Dictionary of Geography and the Natural Environment, Librairie Du Liban, Beirut, 1983.
- 11 - Nasr, Z.,
The Dictionary of Economics and Commerce, The Macmillan Press Ltd, 1979.
- 12 - OAPEC,
Energy Terminology, Kuwait, 1983.

b - The principles approved by CBA for the unification of methodology for forming scientific and technical terms.

a - The principles published by Cairo Language Academy covered the formation of artificial nouns (المصدر الصناعي) such as شاعرية ، شعوية ، تقديمية linking certain derived forms to certain meanings such as فاعل (sounds), فعالة (profession), and فعال (disease), derivation of verbs and nouns from names such as المرسة ،
المسرة formation of negative nouns by adding the negative particle to the noun such as اللادرية ، اللاوعي compounding which produces Arabic equivalents to English words beginning with non-, semi-un- / in- and mis- : لاخطي ، شبه موصل ، غير دستوري ، سوء الادارة

and, finally, lexical borrowings and, finally, lexical borrowings It is worth mentioning here also that the topic of prefixes and suffixes was adequately dealt with in Al-Khatib (1982), Al-Hamzawy (1975), Abdul-Rahman (1984 / 1985) and Al-Maghnam (1984 / 1985).

b - During the period between 18-20 / 2 / 1981, the CBA organised a seminar which was devoted entirely to the formation of a unified methodology for Arabising scientific and technical terms. The list of recommendations is quite lengthy, but the following is a summary thereof : lexicographers should utilise old suitable Arabic scientific terms culled from our heritage; each term must have one equivalent in a given field of specialisation; international Methodology Should be complied with when new terms are formed; preference should be given to pure Arabic or Arabised terms, to lucid terms, to terms which allow derivation rather than those which do not, to specific rather than general terms, to commonly-used rather than rare terms; avoidance of colloquial expressions whenever possible;

meanings of terms given as synonyms must be clearly explained; acceptance of terms suggested by specialists; and using linguistic rules when new terms are produced. In addition, CBA proposed a set of rules to govern Arabised terms. (Nadwat Tawheed... 1981).

5 - Prospects

Although the ceaseless efforts of the Arab language academies and CBA and the resolve and tenacity of many an organisation and a scholar have infused new blood in the process of Arabisation, which specialised dictionaries ultimately serve, the achievement of an acceptable level of Arabisation as a vital pan-Arab objective calls for an increase of emphasis on translation, lexicography and co-ordination among the concerned organisations and individuals. So far as specialised dictionaries are concerned, the author suggests the following :

- 1 - Dictionaries prepared by CBA and governmental bodies should become available to the public through experienced publishers like Librairie Du Liban or Al-Ahram,
- 2 - CBA should, in co-operation with publishers, review and approve dictionaries before they are sold on the market,
- 3 - Seminars, workshops and conferences should be held on a regular basis for Arab linguists, lexicographers, translators and other specialists,
- 4 - Public and private organisations particularly those involved in dictionary-making and translation should be made aware of the recommendations and resolutions passed by language academies and CBA,
- 5 - Correspondents should be appointed in every Arab country to monitor the new terminology in various fields. This should be viewed as an ongoing task in view of the huge number of new terms that are produced in the fields of technology and science.

man, in the same order of importance. Arabic-English glossaries are extremely rare as demand in translation is most of the time from English to Arabic. Nevertheless, several lexicographers have provided their dictionaries with an Arabic glossary in the case of bilingual dictionaries (Hitti 1980) as well as glossaries in languages other than that of the lexical entries in the case of multilingual dictionaries (Henni 1972, Abdel-Wahed 1977 and OAPEC 1983).

Lexical entries in the specialised dictionaries are, for the most part, single nouns, noun plus noun compounds (reconnaissance map, price support, heat transmission), adjective plus noun compounds (pricing policy, racial factor, galvanic terminal) or longer nominal phrases (law of diminishing marginal unity, soil moisture stress, electric system protection). On the other hand, these lexical entries are either listed in accordance with the initial component only or under the various constituents of the construction.

Quite recently, two innovations have been registered in the field of specialised dictionaries. First, some publishers have started to publish foreign dictionaries with an English-Arabic glossary at the end (Monkhouse and Small 1983).

Second, some lexicographers tend to organise the lexical entries in accordance with the topic (OAPEC 1983 and Abdulla 1982).

4 - Methodology

The fact that most of the specialised dictionaries resulting from individual efforts are produced by professionals who are wellversed in their areas of specialisation is a mixed blessing. For on the one hand, these professionals could determine the most common terms used in their fields in the languages concerned. On the other hand, the complexity of dictionary compilation and the continuous influx of new concepts and terms makes their task rather difficult as certain issues require the insights, rules and linguistic knowledge only linguists and scholars of Arabic could provide.

This aside, if lexicographers are to work without any linguistic or organisational principles, this would undoubtedly lead to inconsistencies, confusion and duplication, a hardly desirable position if Arabisation is to succeed at all. To illustrate this point, let me give a few examples from three business dictionaries :

<u>English Term</u>	<u>Arabic Term</u>		
	<u>Librairie Du Liban</u>	<u>El-Assioutty</u>	<u>Abu Ghazaleh</u>
charge account	حساب قيدي، حساب الزبون الجاري	حساب المبيعات الاجلة	حساب العميل
charge adjuster	مسوي الخسارة	موزع العوارية	
consignment clearance	إرسالية، بضاعة أمانة	إيداع برسم الأمانة	إرسالية بضاعة (شحنة)
consignment	ربح، منحة، إجازة، تصفية، تخلص	تخلص، إبراء	تساح، فك الرهن، مقاصة
deferred credit	دين مؤجل الدفع	قيد دائن بتاريخ	إيراد مؤجل
margin	حد (الربح، الخسارة، إلخ)	حد، هامش، احتياطي، غطاء	الربح الاجمالي، هامش الضمان، تأمين نقدي

Perhaps the most significant contributions made in the field of unifying methodology in lexicography are the following :

- a - The set of principles issued by Cairo Language Academy regarding derivations, and

which was formed on June 8, 1919 was soon to become the first Arab language academy : Damascus Language Academy (Hijazi, 1987). The Egyptian government followed suit in 1932 by establishing Fuad I Language Academy (which later became Cairo Language Academy). The two major objectives the Academy set about to achieve were :

- 1 - To maintain the accuracy and purity of Arabic and ensure that it can efficiently meet the requirements of progress in sciences and arts.
- 2 - To compile a historical dictionary for Arabic. (Al-Mu'ujam Al-Waseet, 1972).

Sixteen years later, the Iraqi Scientific Academy was established. But the last academy of this sort to be launched was the Jordanian Language Academy which was formed in 1976 (Al-Khoury, 1986).

These academies were destined to play a significant role in the process of Arabisation and spearhead the efforts to compile specialised dictionaries. Arabic equivalents for thousands of predominantly English and French words were proposed, and Cairo Language Academy made considerable efforts to regulate and control the selection of equivalents in Arabic.

c - As the second half of the present century dawned, more Arab countries gained independence. The strong desire among Arab linguists, academics, lexicographers and intellectual leaders to give the process of Arabisation a new impetus, to pool all the linguistic resources of the Arab World and to co-ordinate and systematise the efforts in this particular area culminated in establishment of the Co-ordination Bureau of Arabisation (CBA) in Rabbat in 1962. Set up within the framework of the Arab League Educational Scientific and Cultural Organisation, the Bureau started to organise conferences, seminars and workshops on all aspects of Arabisation, lexicography and translation. Through its journal, *Al-Lisan Al-Arabi*, CBA was instrumental in publishing a very large number of specialised bilingual and multilingual dictionaries. In addition to the works of its members, the most notable of whom is Abdul-Aziz Ben-Abdulla, the Bureau began to serve as a focal point for the co-ordination of dictionary-

making and Arabisation : Lexicographers, whether individuals or organisations, started to cooperate with CBA which helped in reviewing dictionaries and in suggesting modifications and alternative terminology. Moreover, the Bureau set up specialised committees in different parts of the Arab World to produce specific dictionaries. Upon completion, these dictionaries are returned to the Bureau whose specialists will determine whether to retain, drop or modify the contents in the light of guidelines suggested by Arab scholars and linguists. Once the task is accomplished, the draft is then submitted to a conference whose specialised committees will review the dictionary and propose any relevant modifications. (Al-Hamzawi, 1984 / 1985)

d - Compilation of specialised dictionaries, however, is not limited to the Arab language academies and CBA. A number of governmental, semi - governmental and autonomous organisations have published, and indeed continue to publish, glossaries and dictionaries in their fields of specialisation. Among these, to name a few, are the central Bank of Iraq, the Egyptian Scientific Academy, the Statistical Society for Arab Countries, Organisation of Arab Petroleum Exporting Countries and Kuwait Foundation for the Advancement of Sciences. In addition, the recognition of Arabic as an official language in the various bodies of the United Nations gave rise to a number of specialised dictionaries. (Abdulla, 1982)

e - The contribution of several scholars in the field specialised dictionaries is also noteworthy. Their methodology and the contents of their dictionaries were largely influenced by the views, principles and glossaries published by language academies and CBA. On the other hand, some of the dictionaries compiled by certain individuals were endorsed by official organisations (Al-Khatib, 1976 and Ellassioutty 1980).

3 - Languages and Organisation

The great majority of the specialised dictionaries published in the Arab World are no more than English-Arabic glossaries. Other languages which also appear are French and Ger-